

Introductory lecture to a course of military surgery, delivered in the University of Edinburgh / by Sir George Ballingall.

Contributors

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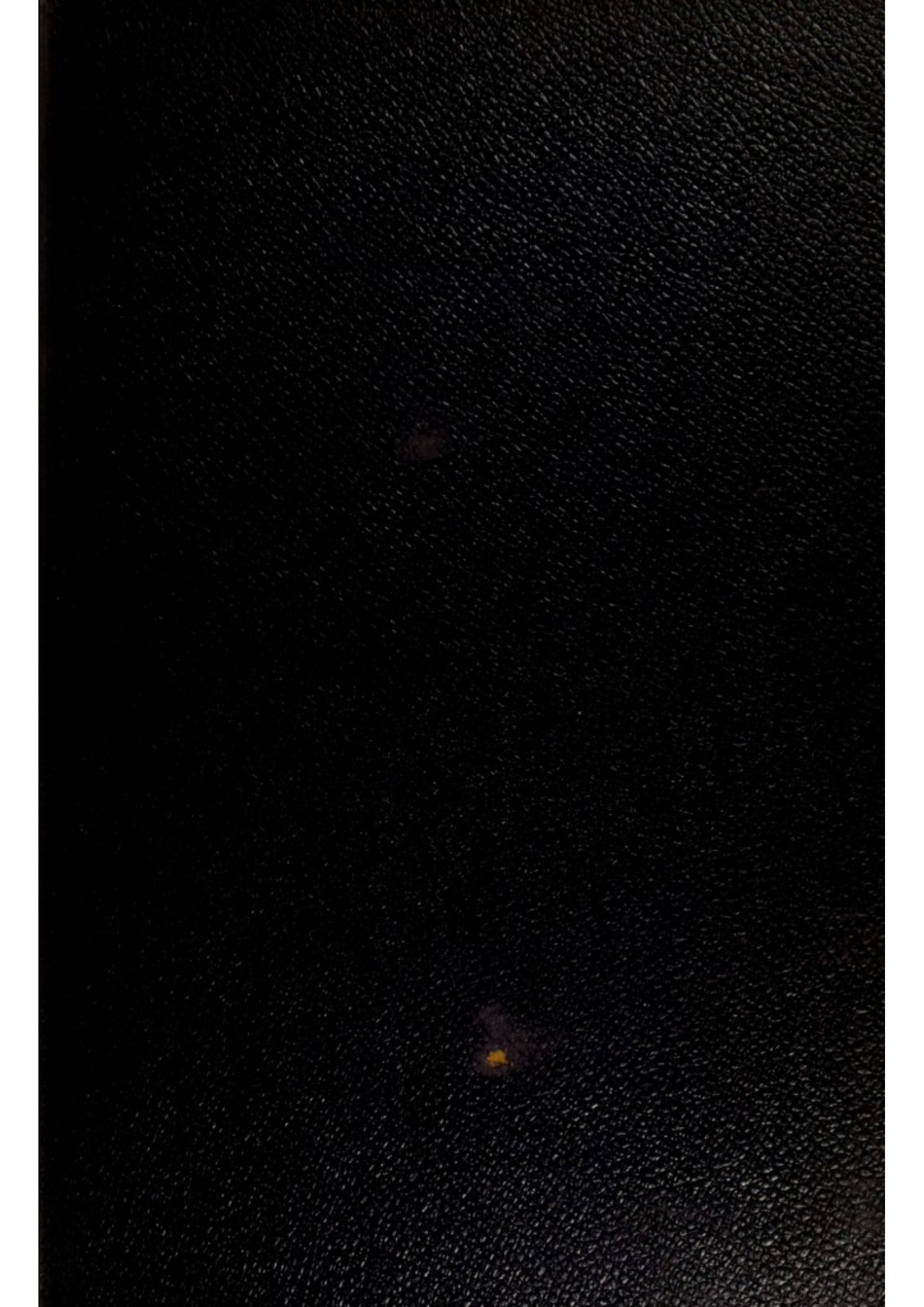
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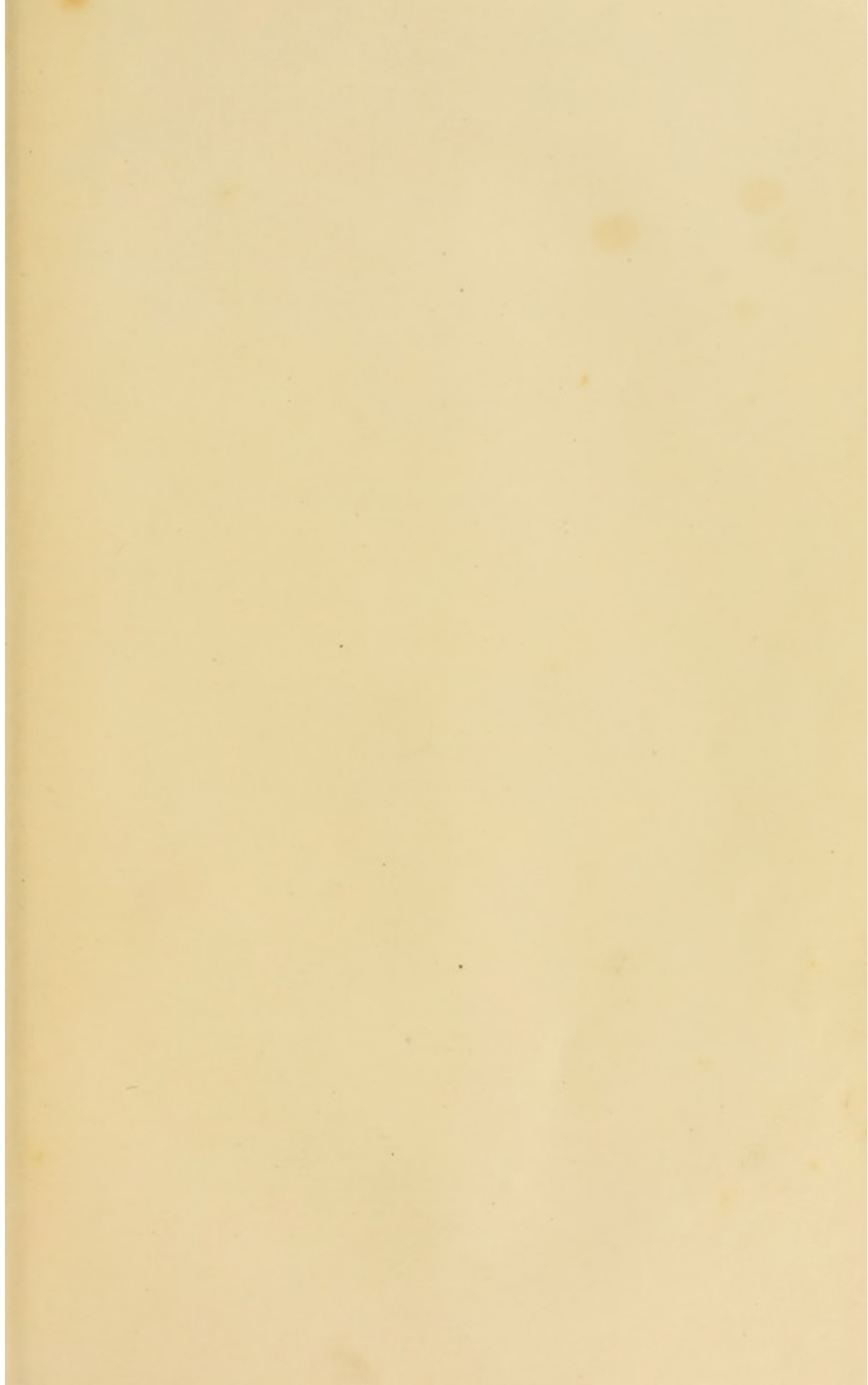
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*For Sir James McEwen
with Sir G. Ballingall (imp!)*

INTRODUCTORY LECTURE

25



TO A COURSE OF

MILITARY SURGERY,

DELIVERED IN

THE UNIVERSITY OF EDINBURGH.

BY

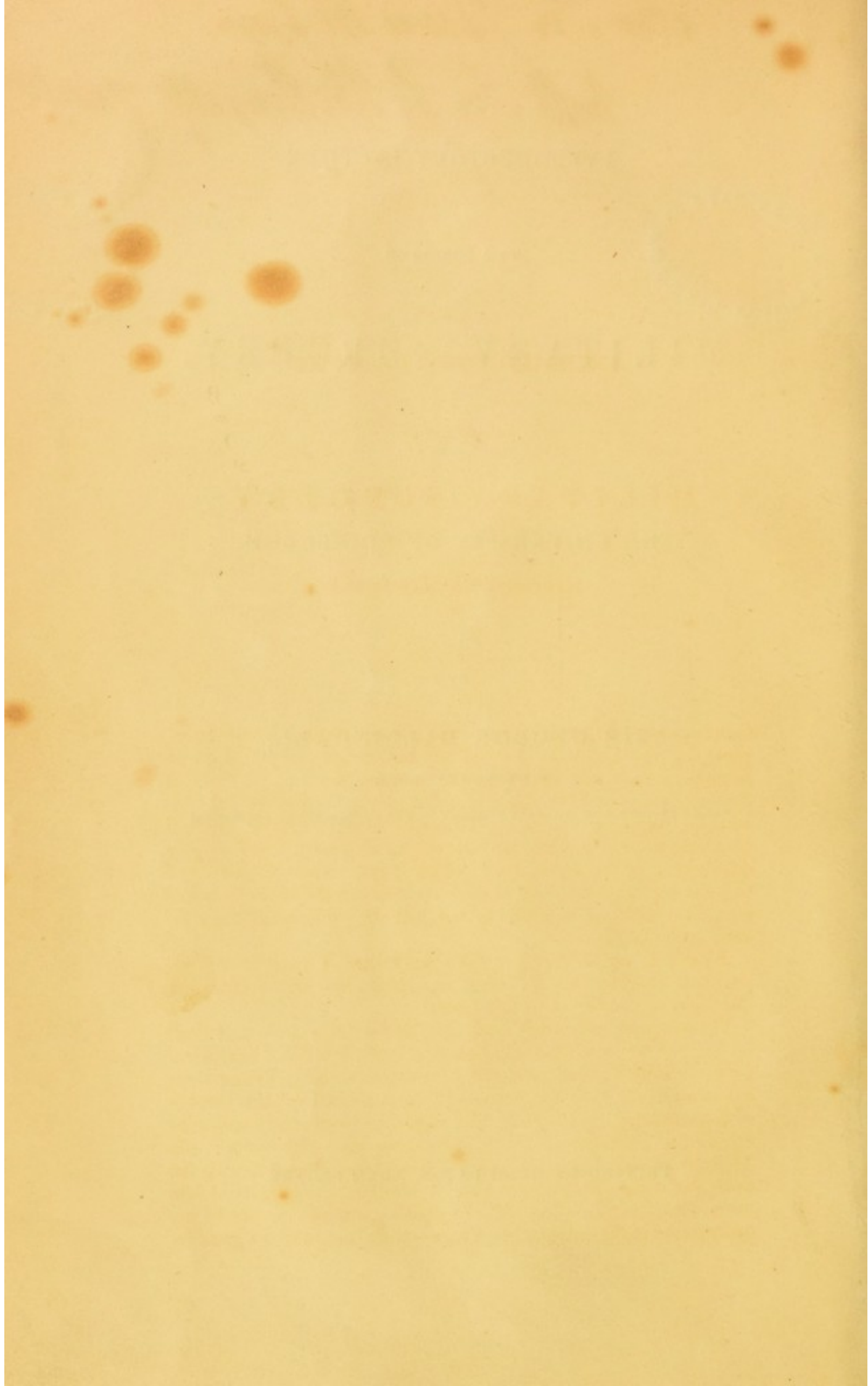
SIR GEORGE BALLINGALL,

SURGEON TO THE QUEEN,

REGIUS PROFESSOR OF MILITARY SURGERY IN THE UNIVERSITY OF EDINBURGH.



PRINTED BY HUGH PATON, ADAM SQUARE.



INTRODUCTORY LECTURE

TO A COURSE OF

MILITARY SURGERY.

(Delivered 4th May 1846.)

GENTLEMEN,—In entering upon the present course, I have to express my regret that the state of my health has compelled me to postpone it from the winter to the summer session. I have at the same time to offer my acknowledgments to the Royal College of Surgeons, and to the Directors General of the Medical Departments of the Army and Navy, for so kindly and promptly acquiescing in the arrangement which I was reluctantly obliged to propose, and for having agreed to extend to the course, *pro hac vice*, that recognition which it has hitherto enjoyed in their several codes of education.

Although my absence has been prolonged, I trust it will appear that my time has not been mis-spent, and that I have not lost sight of the duties of this Chair.

By lecturing every day, instead of three times a-week, I shall be enabled to complete the number of lectures which I have heretofore delivered ; but those who have attended me in former years are aware that, with the periodical examinations of the class—with occasional meetings in the museum—with daily meetings during the performance of the operations, and with visits to the Military Hospital in the Castle, I have been occupied, upon an average, full four days a-week ; and I have felt, particularly of late years, that this is all too little to enable me to do justice to my conceptions of the duties of the Chair—to do justice to the great in-

crease of my *materiel*, and to the numerous communications which I have received from my pupils in every quarter of the world.

In entering upon the business of my course, I have upon former occasions, like most other teachers, adverted to the origin, the progress, and the importance of my department, and have given a hasty sketch of the lives and writings of those distinguished individuals to whom we are indebted for the progressive improvement of military surgery, more particularly in France and in England. Amongst the writers of the former nation, I have noticed particularly Ambrose Paré, who, for more than thirty years, followed the fortunes of the French army, and the late Baron Larrey, the faithful follower of Napoleon in all his campaigns. These men were the companions of princes, the confidential advisers of generals, and the idols of the soldiery. As regards our own service, again, I have sketched the progress of military surgery from the time of Colnet and Morstede, the professional attendants of Henry the Fifth, down to that of Guthrie, of Hennen, and of Hutchison—men who have possessed the enviable distinction of giving their professional assistance to the wounded under a Nelson and a Wellington. Much of all this has, however, been already laid before the public in my "Introductory lectures" and "Outlines of Military Surgery," and instead of recapitulating a twice told tale, I propose, upon the present occasion, to give you a short notice of those numerous Hospitals and Schools which I have recently taken occasion to visit on the Continent and elsewhere, particularly those in the capital cities of Prussia, of Austria, of Belgium, of France, and of Egypt, where large bodies of troops are quartered, and in many of which schools for the special instruction of military surgeons are established.

This notice, brief as it must be—partly from the little time I could devote to my first visit, and partly from the loss of my notes on the second,—will, I trust, prove more interesting, and also more instructive to you, by directing such gentlemen as may have the opportunity of visiting the Continent to those localities where military hospitals are to be found, and where the instruction of army surgeons is more particularly an object of attention.

In the autumn of 1843, I visited, in company with my son, who is educating to the profession, the great hospital at Hamburgh, where I was sorry to find that the place of chief surgeon had been recently vacated by the death of Fricke. This hospital is said to have been built for one thousand patients, but, at the time of my visit contained fifteen hundred, and was consequently much overcrowded. Here were under treatment a great many accidents from the rebuilding of the city; numerous cases of fracture, some of them treated with peculiar pieces of apparatus, which I consider as well entitled to your attention, and to which I shall, in the progress of the course, have another opportunity of adverting.

At Berlin, as may be supposed, there is much to interest the

military surgeon. Here, after seeing the anatomical and pathological museum of the University, by the kindness of Müller, under whose charge it is placed, we visited the barracks and hospital of the Cadet corps. In this institution were about 320 pupils educating for the army, and it seemed, in many respects, a good school for young soldiers. Their fare was coarse, and not over abundant for young men whose appetites are sharpened by long drills. In the hospital were eight young gentlemen labouring under dysentery, one of them in a dangerous state; and this it appears, is sometimes a very formidable disease in the establishment.

Our next visit was to the barracks and hospital of the 2d Regiment of Lancers, then in garrison. These buildings were originally private houses, and not well adapted to their present purposes. Into this hospital were received the sick of detachments from other cavalry regiments sent here for instruction; but the number was altogether limited, and the cases afforded no room for remark. Into the Garrison hospital are received soldiers employed as servants to the officers of the garrison, those employed on staff duties, and others who have no regimental hospital in the city. This hospital, although not a building of superior construction, was sufficiently clean, and apparently well regulated. Its inmates, none of whom presented any remarkable cases of disease, were about seventy or eighty; and from this limited number, it may be inferred, that the system of regimental treatment, so highly appreciated in our service, is carried farther in Prussia than in some of the other continental armies. The "Charité," or great civil hospital, contains about 600 patients, and an adjoining building, of which a large part is fitted for the reception of lunatics, contains about 400 more. In this hospital were many patients with fractures of the inferior extremities, treated in the extended posture, and numerous venereal patients, in whose treatment no mercury was used. Dr Grimm, the king's physician, proposed, on the morning of our visit, to have performed the operation of lithotomy, but was obliged to postpone it in consequence of his patient being attacked with diarrhoea.

The "Institution of Frederick William the Second," one of the royal establishments of this metropolis, is appropriated to the reception of the young gentlemen educating for the medical service of the Prussian army. Of their number, I find I have not taken any memorandum, but they are here lodged, boarded, educated, and, if I recollect, furnished with books, at the public expense; and, so far as I could judge from a cursory visit to some of their quarters, they seemed to be well accommodated. To this establishment, as well as to several of the barracks and hospitals of Berlin, I was conducted by Dr Wald, surgeon of the Cadet corps, who speaks and writes English well, and to whom I am indebted for much valuable information relative to the medical department of the Prussian army.

At Dresden is to be found an anatomical collection in a curious old house, partly lined with tapestry, and containing some good pictures. I was surprised at the extent and value of this museum, as I had heard comparatively little of Dresden as a medical school. It contains many interesting pathological specimens, a large collection of skulls of different nations, casts of the heads of eminent individuals, and several remarkable monstrosities. Here we visited a barrack, and a small military hospital in the suburb, recently erected, capable of containing 160 patients. The wards were of an unusually small size, but neat and clean; the bedsteads of iron, with iron-wire net-work bottoms. And in this capital I was also struck with the clean, smart, soldier-like, and healthy appearance of a regiment of Saxon dragoons.

On entering the ancient city of Prague, we saw numerous bodies of troops at drill, dressed in blouses, or smock frocks, a fashion of which I greatly approved, as being well suited to the heat which then prevailed, in the month of August. The military hospital here was formerly a college of Jesuits, and contains about 400 patients. The wards were overcrowded, but not over clean, little corresponding with the spacious, cleanly, and imposing appearance of the lobbies, staircases, and corridors, one of which, says the guide-book, is 600 feet long. There is, I believe, a separate hospital for the Artillery, which I had not time to visit.

At Vienna, we find the "Josephinum," so called from its founder, the most splendid of all institutions for the instruction of military surgeons, originally founded and largely endowed for this special purpose, "et omni suppellectile salutaris artis instructum." Here there is a valuable collection of anatomical and pathological preparations; it is particularly rich in specimens of diseased bones, and I remarked more instances of bony ankylosis of the joints than I had seen in any other collection—several of the hip and knee joints. Here is a collection of the famous wax-work preparations made at Florence. The figures are numerous, some of them indifferent, and others such perfect representations of nature, that I expressed an apprehension lest the young men should begin to consider it superfluous to dissect. I was particularly struck with a figure, of the natural size, representing the lymphatic system, and find it difficult to conceive how such a figure is executed. Attached to this institution, is a large military hospital, containing about 500 patients. It is occupied by the soldiers of the garrison, and affords an excellent clinical school for the instruction of the pupils. Immediately contiguous to it is a barrack, which I visited, capable of containing 10,000 men. At the Josephinum, we were received by a venerable old army surgeon, the Director of the institution, and were conducted over it by Hager, from whom I received much information, and who seems to have devoted much attention to surgical instruments, and to the construction of surgical machinery. To this gentleman I am indebted for the

Medical Regulations of the Austrian army, and for his valuable work on Bloody Tumours.

In the neighbourhood of the Josephinum, is the "Allgemeine Krankenhaus," or great civil hospital, consisting of ten or twelve squares or courts, and capable of containing upwards of 3000 patients, perhaps the largest hospital in the world,—much too large, in my opinion, for the advantageous treatment of the sick. Over this we were conducted by Rokitanzky, the professor of anatomy, who very kindly showed us the anatomical and pathological collection attached to it, under his charge. This contains many rare and many valuable specimens. Amongst others, I remarked, what I had not seen before, a bony ankylosis of the lower jaw, but the history of the case was unknown. I observed particularly, in this hospital, the venereal wards, which were much too crowded, and the ophthalmic wards, which were under the charge of Professor Rosas. He took much pains to explain to us his practice, and to show us his collection of instruments, which is very complete, containing those of which he disapproves as well as those which he uses. He has also deposited in the hospital a very pretty collection of wax-work, illustrative of the diseases of the eye, and a collection of works on ophthalmic surgery. To the kind offices of Hager, Rokitanzky, Rosas, and others, at Vienna, I was introduced by my old friend Dr Vivenot, whom I was glad to find in the enjoyment of an extensive practice, and in the possession of the respect and esteem of his professional brethren. For a more minute account of the hospitals and medical schools of this great empire, you will do well to refer to Wilde's "Austria, and its Institutions," a work, so far as my observation goes, remarkably accurate.

At Nuremberg, we saw a new hospital in the progress of erection; a plain neat building, well situated in the suburbs, with a good spacious airing ground. It was difficult to judge of the interior arrangements in its then unfinished state, but the wards seemed small and rather low in the roof.

At Wurtzburg, the Julius hospital was founded, and said to be richly endowed, by one of the bishops, and has a small botanic garden attached. The house contains about 200 patients, is clean, and apparently well regulated. A range of wooden presses runs along the corridor, in which the patients' clothes are deposited, each press marked with a number corresponding to the number on the patient's bed in the adjoining ward. I was much disappointed at finding that Dr Textor was absent from town on professional business. He is the professor of surgery at Wurtzburg, and from him I should probably have got information about the medical school which exists here.

At Frankfort, the hospital is a new building, capable of containing about 200 patients, and I observed the same arrangement as at Wurtzburg, of having the patients' clothes deposited in

presses in the lobbies. I was sorry to find that Dr Warrentrap, the chief surgeon, was sick, but we were very politely shown through the house by the hospital master.

At Wiesbaden, I visited the Military hospital, in company with my friend Dr Girgins, for whose acquaintance I am indebted to Sir James M'Grigor. Unfortunately, the surgeon was not to be found, and the hospital sergeant, like a good soldier, true to his instructions, would not permit us to enter the wards, but gave us, not without some difficulty, the privilege of looking into them through the doors and windows. The building is new, apparently well constructed, and said to be well regulated. The number of patients was very small, an index of the healthy state of the garrison.

At Antwerp, the Garrison hospital is an old building, occupying the sides of a quadrangular court, capable of containing about 400 patients. Many of the wards are narrow, low roofed, and inconveniently long, containing from 40 to 60 bedsteads. It appeared well regulated, and in good order, but does not show to advantage, in comparison with modern hospital buildings, and is situated in a crowded part of the town. Here were several cases of fever, some of them intermittent, which is a prevalent disease amongst the troops. We also saw many cases of ophthalmia, and of the venereal disease. The former had prevailed in the army to a great extent, and proved very obstinate. From what I observed, I should fear that it was hardly treated with sufficient activity in its early or acute stage,—in the chronic stage with a granular state of the palpebræ, of which I saw several instances, the nitrate of silver was used freely. In venereal cases, mercury was used to a limited extent. A patient who had undergone amputation of the forearm by the circular incision—the operation generally adopted—had an excellent stump, but, although six weeks had elapsed from the date of the operation, the ligature was not yet detached. //

At Brussels, the Military hospital is, as in other continental cities, a Garrison hospital. It is comparatively a modern building, with good, lofty, spacious wards, and airing grounds for the use of the patients. The prevalent diseases, venereal complaints and ophthalmia; gonorrhœal ophthalmia, of which I saw two instances, is said to be frequent, and believed to be produced by the patient conveying the matter from the urethra directly to the eye. I did not observe any peculiarity of treatment, but I may remark that here, as at Vienna, one of the wards is painted green for the reception of ophthalmic patients. In the civil hospital, we found Monsieur Suetin, who, I believe, in virtue of his office as chief surgeon of the Belgian army, acts also as consulting surgeon to the garrison hospital. This gentleman, to my great delight, was employed in dressing a fractured limb, in the peculiar method associated with his name. The patient, besides a concussion of the brain, had sustained two fractures of the lower jaw, one on either side, a compound fracture of the forearm, immediately above

the wrist, and a simple fracture of the thigh. In dressing the latter, the apparatus which had become slackened from the subsidence of the swelling was slit open, a portion of it removed by paring off one of the edges of the slit, so as to adapt it accurately to the diminished size of the limb, and was then replaced with the starched bandage over it. Here we were also fortunate in seeing a little patient, three or four years old, who had been admitted on the preceding evening, with a fracture of the thigh, and in this case the apparatus, which is put on immediately after the accident, having become too tight, was slit open with M. Suetin's scissors.

To this practice I must again advert fully in a subsequent part of the course. In the meantime, I would recommend to the particular attention of those who may have the opportunity of inspecting it, the "Hospital St Jean," a new building, not quite finished at the time of my visit. The day which I had devoted to this being a holiday in Brussels, in consequence of our Queen's visit, the public places were all shut, and it was with great difficulty we got admission to see this hospital. It is an elegant modern building, partly of granite and partly of brick work. It consists of two principal floors, with a great deal of sunk accommodation, and an attic story. The building occupies the four sides of a quadrangle, with spacious corridors or verandahs, running all round the interior. The principal wards are lofty and roomy, each containing twenty-four beds, and the whole capable of containing 600 patients. The bedsteads are of iron, larger, and more commodious than many of the foreign bedsteads. In the body of the building are two chapels, one for the use of the patients generally, and the other, a smaller one, for the use of the "sœurs de charité," who attend the establishment, and each of whom has an apartment in the upper floor, neatly and comfortably furnished. There is also an operating theatre, which would be found small for any considerable number of pupils, and it seemed to me insufficiently lighted,—a defect, however, which may appear less when the walls are plastered and painted. The apparatus for raising water, for cooking, for washing, dressing, and drying the linen, are all in the sunk story, and of the most complete and perfect description. It may give some idea of the scale of the building, when it is mentioned that a railroad was constructing for conveying stores and provisions from one part of it to another. This hospital is, in short, the most complete structure of the kind which I have ever seen in any of the three quarters of the world in which I have served. It was thought a sight for the Queen of England, but owing to fatigue, Her Majesty omitted to visit this, and some other institutions, where she was expected.

Of the hospitals in Holland, those at Rotterdam, the Hague, and at Leyden, I am unable to say any thing. My visits to these places were too transitory to admit of this. At the former, there

is a new and elegant-looking hospital, probably by this time completed and occupied. Its situation, considering the general character of the country, appeared to me good, and I should be glad were I able to promise myself another opportunity of investigating its interior arrangements and economy. At Leyden is to be seen a very extensive collection in natural history and comparative anatomy. Here, also, is the anatomical museum of the celebrated Sandifort, and the botanic garden of Boerhaave; but having been unfortunate in not finding the chief surgeon at home, I had no opportunity of seeing the hospital.

At Heidelberg, where I passed several weeks last autumn, there is, as many of you know, a school of celebrity. Here Tiedeman holds the professorship of anatomy in the university, and has taught his science for upwards of forty years. He possesses a museum rich in many respects, particularly so in preparations of the lymphatics, and in those exhibiting the varieties of the arteries, in which this venerable anatomist is so eminently skilled. In this school, the professorship of surgery is held by Chelius, who is well known in this country by South's translation of his system of surgery, and whose name, in Germany, and all over the Continent, is associated with every thing which is profound, accurate, and useful in surgical science. At the hospital, where my son was a daily attendant, and I an occasional visitor, I saw this gentleman conducting the surgical duties with admirable precision, operating with steadiness and dexterity, and giving to the students of clinical surgery lessons of experience, by which I regret that my ignorance of the language did not enable me to profit. At this hospital, a large proportion of the applicants are treated as out-patients, and only those admitted into the wards whose cases are urgent or calculated to afford instructive lessons to the pupils. Hence those wards are less crowded than almost any others I have seen upon the Continent, and the patients in consequence more advantageously treated. There is a large field for selection, particularly in ophthalmic cases, a large proportion of which fall to be operated on in the hospital. Some of the wards allotted to their reception, are here painted of a grey or light bluish colour, which Chelius prefers to the green adopted at Vienna and Brussels. There is here a room set apart for a very large and instructive assortment of surgical instruments and apparatus, ancient and modern, calculated to show the progress of the art; to point out to young men the many foolish or mischievous contrivances meant to supply defects in the heads or hands of the inventors; and well calculated to prevent surgeons from bringing forward as novelties things which have been already tried and found wanting.

In Switzerland, I am not aware that any separate military hospitals are to be found, and into the state of the civil hospitals, of which slight notices are given in Dr Carter's work, I had no opportunity of inquiring. I regretted that I could not visit the one

at Berne, of which he speaks favourably ; but in this city I was much interested with the museum, where is to be seen a portrait, and some relics of the celebrated Haller, of whose extended reputation the Bernese seem to be justly proud.

Of the Parisian hospitals, I have, until now, been ill able to form, and slow to express, an opinion. When billeted with my regiment at Vaugirard, a suburb of Paris, in 1815, I had sufficient occupation in my own hospital, and little time to visit those of the metropolis ; or to cultivate the acquaintance of the eminent men who then practised in them. A second visit in 1841, was of such short duration, that, although I contrived to look into most of them, it was merely to make my bow to the chief surgeon, and to express my regret that I was unable to see more of them. During the by-gone winter, I passed three months in Paris, and was almost a daily visitor at one or other of the principal hospitals. It is quite obvious that, with all the accommodation which these institutions afford, they are much too limited for the pauper population of Paris ; that they are consequently overcrowded ; and that the surgeons as well as the patients are placed at a great disadvantage in the treatment of disease ; but nothing can exceed the attention to the cases, and the importance of the clinical instructions which are given at the Hotel Dieu by Roux, at La Pitié by Lisfranc, and at the Charité by Velpeau. Any peculiarities which I may have observed in their operations, modes of dressing, or treatment, will be noticed as opportunities offer in the progress of the course.

The "Hopital du Midi" is exclusively appropriated to the reception of venereal cases ; the building is antiquated, apparently damp, and in some respects ill adapted to do justice to the able treatment which these cases receive under the direction of Ricord, particularly to cases requiring the use of mercury. The opinions of this gentleman I have elsewhere noticed, and I had a much valued opportunity of hearing an exposition of them from his own lips, in excellent English, at a meeting of the Parisian Medical Society. Upon some few points my personal observation does not enable me to confirm or to impugn his peculiar views, but upon many points of practical importance I have often had the pleasure to remark a coincidence between Ricord's opinions, and the doctrines which I have long taught in this place.

It was, however, to the "Val de Grace," the principal military hospital, that my visits were most frequent. Here the patients are most advantageously placed ; the airing grounds ample and well kept ; the wards spacious, clean, and not overcrowded ; many of them, indeed, as the "Salles des Blessés," not at all occupied under ordinary circumstances. This is one of the four "Hopitaux d'instruction," for the education of the young army surgeons of France ; and here is a complete school of physic, with a series of eleven medical and surgical professorships, for the most part filled by gentlemen who have previously served in the army. Here

also is a valuable anatomical and pathological museum, a chemical laboratory, as well as a medical one for the service of the hospital, a library, and a commodious dissecting-room.

Amongst those who hold professorships in this school, is Monsieur Baudens, the "Chirurgien en chef," who at one time held the same appointment to the French army in Algeria, and whose name you will find mentioned with respect, in my "Outlines," as being, I believe, the first of the continental surgeons to deprecate the indiscriminate practice of dilatation in gunshot wounds. This gentleman very kindly demonstrated to me and my son, upon the dead body, various peculiar modes of operating, which he recommends in the removal of limbs, and which will be brought to your notice at the proper period of the course. Here too I was delighted to find my friend Baron H. Larrey, the distinguished son of a distinguished sire, holding the appointment of professor of surgical pathology, and one of the surgeons of the hospital. To him I have frequently occasion to refer as the author of the "Histoire Chirurgicale du siege de la Citadelle d'Anvers," at which he served in 1832; and it is not, I think, any overweening partiality to this gentleman, nor to his late venerable father, which induces me to say that he discharges his hospital duties with a masterly hand, and that he is one of the best lecturers I heard in Paris.

At the "Val de Grace," I was invited to be present at the distribution of the prizes to the pupils at the termination of their course, after an inaugural address by Lustreman, the professor of operative surgery. This took place in the principal theatre or lecture-room of the hospital, adorned with the busts of eminent surgeons of former days,—hung with drapery and with flags,—a guard of honour, and a military band being stationed in the adjoining court,—and the area of the theatre crowded with general and field officers, wearing on their breasts the badges of successful campaigns. Every thing, in short, betokened a becoming respect from the military to the medical department of the army—every thing was calculated to make an army surgeon proud of his position, and to encourage him in the faithful discharge of his duties,—and there was much to remind me, individually, of what I look upon as wanting in our own service.

Since I formerly visited this hospital in 1841, the statue of Broussais, which was then erecting in one of the courts, has been completed, and a place is marked out for an admirable statue of Baron Larrey, the model of which I saw in the hands of the sculptor David. A conspicuous place is assigned to it in front of the church of the Val de Grace, corresponding with the prominent position which the Baron so long held in the armies of France. In this hospital, which at the time of my visits, contained nearly six hundred patients, and in the "Gros Caillou" which contained upwards of three hundred, nearly all the sick of the im-

mense garrison of Paris fall to be treated. At the latter institution, the duties of chief surgeon are successfully discharged by Monsieur Soudan, who served for sometime in the army of Algeria. Here, as well as at the Val de Grace, we saw several officers under treatment in the hospital,—a practice common in the French army.

On the Quai d'Orsay, not far from the Gros Caillou, stands the "Magazin Central," a large depôt of military stores, and containing also those for the medical department—patterns of all the instruments furnished to the army surgeons, approved and sealed by the minister of war; with large quantities of linen for dressings and bandages. The "linge fenêtré," is cut by a machine, and the bandages are cut and rolled, in numbers at a time, by an ingenious contrivance, the invention of one of the officers of the institution. Here also we were shown one of the "ambulances," charged with its equipment of field stores, dressings, and apparatus. This I find has undergone great modifications since first described and figured by Baron Larrey in the first volume of his memoirs. These modifications I shall be able to explain to you in the proper part of the course; and by that time I may possibly be in possession of a plan and description of the ambulance, which was in the course of being printed when my son left Paris a few weeks ago; and of which I have been kindly promised a copy by Monsieur Bazan, the Director of the establishment, an old officer who had served in the Russian campaign.

Although not perhaps equally interesting to others as to me, I cannot leave the medico-military institutions of Paris, without noticing the celebrated Veterinary school at Alfort, about two leagues off, under the able direction of Monsieur Renaud. Here are nearly three hundred pupils under tuition, and about sixty horses, besides other animals under treatment. The pupils were to be seen assembled in groups, performing operations, or holding consultations on the cases of their patients. Numerous apartments are allotted for their lodgement, and others for their studies. Here is an extensive botanic garden, and an admirable museum, containing many beautiful and interesting pathological specimens, some of them the results of gunshot wounds in the horse.

At Orleans, at Lyons, and at Marseilles, the hospitals are all civil establishments, with particular wards allotted to the military. The hospital at Orleans is a modern and well constructed building. The theatre, the laundry or linen store, the cooking-house, and the baths are excellent. The wards spacious and not overcrowded, those for the soldiers differing in no respect from the others, except in the beds being destitute of curtains, an appendage to most of the hospital bedsteads in France, of very questionable utility. At Lyons, the old and original part of the hospital, the "Hotel Dieu," consists of a series of small ill ventilated quadrangular courts; a likely *habitat* for the hospital gangrene, which

Pouteau had to contend with in his own person, as well as in those of his patients. A more modern part of the building contains a chapel in the centre, with a large and lofty dome, wards of enormous size radiating off it. At Marseilles, the hospital is venerable only for its antiquity; it possesses no redeeming quality whatever except its elevated position, and is in all respects unworthy of a town of the extent, the wealth, and the commercial importance of Marseilles. A new military hospital is here in the progress of erection, with a view to the reception of the sick from Algeria, and this it may be expected will present in every respect a contrast to the old.

Of the hospitals and medical schools of Italy, I am at present altogether unprepared to speak, although I will not forego the hope that at some future period I may be able to compare what provision is made for the sick or wounded soldier in modern Italy, with the little that appears to have been done for the Roman soldier of old.

At Malta, I had the pleasure of visiting the military hospital in company with my old friend Dr Mahony, the Inspector General, and found it in that state of cleanliness, order, and regularity, which might naturally be expected under the superintendance of a gentleman of his extended experience. At the naval hospital here, I was recognised as an old preceptor by Dr Watt, the Deputy Inspector of naval hospitals and fleets. This is a recent building, of a very superior description, and in the most perfect order, under Dr Watt's superintendance. In the chapel, I observed a tablet to the memory of a former surgeon, Dr Martin of the navy, who was wantonly shot, a few years ago, by a reckless soldier, careless of his own life, and determined without any obvious motive to take that of another. By a letter recently received from my old apprentice, Dr Dods of the 88th regiment, now stationed at Malta, I have reason to know, that, through the kindness of Dr Watt, a plan of the naval hospital is in preparation for me, to be added to the collection of such plans which I have begun to form, and to which I shall take occasion to call your attention in a subsequent part of the course.

At Alexandria, the hospital occupies the four sides of a quadrangular court; it was formerly a barrack, and is not particularly well adapted to its present purpose, the roofs being low and the ventilation indifferent. The most, however, has been made of the building; and, considering the part of the world in which it is situated, and the habits of the natives, was in a state of cleanliness and order creditable to the medical officers. As a remarkable instance of the progress of surgery, I saw here a patient who had, a few days before, undergone the operation of excision of the elbow-joint, by the chief surgeon, with the assistance of my friend Dr Farquhar. This last-mentioned gentleman, who was formerly one of our House-surgeons in the Royal Infirmary here, is in

charge of the ophthalmic department of the hospital, in which he performs many interesting and successful operations, and I was delighted to find that he enjoys the confidence of the Pasha, as well as the respect and esteem of the European inhabitants of Alexandria.

At Grand Cairo, there is much that is interesting and instructive to the medical observer; and here I had the advantage of visiting the military hospital and the medical school under the auspices of Clot Bey, to whose energy and enterprise it owes its foundation, and to whose kindness and courtesy, as well as to that of his excellent colleague, M. Chedufau, I am deeply indebted. The hospital is capable of containing, if I recollect, fifteen hundred patients; but at the time of my visit, some of the wards were unoccupied, and none of them crowded—a proof of the healthy state of the troops. The prevalent diseases, as often happens in military hospitals nearer home, were itch, venereal diseases, and ophthalmia. Attached to the hospital, is an extensive laboratory, with stores, ambulances, and medical equipments for the army. Here also, as appendages of the medical school, are a theatre, a dissecting-room, museums of pathology and of natural history, a library, and a botanic garden. In the anatomical rooms were to be seen a number of young Egyptians hanging over two dead bodies, and with their books in their hands, (translations of some of our manuals) dissecting with all the ardour of the most enthusiastic pupils—an extraordinary conquest over national prejudices,—and one amongst many proofs of the energetic character of that remarkable man, Mehmet Ali, who never fails to enforce what he wills.

In several of the adjoining rooms, were assembled groups of young men, classed according to their several degrees of progress and repeating, under the direction of the assistants, or more advanced pupils, the instructions of their respective professors. Many of these young men wore upon their breasts badges of honour bestowed by the government. The design was a combination of the crescent, emblematic of the Turkish empire, with the insignia of their profession, the serpent and rod of Esculapius, and this neatly executed in gold, or in silver, to mark the rank or merit of the wearer. The number of pupils in this school, I am not prepared to state, but I think I was told that upwards of six hundred had been already educated, had passed their examinations, and were attached to the army and navy, or distributed over the provinces.

Over another institution which exists in the city of Cairo, I was conducted by M. Chedufau. This is an extraordinary combination of a general hospital, with a receptacle for lunatics, a lying-in hospital, and a school of midwifery, all under the same roof. I am pleased to be able to state, from personal observation, that the insane in this establishment are now happily relieved, chiefly,

I believe, through the successful representation of Clot Bey, from that cruelty and restraint, that combination of stripes and chains, with which patients of this description were formerly treated; and which in this hospital were practised, I understand, up to a late period, with unrelenting severity. In the school of midwifery, girls are brought up from the most tender years, employed first in nursing the children born in the institution, and subsequently initiated into the mysteries of their profession. As auxiliaries to their education, I observed a female skeleton, and some wax figures displaying the peculiar conformation of woman.

Allied to the medical institutions at Cairo, is the Veterinary school, which I visited, beyond Shoubra, six or seven miles off. Here were about fifty pupils under instruction; and the native Director, who seemed much pleased with my visit, insisted upon having them assembled in the theatre, and upon my putting some questions to them. Through the medium of the French language, which he spoke fluently, which I never speak but from necessity, and at all times imperfectly, I contrived to ask a few questions on the structure of the skeleton, the contents and diseases of the thorax, the contents of the abdominal cavity, and the difference between the stomach of the horse and that of ruminating animals, to which I got, in general, very satisfactory answers. In my visit to the hospital at Cairo, I was accompanied by my old pupil, Dr Barker of the Madras army, whom I accidentally met here on his return from India. Nothing indeed has given me more pleasure during the few by-gone months than the opportunity of meeting with so many of my old pupils. Whether in France, in Italy, at Malta, or in Egypt, whether at sea or on shore, I have met with old pupils of this class, studying their profession with assiduity or practising its duties with success.

To counterbalance this pleasure, I have to regret that, in consequence of the shipwreck of the "Great Liverpool," in which I was cast ashore on the coast of Spain, I have been deprived of numerous books, papers, and manuscripts. Amongst these were several works and monographs, with which I was kindly loaded by Clot Bey, partly for myself, and partly for the University. Amongst the latter was one on the Guinea worm, of which he also favoured me with a specimen; and although this was of no great intrinsic value, as I possess numerous specimens of this animal from other quarters, which will be shown in the proper period of the course, yet I am deprived of the pleasure of enrolling the name of this eminent surgeon amongst the contributors to the museum of this class. Of his life, I had furnished myself with a memoir, extracted from a French publication, entitled, "Les Hommes du jour." The most irremediable, however, of all my losses, is that of my notes on the French hospitals, which I had occupied myself in writing during the winter, and which would have enabled

me to make this sketch more accurate, more complete, and in every way more worthy of your acceptance.

I would now, Gentlemen, advert more particularly to our own position in this great school of medicine, to notice the arrangement which I think it expedient to follow, and to enumerate the topics which it is incumbent on me to discuss. The course consists of three great divisions; in the first of which falls to be considered the selection and examination of recruits for the army; the diet, clothing, and exercise of troops; their accommodation in the field and in quarters; the position of camps; the site and construction of barracks; the diseases to which they are more particularly subject in these respective situations, and the means of prevention. Next, the situation, construction, and economy, of military hospitals; and, lastly, the means of transporting the sick and wounded. These are topics of which it will be difficult for young men inexperienced in the service duly to appreciate the importance; but the numerous authors to whom I shall have occasion to refer, in illustration of my views, will afford the best possible proof of the value in which they have always been held by the most able and experienced of our military and naval surgeons.

In entering upon the second or surgical division of the course, I introduce it with a few remarks on inflammation, which are followed by the consideration of burns, ulcers, and hospital gangrene. Next follows the subject of wounds, with their numerous complications, and the several operations required in their treatment; and, lastly, the treatment of ophthalmia and the venereal disease, with the subject of military punishments, coercive and corporal.

In the third and concluding division of the course, fall to be considered the geographical distribution of diseases; the diseases incident to soldiers and seaman in long voyages, on foreign stations, and particularly in tropical climates.

Those who are conversant with the spirited memoir of Mr John Bell, on military and naval surgery, lately reprinted in the *Medico-Chirurgical Review*, will observe that the above outline coincides in all its essential features with the plan sketched out, nearly fifty years ago, by that talented writer, who was the first to suggest a course of this kind, and the most strenuous advocate for its establishment. The experience of a quarter of a century, and the unreserved intercourse which I have enjoyed during that time with my professional brethren of all ranks in the public service, does not suggest to me any material change in the general plan and arrangement of the course; but it is otherwise with regard to the time allotted to the several departments. I have elsewhere given my reasons for extending the surgical division of this course, and when I remarked, that, "in a period of long protracted peace there is some risk of the medical officers of the army overlooking the importance of the surgical department of

their profession," it was only a delicate way of stating a fact, which I have too frequently observed, that when men are long withdrawn from the contemplation of surgical cases, they become indecisive and inexpert in their treatment. It is not then any abridgment of this, but an extension of the other two divisions of the course which I would desire; the first, as embracing subjects of paramount importance to the health and efficiency of the soldier; and the last, as being the department of the course in which I am least of all satisfied with my own exertions. Here I am free to confess, that, from the want of time which I have generally experienced towards the conclusion of my course, I have been unable to do justice to the later observations of others, and have been too apt to satisfy myself with having, nearly thirty years ago, laid before the public all that my personal experience had taught me of the diseases of the European troops in India.

In adverting to the means of illustrating my views in the introductory department of the course, I cannot omit this opportunity of offering my acknowledgments to several officers, both of the Queen's and East India Company's service, who have furnished me with plans of hospitals, and with plans and models of contrivances for the conveyance of sick and wounded. In looking to the surgical department of the course, I would notice, with feelings of gratitude, the obligation under which I and my class have recently been laid by the *Senatus Academicus*, in procuring for the instruction of the students of military surgery, and of the medical students generally, the valuable collection of preparations made by Mr Rutherford Alcock, during the campaigns of the British Legion in Spain. This is a collection chiefly illustrative of the injuries done by firearms—a collection to which I have frequent occasion to refer, and of which I may give you some idea by the few specimens I now lay before you, and by the printed catalogue which I shall put into your hands. Here also I would notice a valuable present which has lately been made to me by my distinguished predecessor, Dr Thomson—a collection of nearly two hundred sketches of the most remarkable wounds received at Waterloo. The object for which I would turn your attention, at the present moment, to these sketches, is to impress upon you the advantages of cultivating a taste for drawing, which I omit no opportunity to recommend. To show you how much may be done in this way by the simplest possible means, and almost without instruction, here are sketches made with a common writing-pen on slips of letter-paper, each of which forms a more useful and convenient memorandum to a military surgeon than a volume of descriptive writing. To those of you who wish to prosecute this elegant and useful accomplishment, I would hold up the example of my late distinguished colleague, Sir Charles Bell, whose pencil was a treasure to himself and to his pupils. Were our brethern in attendance upon the armies of India skilled

in the use of the pencil, what interesting sketches might we not expect from the banks of the Indus and the Sutlej?

The collection of which I have been able to possess myself in this locality, comparatively unfavourable from the limited military establishment in Scotland, will show,—I admit indeed but faintly,—what might ultimately be accomplished by the co-operation of professors in the two other metropolitan cities of the empire. While I would make the possession of such a collection a matter of congratulation to you, I must allow, that it brings to me two very painful reflections,—the feeling that, in the earlier years of my occupation of this Chair, I discharged my duties to my pupils under many disadvantages,—and that now, when placed in a position to discharge those duties more to my own satisfaction, I find that the advance of years, and the encroachments of ill health, prevent my looking to a long tenure of office. This leads me to say, that, be my retirement sooner or later, I shall quit my post with feelings akin to those which dictated the following sentiment of the late Dr Trotter:—"From that service," says he, "I am now about to retire, where I have spent all the best of my days, and to which my studies have been faithfully devoted. It must now think of me as a man who can have no share in its future operations, but who will be proud of its remembrance as long as he lives. God forbid! that I should carry to the grave a single idea that could benefit the naval service of the country."

Although, Gentlemen, we have too long stood alone in this University, as the only class of military surgery in these kingdoms, I must not lead you to suppose that this is the only source of instruction open to young men entering the medical departments of the army and navy. At the General Hospitals at Chatham, at Haslar, and at Plymouth, there are opportunities of receiving the occasional instructions of men of experience in the service, and there are opportunities of pathological research of the most valuable kind. I have elsewhere given my opinion of the advantages which these establishments hold out, and of those of which they are necessarily destitute. Upon this subject, however favourable the opportunity, I will not be tempted to enter again, lest I should appear to depreciate the importance of Institutions so eminently creditable to the present Directors of the Medical Departments of the army and navy as their patrons, and to the junior officers of these departments as their most liberal supporters. The state of the museums attached to these institutions must, indeed, be matter of surprise and admiration to those who know, as I do, with what scanty assistance from the public they have been brought to their present state of perfection. I know not whether of late years the Government has been more liberal, but, with reference to Chatham, more particularly, I believe I am correct in stating, that at one time the money necessary to procure glass and spirits for the preparations, was given with a grudging hand.

Without disparagement to any of his predecessors, I may be permitted to say, with reference to an old friend, Dr French, that the superintendence of the young gentlemen at Chatham, was never in more eligible hands than at the present moment—in the hands of a man who has been thirty years out of England on professional duty, and who, while he possesses much of the energy of youth, has had the experience of a campaigner in the Peninsula, in India, and in China. But I am much mistaken if he, as well as others, will not see the superior advantages of a metropolitan establishment for the objects which I have in view. The Director General, in a communication which I had from him many years ago, was pleased to express his regret that my lectures were not delivered at Chatham; but I believe he does not dissent from the opinion I have elsewhere expressed that, “lectures of this kind will be most advantageously given where there are most to benefit by them—in the metropolitan schools.” A General Hospital offers no peculiar facilities for the collection and diffusion of information on the subjects embraced in the introductory part of my course, in what relates to the selection, to the clothing, equipment, dieting, and lodgement of soldiers; in short, to the all-important subject of preventing disease. The advantages of such an establishment as Chatham, are necessarily confined to young men who are already commissioned, or who are sent there for a limited period, preparatory to getting commissions in the public service. The doors of such an establishment are virtually closed against a class of gentlemen who for many years constituted the most numerous, and who have always constituted the most attentive part of my audience—gentlemen returning after a long absence, on foreign service. These gentlemen find, that in their absence surgery has made gigantic strides, and that chemistry has become a new science; and are they to forego all the advantages of a metropolitan residence, with the facilities of access to all departments of study, and to resort to a provincial town, where pathology and natural history are the only subjects they can study to any peculiar advantage? I am not seeking the extinction of the clinical school at Chatham, I am advocating the transference of its valuable museum and library to the metropolis.

We are now in some measure prepared to compare what is done in other countries for the instruction of their army surgeons, with what is done in our own. In taking a retrospect of the foreign hospitals, I must say that, with the exception of those at Brussels, and at Orleans, I have seen little to admire in regard to their construction, nothing to be compared with some of our own structures, particularly those of the navy,—the great hospital at Haslar,—the marine hospital at Chatham,—and the naval hospital at Malta. But into the advantages of these, or the defects of others, I must not enter at present; a very early opportunity will present itself of giving you my sentiments fully upon this sub-

ject, when I come to treat of the structure, economy, and administration of military and naval hospitals. Looking again to the medical schools connected with the great military establishments of Prussia, of Austria, and of France, one cannot help being struck with the liberal expenditure of these foreign powers in their support, and the vigilant attention to the health of the soldier, which this expenditure implies. One is at the same time naturally led to inquire into the necessity of such separate establishments in countries where the army surgeons have only to become conversant with the diseases of their own climate. In answer to some remarks which I formerly made upon this point, it has been said that the scanty pay of the surgeons in the continental armies holds out no inducement to men of education to enter them, does not enable young men to educate themselves for the service, nor to prosecute their studies in the intervals of active duty.

I can understand the application of all this at Grand Cairo, where there is no medical school in the country, except that which is established by the government at the military hospital. But I should be glad to know how it applies to those continental cities, where the professors in the universities, and the surgeons in the great civil hospitals, are all paid by the state? and where admission to the lecture-room, and to the wards of the hospital, is as free to the pupils as the air they breathe? I was unable to obtain any accurate account of the expenses of the "Val de Grace" at Paris, but I question whether one half of the expenditure of this splendid institution would not board all its pupils in the city; aye! and if necessary, fee, over and again, all the professors they might have occasion to attend. I question whether the five thousand pounds said to be expended annually on the Josephinum at Vienna, would not double the pay of all the surgeons in the Austrian army. Is it not possible, however, that the foreign governments see advantages to the young men educating in these institutions from the subordination and surveillance there established? from the opportunities they have of becoming acquainted with the habits, constitutions, and diseases of the soldiery? and, above all, from the opportunities of hearing the lessons of professional experience from men whose views are modified by military contingencies? Is it not possible that they may be actuated by those views which dictated to Frederick William the Second, the foundation of his Institution at Berlin, "TO PRESERVE TO THE NATION THE EXPERIENCE ACQUIRED BY THE ARMY SURGEONS DURING THE WAR?"

The liberal expenditure, for this purpose, of foreign states, which I have noticed as a contrast to our own, is probably in some measure due to the absence, in the monarchical governments on the Continent, of that constitutional jealousy of a standing army which in England is carried to excess. But I cannot permit myself to

suppose that this will be seriously argued as a question of economy, when the health of the army and navy is concerned.

It is not, Gentlemen, for the institution of such schools as those which I have noticed on the Continent, that I am contending, it is for a much more limited object,—the establishment of a single lectureship in each of the other metropolitan cities of the empire. I do not contend for separate schools for the general education of our army and navy surgeons, but for special courses of instruction which the peculiarity of our service demands. I am well aware of the liberality with which numerous educational establishments and private lecturers have opened their doors to our army and navy surgeons, and for which I believe they are abundantly grateful. But this does not obviate the defect at which I point, and while that defect continues, the necessity for a remedy increases every hour. At this moment the country is ringing with the peals of victory, and the shouts of triumph from a distant quarter of the world, where thousands of our countrymen, and of their brave native comrades, have perished in hard fought fields,—and where thousands more are contending with an adverse climate in addition to their wounds. Possessed of colonies in every corner of the globe, savage and civilized, these colonies presenting to the soldier and the seamen every thing which can possibly affect his health,—every variety in climate, in lodging, in food, and in duty,—it surely behoves us to afford to those who undertake the professional charge of our fleets, and our armies, the means of informing themselves of all that has been done,—of all that may be done,—towards saving the lives, and preserving the health of our gallant defenders.

To say that these opportunities are afforded in the schools as at present constituted, is, in my opinion, to betray an utter ignorance of the subject. Let me ask any honest and unprejudiced teacher to look at the lists of professional writings of military and naval surgeons, which I have laid before the public, in my "Introductory Lectures," and "Outlines," and let him say whether he has had the inclination or the inducement to scrutinize these volumes, and if so, whether there is time and opportunity to introduce into the common courses of physic and surgery all that is of importance to the health of the soldier. Is this country, which affords opportunities for the improvement of Military and Naval Medicine, beyond any other, aye! beyond all others put together, to be the country where least of all is done for the advantageous study, and the useful diffusion of its vast stores of experience? Is the accumulated experience of our army and navy surgeons, to go to the grave with its possessors, or to be buried in the archives of a public office? In saying this, I am well aware of the facilities of access which are given to the records of the medical departments, and I appreciate most highly the digest of these records which has recently been given to the

world in the Statistical Reports ; but I am equally aware, from personal experience, that much tangible and available information is elicited by incidental observations in the course of lecturing, and that numerous important communications, both verbal and written, are voluntarily given to a professor, which would never be called forth by authority. It is in this way that the experience of the existing generation of army and navy surgeons will be most advantageously handed down to their successors in office ; and it is the loss annually sustained by the profession and the public, from the want of additional establishments for this purpose, which I deeply deplore.

But as the opportunities for prosecuting studies of this kind are wanting, so also is the time. It is no new nor peculiar opinion of mine, that the courses of study prescribed by some of our licensing bodies have become overloaded with compulsory attendance. Let it not be supposed that I deprecate the cultivation of those accessory branches of learning and of science which have been, I think unwisely, mixed too much with the courses of professional study. I do not undervalue those desirable, those necessary accomplishments, which are creditable to the individual and honourable to the profession. All I desire is to see the period generally allotted to professional study more judiciously adapted to the objects of the student. There are certain fundamental branches indispensable to all, but I must think that in many instances the nature and extent of compulsory study is ill proportioned to the probable wants of the individual, and what is necessary for the temporary purpose of an examination, takes the place of what would be permanently useful. Is it right that every medical student should be forced, whether by a compulsory law or by the terror of an examination, to consume his limited time in pursuits to him, it may be, of little importance, to the exclusion of those which are to constitute the business of his life ? I have always advocated a high standard of literary and scientific attainment in gentlemen aspiring to a Doctor's Degree, but is it necessary that the studies requisite for this purpose should be so mixed with his professional course, as to preclude a candidate for the army from giving his attention to military hygiene ? or the expectant of a naval appointment from studying the causes and prevention of disease in the fleet ?

I do not desire that a course of Military Surgery should be added to the list of imperative classes, nor that attendance upon it should be indirectly enforced by examination preparatory to the obtaining of a surgeon's diploma, or a doctor's degree. Let the time and opportunity be given, and the professors of military surgery may promise themselves numerous auditors, neither inattentive nor unwilling. " I know," says Mr Bell, " that your minds go willingly along with me when I dwell upon those duties which agree so well with the ardent and generous temper of youth."

The correctness of this sentiment I have fully experienced ; and I have also learned, by experience, that courses of military surgery are prized by many who have no view to the public service of the state ; by gentlemen educating with a view to the charge of large civil hospitals ; to practise in the manufacturing and mining districts of the country ; to serve in the large ships of our commercial marine ; and, above all, by those educating for colonial practice.

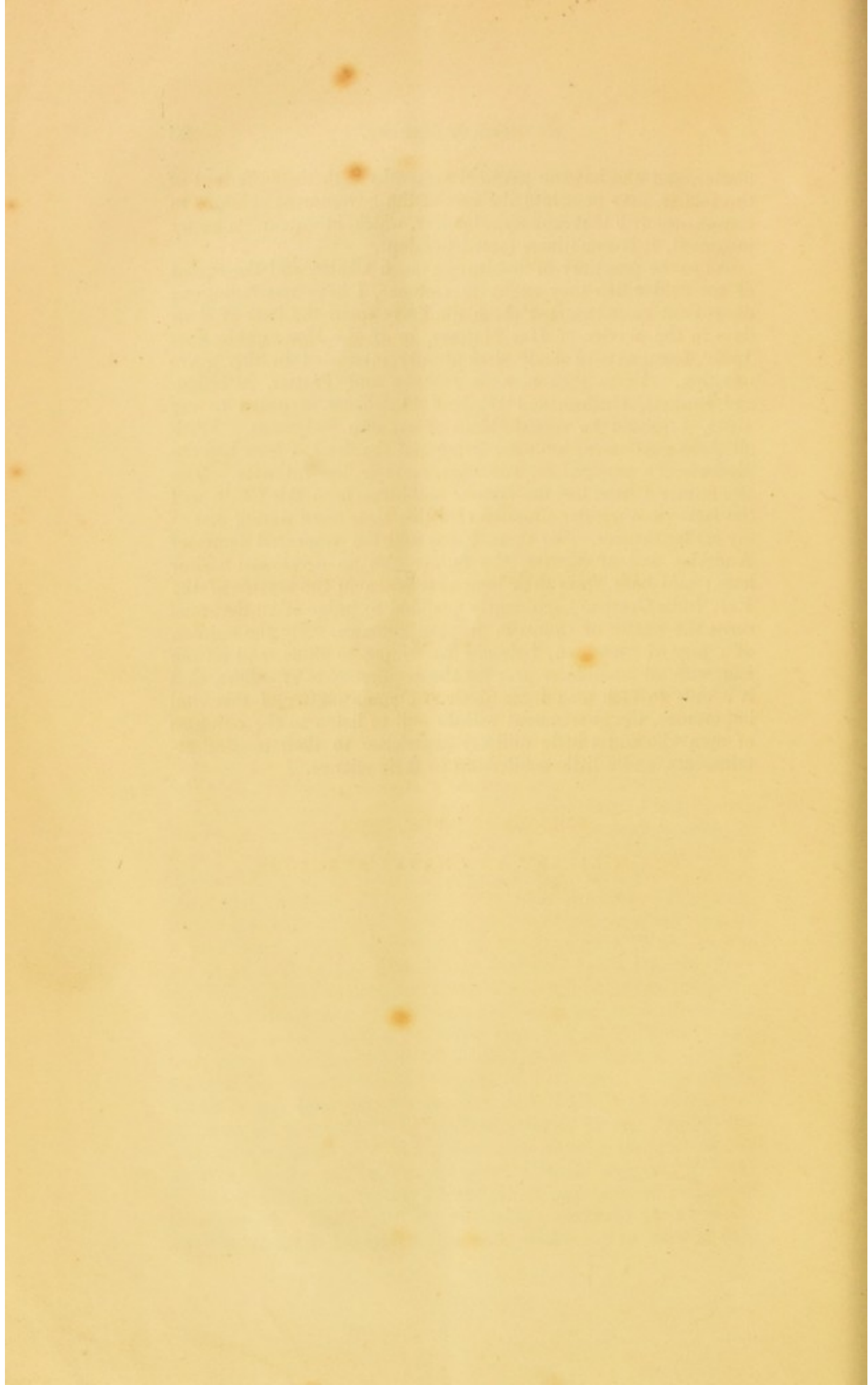
Why, then, is the government so slow to adopt this reasonable suggestion ? The utility of this course has been officially recognised by the highest authorities, in a way, to me, peculiarly gratifying ; and in the College of Surgeons here, the late Dr Kellie, himself an old naval surgeon, moved, that candidates for the diploma of the College should have the option of attending this class, instead of a second course of surgery ; and this, said he, I propose as a boon to the student, not to the professor. But the utility of such courses ought not, in my opinion, to rest upon any thing which has hitherto been done here or elsewhere, but upon what may hereafter be done by the combined efforts of several professors.

Did I now come forward, for the first time, to propose the establishment of rival schools, when growing years and failing health render me unable to enjoy my monopoly, I should come in a very questionable shape ; but upon this subject my language has been uniformly the same, *talis ab initio* ; and of this, fortunately for me, there is abundant evidence in my Introductory Lectures, published many years ago, in my letter addressed to Mr Warburton in 1834, and in the successive editions of my " Outlines."

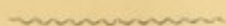
From the moment I was placed in this Chair, I have never ceased to feel how much my efforts must be cramped, so long as I stood alone. The distinction of being the only Professor of Military Surgery in these kingdoms, is one which I have always been ready to share with others. In season and out of season, within the walls of this class-room, and in the circle of my friends, I have never ceased to advocate the establishment of similar lectureships in the other metropolitan schools ; but it was only after my visit to the Continent, in 1843, that I felt myself called upon, or placed in a position, to make a public representation upon this subject, in a letter addressed to Sir Robert Peel. To those who have given any attention to the questions with which the government of this country has been occupied for years ; to the way in which it has been importuned and bewildered with conflicting opinions on the subject of medical reform, it can scarcely be matter of surprise that the government should be slow to undertake, or the medical departments slow to suggest, the endowment of Chairs for the instruction of any particular class of practitioners. But while the authorities withhold their official representations, it is possible that men, without experience in this

matter, and who have no personal sympathy with the sufferings of the soldier, may pour into the ears of the government opinions in consonance with that economical policy, which, in spite of its better judgment, it is sometimes forced to adopt.

As to the propriety of instituting such Chairs, and the extent of the field which they ought to embrace, I have not found one dissentient voice amongst those who have spent the best of their days in the service of Her Majesty, or of the Honourable East India Company—a body very deeply interested in this grave question. Were such men as Jackson and Trotter, M'Grigor and Burnett, Guthrie and Copland Hutchison, opposed to my views, I should be very diffident of my own judgment. With all these gentlemen, both the living and the dead, I have had the pleasure of a personal acquaintance, more or less intimate. The two former I have had the honour to address from this Chair, and the last was a regular attendant in this class-room during one of my earlier courses. To these I may add the respected names of Annesley and of Martin, the former also an occasional visitor here; and both, from their long experience in the service of the East India Company, eminently qualified to judge of all that concerns the health of troops in tropical climates. By the opinion of a jury of such men, I should be willing to abide, and let me add, with all possible respect for the acquirements of others, that it is only to such men I can defer. Upon a matter of this vital importance, the government will do well to listen to the opinions of men who add a little military experience to their medical attainments, and a little soldiership to their science.



APPENDIX.



LETTERS

TO SIR ROBERT PEEL, BART.

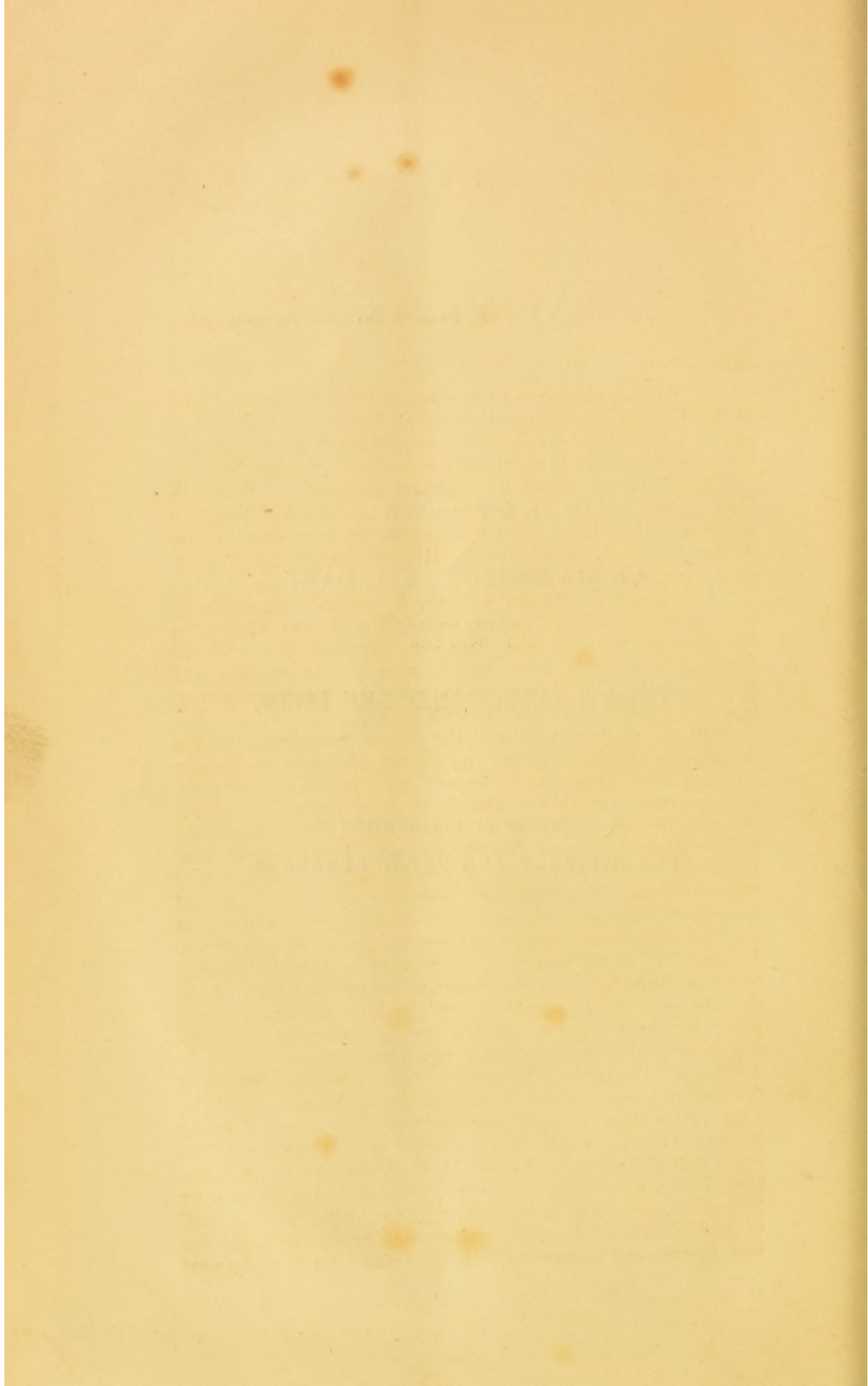
AND TO THE

EDITOR OF THE MEDICO-CHIRURGICAL REVIEW,

ON

SCHOOLS OF INSTRUCTION

FOR MILITARY AND NAVAL SURGEONS.



EDINBURGH COLLEGE, 25th September 1843.

SIR,

To your patronage I am indebted for the situation I hold in this University, and to you, therefore, I venture to address myself on a subject which necessarily occupies much of my attention—the instruction of Medical Officers for the Army and Navy.

I have recently visited the Garrison Hospitals of Paris, the Gros Caillou, and the Val de Grace, with the School of Medicine attached to the latter; and I have, within these few days, returned from a professional visit to the Military Hospitals in Prussia, in Austria, and in Belgium.

I have been much struck with the liberal provision made by some of these foreign states, particularly Prussia and Austria, for the education of their Army Surgeons, in comparison with the very scanty provision made for the same purpose by our own Government. This liberality is the more remarkable, in proportion as it appears to me the less called for.

With the single exception of the French Surgeons serving in Algeria, the Surgeons of the continental armies are exclusively occupied in the treatment of diseases occurring in their own climate,—diseases which are familiar to every practitioner of experience, whether in civil or in military life. What again is the case with our Army and Navy Surgeons? Two-thirds of them are constantly occupied in the treatment of formidable and fatal diseases, incident to soldiers and seamen on foreign stations, and in tropical climates,—diseases with which neither practitioners nor teachers in this country are, of necessity, practically acquainted. While, then, on the continent, where little peculiarity of instruction is required by the Army Surgeon, institutions for his education abound; in this country, where the duties devolving on the Army and Navy Surgeon are of a peculiar and onerous description, little facility is given for his special instruction.

Of the “Hospitals of Instruction” for the Medical Officers of the French army, established at Strasburg, at Metz, and at Lille, I am unable to speak from personal observation, but I would briefly notice two establishments which I have recently seen, the institution of Frederick William II. at Berlin, and the Josephinum Academy at Vienna. The former of these was destined by its royal founder, “in the first place to receive the Surgical Staff of the Field Hospitals, which had acquired experience in the war with France, and to preserve it to the country; and in the next

place, to provide for the Field Hospitals in future, a supply of well educated Surgeons." The Josephinum at Vienna is justly said to be "one of the most truly imperial establishments in the city." This institution, said to be supported at an annual expense of nearly £5000, with its magnificent anatomical collection, its large Hospital and Clinical School, its numerous able and talented professors, was established by the Emperor, whose name it bears, as "a School of Medicine for the special purpose of supplying medical men to the Austrain army." "MUNIFICENTIA ET AUSPICIIIS IMP. CÆS. JOSEPHI II. P. F. SCHOLA MEDICO-CHIRURGICA MILITUM MORBIS ET VULNERIBUS CURANDIS SANANDISQUE INSTITUTA ÆDE ET OMNI SUPPELECTILE SALUTARIS ARTIS INSTRUCTA."

Let us now compare these institutions with the very limited provision made for similar purposes in Great Britain, namely, the establishments at Chatham, at Haslar, and at Plymouth, and the professorship of Military Surgery in the University of Edinburgh. The Museums attached to the great Military and Naval Hospitals in England, most creditable as they are to the Heads of the Medical Departments, and to the zeal and public spirit of the Medical Officers of the service, are very inadequately patronized by the Government. They are, in fact, more the creations of the departments, than the institutions of the State.

The Hospitals, again, to which these collections are respectively attached, however valuable they may be as Schools of Morbid Anatomy and Pathological inquiry, are but little calculated to instruct young men in the treatment, or, what is of more importance, in the prevention of those diseases for which their best energies are required. A large proportion of the diseases falling to be treated in these Hospitals are not the diseases incident to men in the vigour of life, who, by prompt and efficient treatment, may be preserved to the service; but are, in many instances, the cases of men already lost to the service, in consequence of confirmed and incurable organic disease.

But even admitting, to the fullest extent, the utility of these Museums and Hospitals, to young men entering the army, I would ask, how far they are available to another and very important class of pupils,—to men returning from a protracted absence on foreign stations, with the double purpose of renovating their health, and renewing their professional knowledge. I know well what it is to have served in the distant regions of India, secluded for years from the companionship of books, and from all intercourse with the lights of the profession. I have seen, with much pleasure, the facilities so judiciously afforded, by the present distinguished heads of the Medical Departments of the Army and Navy, to gentlemen so situated, to resume their professional studies—a clear index of their opinion of its necessity; and I have witnessed with delight the avidity with which these gentlemen avail themselves of the opportunities here offered of recovering their

lost ground, and qualifying themselves to take their place amongst the well informed members of the profession. But it is not to Chatham, to Portsmouth, or to Plymouth, that such men will resort. It is to the metropolitan cities of the empire to which they will naturally look for the most recent, the most satisfactory, and the most authentic information on the progress of science, and on the improvements in Medicine which have taken place during their absence.

While much of the information which such men naturally desire, is, I readily admit, to be obtained from the usual courses of Medicine and Surgery as delivered in the schools, it is not too much to expect that there should be in each of the three divisions of the kingdom at least one establishment, under the patronage of Government, to which they may resort as a matter of right, where they will be sure to find at least one Professor conversant with the nature of their duties, who can enter into their wants and wishes, and who is constantly employed in directing their attention to those subjects which constitute the business of their lives; where they will meet with their brethren in the same department of the service from every quarter of the world, and from intercourse with whom, mutual benefit may be derived. I would ask the numerous gentlemen in the Army, the Navy, and the Honourable East India Company's service, who have frequented the class of Military Surgery during the last twenty years, whether they have not obtained, from such intercourse, great and obvious advantages. I have already given my opinion, "that much valuable information is annually lost to the public from there not being in each of the metropolitan schools, at least one Professor or Lecturer, whose attention is specially directed to the topics embraced in the course of Military Surgery, and to whom gentlemen returning from foreign service might freely communicate their observations."

The Chair of Military Surgery in this University was instituted in the person of my immediate predecessor, the learned and venerable Dr Thomson, author of a much esteemed work on "Inflammation," and of a "Report on the state of the Wounded in Belgium after the Battle of Waterloo." Its institution was, I believe, originally grounded on a memoir addressed to the First Lord of the Admiralty, after the battle of Camperdown, by the late Mr John Bell,—a memoir, every word of which I might quote with advantage to my present object, but I only advert to the very accurate conception which the author had formed of the duties of a Professor of Military Surgery, to say how perfectly it coincides with my own. After alluding to the essentials of Anatomy, and to the great principles of Surgery, Mr Bell goes on to observe, "These general principles of the science must next be applied to the peculiar duties of the Military Surgeon; the Professor must teach carefully the peculiar nature of gunshot wounds.

“ He must deliver a short code of Military Medicine, explaining the fevers, fluxes, spasms, infectious diseases, and all the peculiar duties of the camp and the hospital ; he must also explain the scurvy, ulcers, and all the disorders most frequent in ships of war.

“ He must teach Medical Geography, the climates, seasons, coasts of various countries, the manner of conducting soldiers on a foreign expedition, the general care of their health, the choice of encampments, the forming of hospitals on shore ; how to convert churches, granaries, public buildings, into occasional hospitals ; how to attend an army in the field ; how to lay the wounded in besieged towns ; how to carry them off the field in a retreating army.

“ Along with these must be taught Military Economics, diet, exercise, clothing, general medicine, and all methods of preventing disease. Without this knowledge, no man is entitled to serve. How few are thus taught ! How few are fit for service ! How few are there who are not conscious of those blurs and blots in their general education, which no diligence of their own can ever do away !

“ The last and not the least important duty of the teacher should be to point out for his pupils a future plan of study ; to make for them a selection of books ; to deliver critical and practical observations on those which are to be most used. The teacher must not only instruct his pupils for the present, he must select objects for their future study. He must teach them this truth, that their education is only begun, and that the best of their studies remain as yet untouched ; he must show them how to think for themselves, and then he may hope to reap in his turn the fruit of their labours, and live to see their observations and cases published under his own care.”

Within these few months, the Senatus Academicus of this University has, upon my recommendation, procured for the instruction of this Class, and for the use of the Medical Students generally, the valuable collection of preparations made during the recent campaign of the British Legion of Spain, by Mr Rutherford Alcock ; a collection almost exclusively illustrative of Gunshot-wounds—so far as I know, quite unique in its kind—and which, with the small collection of preparations, models, casts, and drawings, which I had previously made, will enable the Professor, in future years, to conduct the business of this class with increased advantage. I feel that the liberality of the Senatus Academicus upon this occasion deserves the gratitude of the public. I feel that it has done what might, not inappropriately, have been done by the Government ; and I feel that it has laid me under a load of responsibility which I am desirous to meet by increased exertion. But I feel, at the same time, very forcibly, that upwards of seven-and-thirty years have now elapsed since I first entered

the army as an Hospital Mate, and that, consequently, I am arrived at a time of life when my exertions are ill able to keep pace with my wishes.

There is one other source of information for the Medical Officers of the Army and Navy, to which I would briefly allude, and with which you, Sir, as a Member of Parliament, must necessarily be acquainted, I mean the "Statistical Reports on the Sickness, Mortality, and Invaliding among the Troops," and the "Statistical Reports on the Health of the Navy." These have been prepared at an enormous amount of labour to the authorities at the Horse Guards, the Medical Board, and the Admiralty, and at a very considerable pecuniary expense to the public. All this labour, all this expense will, I confidently assert, be in a great measure lost to the service, unless means are taken to concentrate the valuable information embodied in these reports, to put it in an attractive and impressive form, and to keep it constantly before the present and the rising generation of Army and Navy Surgeons.

Having now, I believe, noticed all the sources of information specially adapted to the Medical Officers of the Public Service, I would observe, that the first, the General Hospitals, are in a great measure unavailable to a numerous and important body, the Medical Officers returning from foreign stations; the second, the Lectures delivered in this University, are only accessible to a limited number, and this hitherto by favour of the Professor, not as a matter of right; and that the third, the Statistical Reports, are in their present shape too voluminous to be consulted with facility, or to be carried about with convenience. What then is the remedy I would propose? Simply the endowment of a Professorship of Military Surgery in the King's College, or in one of the Central Medical Schools in London, and a similar establishment in the University, or at the College of Surgeons in Dublin.

I am well aware that in advocating any establishment connected with the purposes of warfare, I shall perhaps meet with little sympathy in the public mind, which has now, for a series of years, been so wisely and so well devoted to a cultivation of the arts of peace; but it has been justly observed, that "in proportion as constitutional, political, or financial circumstances render it expedient to reduce the numerical force of an army during peace, it becomes the more necessary to maintain those establishments in which practical science is upheld,—science which has been acquired in a long series of arduous and expensive training on real service." "War, and all its demoralizing and expensive consequences, are doubtless conditions not to be desired; and it becomes both nations and individuals to be prepared against its casualties and calamities. If any one institution is more necessary than another, it is that, the object of which is to diminish

the number, and mitigate the severity of the various evils necessarily attendant on those engaged in Military and Naval duties."

I am also aware, that in advocating such establishments, I have professional prejudices to encounter. Frivolous and idle exceptions have been taken to the very term "Military Surgery," as if it was desired to imply by it something altogether different in principle, as well as in practice, from common Surgery. It is not for a name that I am going to contend; and although I do not myself consider the term inappropriate, I say, at once, that I wish it to be used in a very extended sense; as embracing not only the more strictly surgical accidents and diseases prevalent amongst the troops, the doctrine of wounds, the treatment of ulcers, venereal diseases, and ophthalmia; but also the treatment of those internal diseases which are prevalent on foreign service, and in our numerous colonial possessions; above all, embracing the consideration of every thing which concerns the selection of recruits, the choice of men for particular stations and duties, the diet, clothing, and exercise of troops, the position of camps, the site and construction of barracks and hospitals,—subjects, which are intimately connected with the health and efficiency of the soldier; the diet and clothing of the seaman, the ventilation of ships; and, in short, all that, in either branch of the service, contributes to the prevention, as well as to the cure of disease; for it cannot be too often repeated that it is by prevention, rather than by cure, that the efficiency of our fleets and armies is to be maintained.

I will not, however, dwell longer on such objections as those to which I allude, because they come exclusively from gentlemen, whom, with all possible respect for their professional eminence, their private worth, and unquestionable talents, I cannot admit to be competent judges of this matter. I am in the habit of hearing very different sentiments from those who are conversant with the details of duty devolving on a Military or Naval Surgeon, and particularly from those whose lot it has been to spend any considerable portion of their lives abroad, either in the service of her Majesty, or of the Honourable East India Company. Upon this point I appeal to the sentiments of the public press, and to the recorded opinions of such men as the late Baron Larrey, Sir James M'Grigor, and Mr Guthrie. The last-mentioned gentleman, in the preface to his *Clinical Lectures*, expresses himself thus:—"On ceasing to lecture, I may venture to say I have done that privately, which ought to be done publicly by the Government; which is done so in Edinburgh, and by every Sovereign in the great capitals of Europe. Young men, as well as old ones, require, after a few years of absence from home, to renew the knowledge they once possessed, and which perhaps they have in part forgotten, and to keep themselves up to the improvements which have taken place whilst they have been absent.

When they come to London—and leave should be given for that purpose, from time to time—this opportunity should be afforded to them by the authorities; they ought not to be obliged to go about and pay again their education fees, like a parcel of students, if they have not been educated in London.

“ There is a Museum at Chatham of preparations of diseases of foreign climates, many of which are unknown in England, and which, from its situation, is comparatively of little use. These preparations ought to be demonstrated, and the diseases duly taught. The specimens of natural history are many of them unique, whilst others are more splendid than any in the British Museum or elsewhere, but they are comparatively unknown. A Government that shall appropriate a piece of ground in Downing Street, when the old houses between it and George Street are pulled down, for the erection of a Museum, with apartments for the Conservator, will do themselves great honour. Let them attach to this a Professor of Physic and another of Surgery, and they will render the country an inestimable benefit. The expense need only be the difference between the half and the full-pay of these officers, and they may be otherwise employed in the public service. The saving would be that of a great number of lives.”

The nomination of two Professors, which Mr Guthrie here points at, would, in many respects, be desirable, because it may so happen that a man, eminently qualified to give instructions in all that regards the health of soldiers and seamen generally, at home or abroad, may have little taste, talent, or experience in surgery; and far be it from me to depreciate in any degree the importance of the Surgical Department. I have indeed elsewhere expressed my fears, “ that in a period of long protracted peace, there is some risk of the Medical Officers of the Army losing sight of the importance of the Surgical Department of their profession.”

For the present, however, I would contemplate the institution of only one Professorship in each of the metropolitan schools, not doubting that many men will be found quite competent to instruct the younger part of a class in all that is essential to the preservation of the health of soldiers and seamen, and, at the same time, able to inform the seniors, who may have fallen behind the progress of Surgery, of every solid improvement which takes place in that noble art. I would restrict such appointments exclusively to the metropolitan cities; in the provincial schools they can neither be wanted, nor can they be advantageously conducted.

The endowment of such Professorships would be a matter of little expense, inasmuch, as the only men qualified to fill them with advantage, are those who have gained experience abroad in the service of their country, and who consequently have established a claim on

the public to half-pay. An endowment of the same amount as that attached to the Chair in this University, one hundred a-year, in addition to his half-pay, and the fees of pupils qualifying themselves to become candidates for commissions in the service, his rank, at the same time, going on progressively with that of his contemporaries, would form a sufficient inducement for an able and well-qualified man to become a candidate for such an appointment. It would greatly enhance the importance and utility of this appointment, without increasing the expense, were the Professor, *ex officio*, to have access, along with his pupils, under certain restrictions, to the hospitals of the Garrison. Such access has always been voluntarily conceded to me, by the kindness of the Director-General, and of the Staff and Regimental Surgeons serving in Edinburgh, and I would take this public opportunity of gratefully acknowledging my obligations to them in this respect. But I am going, perhaps, too much into matters of detail; my excuse will be found, in my anxiety to show at how little expense a great boon might be conferred on the Medical Department, and a great good done to the public.

What then would be the additional expense of all I propose—the endowment of a Professorship of Military Medicine and Surgery in London, and another in Dublin? *Two hundred pounds a-year*. Surely, Sir, this were a cheap compliment; surely it were a very becoming attention to the health of that Army and Navy which have served the nation so faithfully and so efficiently; which have preserved the country from foreign invasion, which have protected its commerce in perilous times, and which have opened up vast empires to the spirit and enterprise of the British merchant.

I have already hinted that the time has gone by when I can have any personal interest in the result of this representation. I make it from a sense of duty to the University, to the Chair which I have the honour to fill, and to the patronage which placed me in it. I submit the matter to your consideration, with the fullest confidence that if it shall be found to possess but one-half of the importance which I attach to it, the subject will not be overlooked; and that the patriotic views which guide your conduct as a statesman will induce you to look favourably on a proposal, which has for its object, the health and efficiency of those engaged in the Military and Naval service of the country.

I have the honour to be, SIR,

Your very faithful,

And very obedient humble servant,

GEO. BALLINGALL.

The Right Honourable

SIR ROBERT PEEL, BART.,

&c. &c. &c.

ON
SCHOOLS OF NAVAL & MILITARY SURGERY.

BY SIR GEORGE BALLINGALL, M.D.

To the Editor of the Medico-Chirurgical Review.

Edinburgh, 10th April, 1844.

SIR,

Some six months ago I addressed a Letter to Sir Robert Peel, urging the institution of a Professorship of Military Medicine and Surgery in London, and another in Dublin. Thinking that I had thus fully discharged a duty which I owed to the public service, it was not my intention to have entered upon the subject again. But the unfavourable notice of that proposal which has appeared in the last Number of your Journal gives me the opportunity, and suggests the propriety, of offering, to my professional brethren, some explanatory details, which would have been altogether out of place in an address to the Minister.

The first erroneous opinion, which pervades, more or less, the whole review of my letter, is that "my principal object was to contrast the liberal provision made by some Foreign States, particularly Prussia and Austria, for the education of their Army Surgeons with the very scanty provision made for the same purpose by our own Government." This contrast is indeed sufficiently striking, but a little reflection would have shewn that it was only mentioned incidentally, with the view of rousing the attention of Government to the subject; and that my principal object was to point out the difference of duties which devolve on our Military and Naval Surgeons, compared with those of the Continental States. It is the special nature of the duties devolving upon medical officers in our service which constitutes the most important part of the contrast, and which requires a "course of instruction," not "different from," but over and above, "that necessary for the Surgeon destined for practice in civil life." Perhaps nothing will render this contrast more intelligible than the different duties which are expected of a Professor of Military Surgery on the Continent and in this country—there I find numerous gentlemen denominated "Professors of Military Surgery"—one, it may be, teaching the practice of Physic, another perhaps operative Surgery, and a third Ophthalmology; but not one of them, so far as I know, giving a course in the least degree a-kin to mine. If no special instruction be necessary to prepare our Army and Navy Surgeons for their peculiar duties; then are the educational establishments at the general hospitals superfluous. If such special instruction be requisite; then will it be most advantageously given where there are most to profit by it—in the Metropolitan Schools—which are frequented both by the old and the young. To which those already in the service naturally will, and to which those preparing for the service necessarily must resort.

The topics which should be embraced in a course of Military Surgery have of late, been frequently specified, and are pretty fully stated by the reviewer in a quotation from Mr. Marshall—we have here, on the one hand, a number of important topics enumerated as fit to be included in a course of Military Hygiene, and we have, on the other hand, an extended *curriculum*, in no one course of

which are these topics embraced. Surely out of twenty months allotted to the practice of Physic, and twenty months to the practice of Surgery—in all forty months, or nearly three years and a half—some six months might be spared to those educating for the Army and Navy, to learn something of the new and peculiar duties which, at their very outset, the emergencies of the service may call upon them to execute. I was not eight-and-forty hours in the Army when I was left in charge of two Battalions, and these receiving recruits every hour.

That the Authorities admit the advantage of such a course of instruction is obvious from their permitting Candidates to take six months Military Surgery in place of six months of the Surgical Attendance enjoined on them. By the regulations of the Army, indeed, the former is preferred, a circumstance which the reviewer has failed to notice. The want of similar sources of instruction elsewhere has long been assigned as a principal reason for not making the course of Military Surgery in this University imperative. Did such a course exist in other Schools I think Government would do well to render attendance on it compulsory, and I do not concur in the opinion that such attendance “might justly be considered a hardship.” It is however more for the time than the means that I contend. A prevalent and, I believe, a growing opinion exists, that many of the *curricula*, or courses of education, prescribed by the different licensing bodies, are overloaded with compulsory study. Let there be less *compulsory* and more *optional* study, and I have no fear for the result as regards the Professors of Military Surgery. I have some experience of the popularity of this subject, and although, of late years, for reasons very easily explained, the number of students has been less, I have had, in one year, as many as eighty-one paying pupils, and this without the course being *compulsory* on any one of them.

The study of this department would not be thrown away even upon those “who might not be successful in obtaining appointments in the Army or Navy;”—it would not be thrown away either upon themselves or the public. Let gentlemen who may have so qualified themselves have a preference, in the intermediate approval of recruits, and in those numerous cases where troops are dispersed in small parties over the country, apart from their own Surgeons. The Soldiers would then meet with prompt and efficient treatment, while the public would have always at command a body of men who, without prejudice to their qualifications as general Practitioners, would be conversant with the duties of Military Surgeons, and thus competent to act on every emergency.

In a series of questions, more or less relevant, the reviewer asks, “Is the discipline young officers undergo at Fort Pitt or Haslar, and in a Regiment or on Shipboard, not adapted to initiate them into the mysteries of their respective appointments?” Were I to answer this question, as I shall answer others, in the words of some of the most experienced and intelligent Surgeons in the Army, it would not, I apprehend, suit the reviewer’s taste, nor serve his purpose; but I prefer, in this instance, speaking in my own person, and will take the liberty of answering one question, *more Scottico*, by asking another. The promptitude, tact, and efficiency, which an attentive young man ultimately acquires under an intelligent and judicious Surgeon no man can more highly appreciate than I do; but might he not be so prepared, by a course of previous instruction, as to acquire all this more speedily, more surely, and more advantageously to the public service? The instructions given at Chatham and at Haslar I am not disposed to undervalue, but I am not singular in the opinion that much of this instruction might be given with equal, if not with more, advantage elsewhere. The opinion that the Museum attached to the General Hospital at Fort Pitt might be placed more advantageously in the Metropolis, is proved by the fact, that a large subscription, at the head of which is the Director-General, has been entered into by the Medical Officers of the Army, “towards the erection of a building for the Museum and Library in London.”

With regard to the general Hospitals, as sources of Clinical instruction, I have already hinted at some of the disadvantages under which they labour, but the subject is by no means exhausted. No general Hospital, in this country, can ever be so advantageously employed as the "Hôpitaux d'Instruction" in France, and for this very obvious reason, that we have not here the same diseases to treat as those with which our Military and Naval Surgeons have to contend in our numerous Colonial possessions. So far as Clinical instruction can be combined with the systematic courses of lectures, which I wish to see established in the Metropolitan Schools, it would perhaps best be given by occasional visits to the several Regimental Hospitals of a large Garrison, like London or Dublin; visits such as I have occasionally made, every Session, to the Hospital in Edinburgh Castle. There the pupils would see the diseases which actually prevail amongst the soldiery in this country—not the diseases of invalids. They would see also the interior œconomy and administration of those Regimental infirmaries which have so long been a source of legitimate pride to the Medical Department of the British Army, and to which no parallel is to be found in the other armies of modern or of ancient times. Few of the subjects embraced in the course of Military Surgery are susceptible of clinical illustration. Many of them are highly susceptible of explanation by means of preparations, casts, models, plans, and drawings, such as are provided for the use of the Students of Military Surgery in this University, and of which I have herewith the pleasure to enclose a printed catalogue. Of the subjects enumerated, at pages 8 and 12 of my Letter to Sir Robert Peel, it so happens that the treatment of Ophthalmia, and of the Venereal Disease, are almost the only subjects admitting of any extensive illustration in the Military Hospitals of Great Britain. The illustration of Tropical Diseases in these Hospitals is obviously impossible; and the soil of England—thanks to our gallant Army and Navy!—has never, in our day at least, afforded a field for clinical instruction in the treatment of Wounds.

General Hospitals, however, are necessary for the purposes of the service. One for the whole Army in Great Britain is certainly not a superfluity, and two for the Navy are perhaps still less so. In the Royal Navy the only establishment akin to the Regimental Hospital is the Sick Berth. This upon most occasions is a very limited field, and to the gentlemen of this Department, when returning from foreign service, or attached to ships lying in port, the great Naval Hospitals, with the Collections and Libraries belonging to them, must prove an interesting and valuable source of professional improvement. But the Gentlemen connected with this branch of the service would not, I think, undervalue the importance of a Metropolitan School, in addition to those means of instruction which are necessarily confined to the great sea-ports. It is only justice to these Gentlemen to say that, amidst all my mixed audience, there are none who have been more punctual in their attendance than some of the Naval Surgeons; there are none from whom I have received more interesting communications; and there are none who have shewn more gratitude for the information I was able to give them in return.

This leads me to say a word upon the attendance of Gentlemen already holding Commissions in the service. I am said to have overlooked the fact, that medical officers, even after many years' absence from their native land, rarely obtain sufficient leave to enable them to study. I had, on the contrary, noticed, to the credit of the present Heads of the Medical Departments of the Army and Navy, that they have granted, for this purpose, every facility which the good of the service would possibly permit. I was myself one of fourteen Army Surgeons who graduated here in one year; I have had in one Session as many as thirty-six medical officers entered to the class of Military Surgery; and in all, during the twenty years I have lectured, four hundred and ninety-eight. This no doubt includes all those gentlemen who have been successively stationed here with their Regiments, several who were upon half-pay, and many who have

only attended occasionally, or for very short periods; but, with all these deductions, a very considerable number on leave of absence, many of them in an indifferent state of health, have occupied themselves in a praiseworthy manner, in attendance upon this, and other classes in the University during the whole Session. A numerous body of Medical Officers, those in the service of the Honourable East India Company, have always, from the prolonged leave of absence which they obtain, ample opportunities of attending lectures, and of this they have very fully availed themselves.

I am held to be unfortunate in alluding to the Statistical Reports on the health of the Army and Navy, as sources of information to be turned to account in the Lecture-room. The conclusions deducible from these reports are indeed "remarkably clear, plain, and unambiguous," and it certainly is not as "the groundwork of a few passing remarks," that the results of these statistical inquiries should be brought before his pupils; but as the most appropriate and most forcible illustrations which a Professor can possibly give, of the observations which it is his duty to make on the geographical distribution of diseases; on medical topography; on the choice of sites for Camps, Cantonments, Barracks, and Hospitals; on the diseases prevalent amongst Europeans on Foreign Stations, and in the vast native Army of India; as well as amongst the various races which constitute our several Colonial Corps, Negroes, Hottentots, Malays, and Cingalese. This, in addition to all other measures for extending their circulation, would be one of the most powerful means of impressing on the rising generation of Army and Navy Surgeons the value of these reports; and I still hold to my opinion that, without this, no justice will be done to them. The measure which I advocate, the establishment of additional Professorships of Military Surgery, has no more strenuous supporter than Major Tulloch, the very author of these reports, and I have reason to believe that this gentleman concurs in every syllable of the following observations by the Editor of the "Naval and Military Gazette."

"No Medical Candidate should be permitted to enter the Army or Navy, who has not attended at least one course of Lectures on Military Surgery, embracing all those circumstances by which the health of Soldiers and Sailors is likely to be affected in different climates; and to enable him to do so, it is indispensable that two medical officers of acknowledged talent in that department of their profession, should be nominated to Chairs in the Universities of London and Dublin, and whose duty it would be, to give to their pupils the benefit of the experience they have acquired in a long course of service, as well as of the vast mass of information annually transmitted, from all foreign stations, to the Medical Departments of the Army and Navy, and which, we feel confident, would most cheerfully be laid open to their inspection for this purpose."

In a subsequent number of the same Gazette, (448,) will be found a communication from several experienced Staff and Regimental Surgeons, who attended the class of Military Surgery in this University during the Session 1840-41. "We rejoice to observe, in a recent number of the Naval and Military Gazette, (January 30th, 1841,) that this subject is taken up in connexion with the valuable statistical inquiries which have lately been made into the sickness and mortality of the Army and Navy, and we are confident that nothing could be more conducive to the public interests than the appointment suggested by the writer, of Professors of Military Surgery in London and Dublin, to whose province it would fall to keep the results of these statistical inquiries constantly before the rising generation of Army and Navy Surgeons."

Amongst the Queries to which I may be expected to reply is the following; "Are the few who have attended the class of Military Surgery, more efficient, more studious, better informed, more accurate observers, or more zealous and industrious in collecting and diffusing the results of their experience and observations, than their brother officers?" This is a somewhat comprehensive ques-

tion, and it would be somewhat unreasonable to expect me to answer for some seven hundred young men, who have now passed through my hands as pupils, or even for the limited number of these who may have obtained Commissions in the public service. Much of their efficiency must depend upon the "number of hours, which," in the words of the reviewer, "are spent by Medical Officers in the Billiard-room, or dissipated in some of those ingenious methods devised, both in the Army and Navy, to kill time." That, in the opinion of very competent judges, young men so instructed, are well qualified to become efficient medical officers, may be gathered from the following answer to similar questions propounded to two very intelligent and experienced Army Surgeons, Deputy-Inspector Marshall, and the late Staff-surgeon Badenach. "We have a very high opinion of the utility of a course of lectures of this kind. A student who has attended a course of lectures on Military Hygiene, and on Military Medicine, is prepared to avail himself, with great benefit, of the practical advantages of experience, by which means he will be much sooner able to assume in an efficient manner the medical charge of a body of men, than if he had not received such instructions. A course of lectures on Military Surgery is extremely useful, inasmuch as it supplies that information which is peculiarly required by medical officers, and which can be but imperfectly communicated in a course of lectures, either on the practice of Medicine or Surgery."

Again, it is asked, "What practical advantages have resulted, during the last thirty years, from the establishment of a Chair of Military Surgery in Edinburgh?" This is a question very unfit for me to answer, inasmuch as I can scarcely be considered an impartial judge; but, fortunately, I am under no necessity of doing so, the question has been already asked, and already answered, by more competent authority. "Do you think the institution of a class of Military Surgery at Edinburgh, was a beneficial addition to the course of Medical study? In so far as the public service is concerned, the Army, the Navy, and the Service of the Honorable East India Company, I think it has been a most beneficial addition to the Chairs of the Medical School at Edinburgh. Besides Wounds, and what is termed Military Surgery, the Economy of Hospitals, and of Hospital Arrangements, is in this school taught by a gentleman who has served much in the field and in various climates. At the end of the last war upwards of 300 Medical Officers of the Army were placed on half-pay, and it is within my knowledge that many of them profited greatly by attendance upon this class, before they returned to employment on full-pay." Such is the question submitted to, and such is the answer given by Sir James M'Grigor, to the Commissioners for visiting the Scottish Universities in 1827, when I had been about five years in possession of the Chair. With regard to the utility of this class, in subsequent years, I refer the reviewer to a short notice of my Letter to Sir Robert Peel, in the January number of the British and Foreign Medical Review.

Upon one subject, the reviewer's sentiments and mine cordially agree; the propriety of "stimulating the emulative industry of medical officers, and exciting them to professional improvement." Sir Gilbert Blane's Gold Medal as a prize to the Naval Surgeons, is noticed with much approbation in my "Outlines of Military Surgery;" and the successful labours of Mr. Malcolmson, by which he obtained the Prize for the best Essay on "Beriberri and Burning in the Feet," have been quoted in my Class-room from year to year, ever since that Essay was presented to me by the Madras Government. Concurring in all that is proposed upon this point, I am prepared to go even a little further than my reviewer. It is quite possible that a man may write a valuable essay on a given subject, without being an efficient Army Surgeon, and Sir Robert Peel, without taking an additional shilling from the public purse, might offer a boon to industrious students, and to deserving medical officers, ten times more valuable than all the money that can ever be allotted for Prize Essays. For a series

of years I have held annually a competition amongst the students of Military Surgery, by way of examination, at the close of the Session, and have been fortunate enough to procure Commissions in the Army or Navy, for several gentlemen who have distinguished themselves in these competitions. No prize can be more valuable, to a candidate for employment in Her Majesty's Service, than a Commission, and none can be more valuable to an officer already in it, than a step of promotion, an appointment to a crack regiment, or to a favourite station. Let this be followed out upon a large scale, let an appointment be given to the most deserving student, and a step of rank to the most deserving officer who may be eligible to it,—their merits, in either case, to be decided by a Committee of experienced officers, as is done at Sandhurst and at Addiscombe. Let this be done annually in each of the three proposed schools, and I can conceive no plan more likely to elevate the character of the Department, or to furnish the service with a well-informed and efficient body of Staff Officers, capable of giving to the Governor of a Colony, or the Commander of an Expedition, the most judicious advice in all that regards the health of his troops.

I have hitherto, Sir, as you will observe, addressed myself generally to the objections which have been brought in opposition to my views, I would now address myself a little more particularly to you and to the reviewer. I have not presumed to think that these objections embody the sentiments of an experienced Naval Surgeon, more especially of one who has acquired experience on the Indian Station, "who has seen the diversified maladies produced by climate, season, constitution, and co-existing circumstances." I am, indeed, hardly left to conjecture on this subject, for we are told, in a subsequent article, that this reviewer is an accomplished Army Surgeon, of which I make no doubt; but I must be permitted to say, that he has, in my opinion, taken a very limited view of his subject,—a view very far short of those lofty conceptions which dictated the Memoir of Mr. John Bell—a memoir which you have seen proper to reprint, and which, although inapplicable at the present day, as regards the general education of our Army and Navy Surgeons, is *more than ever* applicable to that special instruction which it so forcibly inculcates, and which our enlarged establishments, our extended commerce, and our multiplied possessions demand.

Your reviewer cannot have considered all the important bearings of this question, as regards the *collection* as well as the *diffusion* of information on the health of the troops. The pupils of this class have distinguished themselves in all the recent struggles in India. In the first luckless campaign of Afghanistan, no fewer than three of them perished; one of these was Dr. Cardew, whose fate is so feelingly deplored by Lieutenant Eyre, and who had become so great a favourite with the soldiers that, when unable to travel farther, they endeavoured to save him by conveying his almost lifeless body on the carriage of a gun. To this gentleman I was indebted for a communication on fractures when a pupil of the class, and had his life been spared, I might have been in possession of information which is now for ever lost to the world.

I have at this moment lying before me Statistical tables of the sickness and casualties amongst the Queen's troops in China, and returns of Surgical Cases after Sir Charles Napier's recent actions in Scinde, framed for my special use by the Superintending Surgeon of the force, an old pupil of the class. The communications indeed which I have received from my pupils, in the shape of contributions to the Museum, of Returns and reports from distant stations, or of written Essays on subjects discussed in the progress of the Course, are more than I shall ever live to do justice to, or sufficiently to express my gratitude for. Amongst several of these communications which have appeared in print, I may be allowed to notice an Essay on the Comparative Merits of Flap and Circular Amputations by Mr. M'Hardy, and the Essay on the Feigned Diseases of Soldiers and Seamen, by Dr. Gavin. To these I trust I may soon be enabled to

add a valuable history of the Medical Department of the British Army, by Dr. Irving.

I am said to have failed in making out a case for additional Professorships of Military Surgery. Upon this point, however, I trust there is room for a difference of opinion; I am told by a distinguished General Officer, who has fought and bled in the service of his country, that I have made out "a most triumphant case," and we are told by a spirited and intelligent professional writer, "that the Government which reads the arguments of Mr. Guthrie and myself, and does nothing, is as clearly condemned as the man who will persist in denying mathematical axioms."

Will your reviewer now allow me to tell him where I think he has failed? He has failed to see how much the institution of such courses of instruction as I recommend is calculated to raise the character of his department. He has failed to see what influence it is calculated to give to medical opinion in the eyes of those holding superior command; and he has failed to see what a waste of life and of health it may obviate, by a perfect fore-knowledge of what has happened, and what may again happen, in any given circumstances.

After having been so freely questioned by the reviewer I shall not I trust be accused of anything rude or uncivil, in asking whether this gentleman has served any considerable portion of his time in the East or West Indies, if so, I have only to observe that he differs very widely in opinion from others similarly situated. Hear the opinion of one of the survivors of the mortality at St. Domingo,—one who subsequently served through the Peninsular war with the elevated rank of a Deputy Inspector of Hospitals, one who, a second time, served in the West Indies, as Chief of the Medical Staff in the Windward and Leeward Islands, and who now lives respected and esteemed by every man who knows him. "I ought," says this voice from St. Domingo, "to have thanked you before now for the little brochure you have sent me, in every word of which I thoroughly agree, and only wish that your arguments may make a suitable impression upon the authorities who have power to give them effect. Your quotation from Mr. John Bell is singularly apposite and good. The most experienced campaigner could not have written better." Hear again the opinion of another gentleman who retired as President of the Medical Board after seven and thirty years' experience in various parts of India;—under all circumstances and situations of inter-tropical service; in charge of large general hospitals at fixed stations; in field hospitals on actual service; in regimental hospitals moving over various countries, and through different climates; amongst Europeans as well as Natives; and among men, women and children; "I am very much obliged to you for your kind letter and enclosures, I sincerely hope you may be successful, and I think it very probable you will, as the importance of what you recommend must be obvious to every man who thinks at all, and particularly those who have any knowledge of soldiering, or the important duties devolving upon medical men on Foreign service. You have already done so much to benefit and improve the studies of Military Medical Officers that nothing is left but to follow up your plans; which, if adopted in London and Dublin, by the nomination of competent Professors, there cannot be a doubt that the public will be great gainers."

Both the gentlemen above alluded to have written much, and have written well, on the diseases of the troops, and on military hygiene, and their cordial approbation of my views would seem to shew, that they concur in opinion with another talented and experienced Army Surgeon, who, with reference to the very article on which I am now commenting, observed that "the reviewer might as well propose to supplant the Commissariat of an Army by Dr. Kitchener's work on Cookery, as to supply the purposes of so great a School by a book." But it were endless to multiply such quotations, suffice it to say that I am now in possession of six-and-forty letters to the same effect—all these letters, be it observed, wholly unsolicited. One from the Director-General; seven from

Inspectors of Military Hospitals, or of Naval Hospitals and Fleets, eighteen from gentlemen holding the rank of Staff, Regimental, or Naval Surgeons, and the others from Professors in English Universities, from private practitioners, or from General and Field Officers in the Army—the last a class of men whose evidence I am inclined to rate very highly in a question of this kind. A medical man does not, I believe, consider it necessary to acknowledge every pamphlet which may be laid upon his table, and when so many gentlemen of talent and experience have stepped forward to volunteer their opinion in support of my proposal, I may well sit at ease under the strictures of my reviewer.

I conclude by observing that it is from respect to the established reputation of your Journal, from respect to your own character, personal and professional, and from respect to your position as a Naval Surgeon, that I have been mainly induced to enter into this detail. Believe me, Sir, that in what I have now written I am much more solicitous about the promotion of a great public object, than about my personal vindication, or my private interest. I have now been employed for nearly forty years in the study, in the practice, and in the teaching of Military Surgery. I have submitted to the Government, from an imperious sense of duty, my sentiments on this important question, *valeant quantum valere debent*. Gratified by the approbation of my seniors and cotemporaries, both Military and Medical; strong in the rectitude of my purpose; and feeling, personally, but little interested in the result, I shall not again be easily drawn from that quietude which best befits my habits, my present state of health, and my time of life.

I remain, Sir,

Your very faithful and obedient Servant,

GEO. BALLINGALL.

