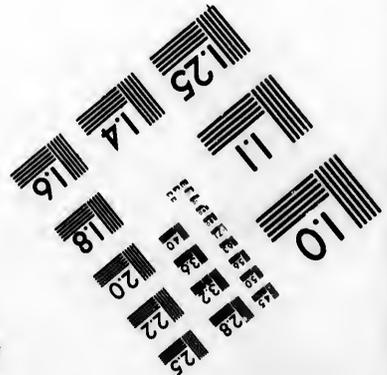
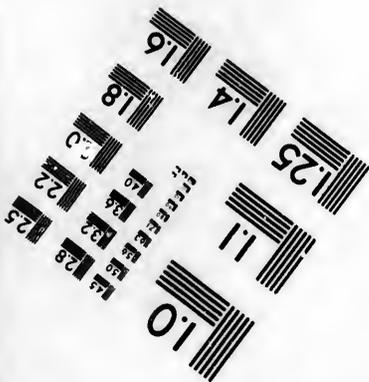
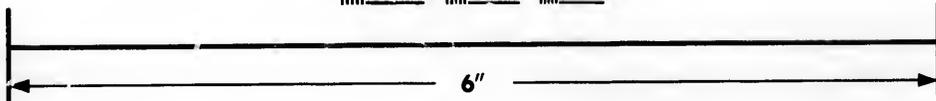
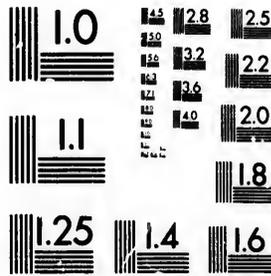


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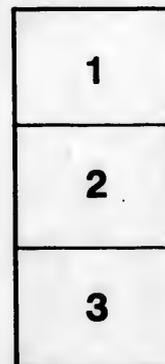
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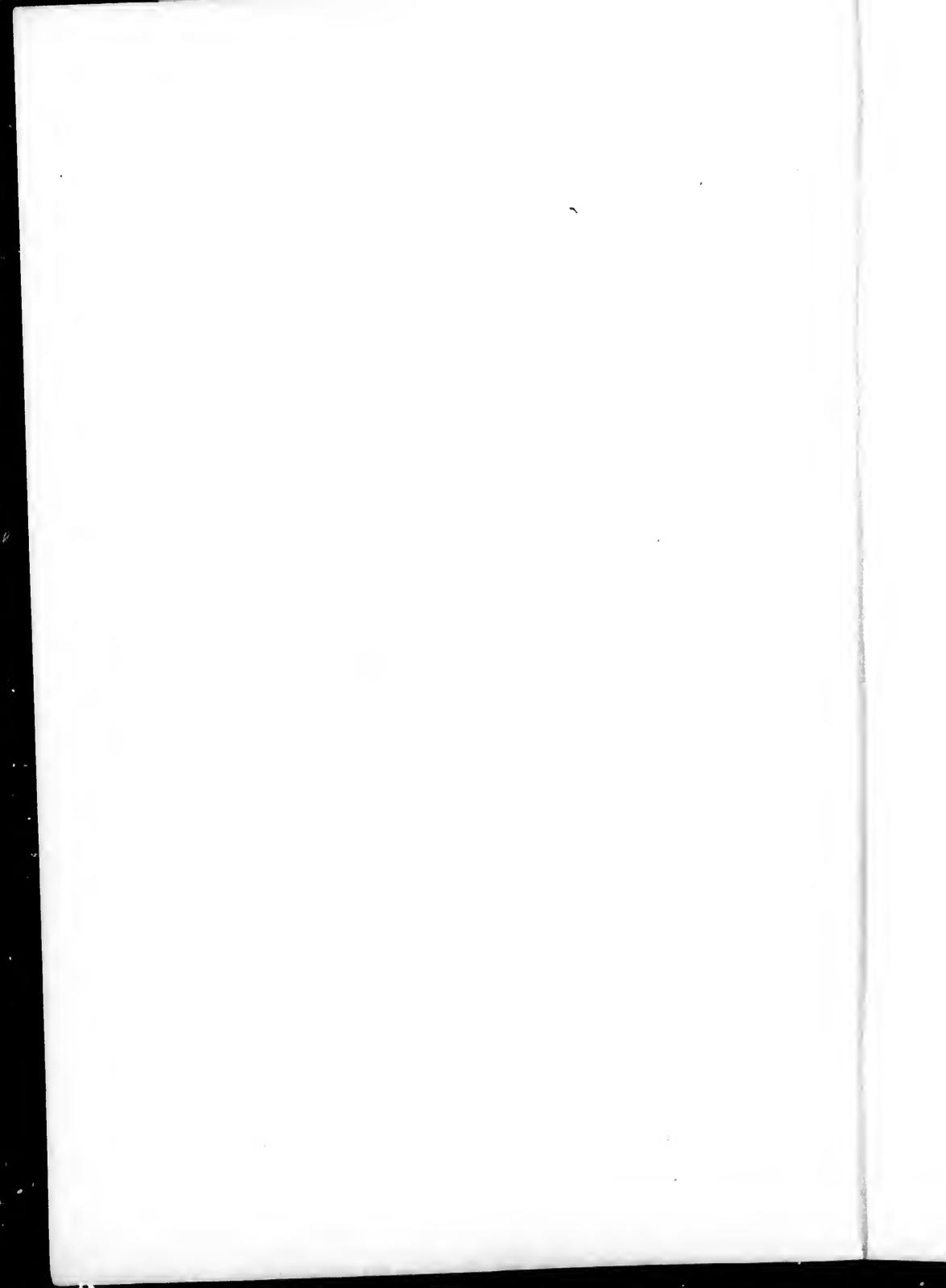
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THE
BIRMINGHAM
SCHOOL OF MEDICINE.

BY
B. C. A. WINDLE. M.A., M.D.,
AND
W. HILLHOUSE. M.A., F.L.S.

BIRMINGHAM:
PRINTED BY HALL AND ENGLISH, 71, HIGH STREET.
1890.

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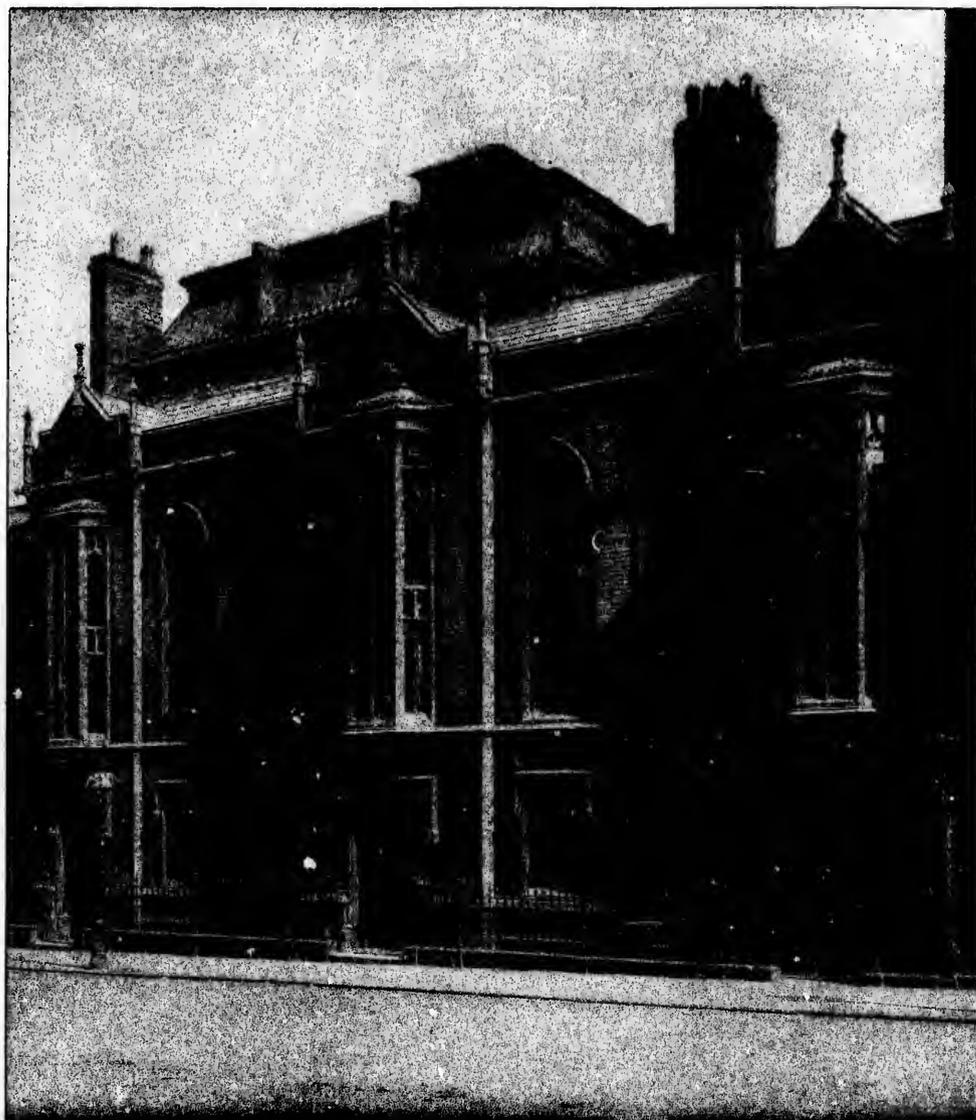
THE following pages were written for the information of those members of the Medical Profession who attended the Birmingham meeting of the British Medical Association in July, 1890, and formed a part of the Official Guide Book published by the Local Committee. It has been deemed desirable to republish them separately; and for the purpose of further adding to their utility a few reproductions of photographs of the more important constituent parts of the Birmingham School of Medicine have been introduced. Our work will not have been in vain if this little book is the means of in any way increasing the knowledge that here, in the centre of the Midland district, and with unrivalled railway facilities, there exists what, taken in all its aspects, is one of the best equipped Schools of Medicine in the provinces.

B. C. A. WINDLE.

W. HILLHOUSE.

July, 1890.

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QUEEN'S COLLEGE.

PLATE I.

THE BIRMINGHAM SCHOOL OF MEDICINE.

QUEEN'S COLLEGE.

"Mr. William Sands Cox will commence a course of Anatomical Lectures, with Physiological and Surgical Observations, on Wednesday, the 1st of December, 1825, at 12 o'clock. The course will be continued during the ensuing winter on Mondays, Thursdays, and Fridays, at 24, Temple Row."

The advertisement just quoted, which appeared in the local paper of November 7th, 1825, was the first announcement of the formation of the Birmingham School of Medicine. Although instruction had been given before this time at the General Hospital, several men, afterwards well known—Sir William Bowman amongst the number—having been pupils of the surgeons to the charity, there had been, prior to the notice just quoted, no systematic courses of medical lectures carried on in the town. At their commencement the arrangements for the instruction of students were of a very modest nature, one room sufficing for all purposes.

Dr. John Johnstone, at that time one of the professors of the College, in an introductory lecture delivered in the year 1834, gives some interesting information as to the early days of the School. "To Mr. Sands Cox," he says, "is due not only the formation of the School, but the idea in which it originated. After a liberal education in his own country he visited Paris, in the year 1824, for the express purpose of preparing himself for delivering lectures in anatomy and surgery. In October, 1825, he first submitted his plans to the profession in Birmingham and delivered his inaugural lecture. In 1826 and 1827, for the purpose of obtaining information, he visited the schools of Edinburgh, Glasgow, and Dublin, still continued to recommend the formation of a regular school in Birmingham, and by that impulse which zeal and talent are sure to impart, in 1828 he gained the patronage of some of the seniors of the profession in Birmingham, and the School was constituted. Up to 1829 the School had only the convenience of one room for all its purposes. In consequence of this narrowness of accommodation, Mr. Sands Cox offered to build a set of rooms, provided the body of lecturers would guarantee a certain rental, for

the reception of the Museum and Library; and in order to learn how to arrange the Anatomical Museum in the best form, our enterprising and unwearied founder visited the various hospitals and schools in France, Germany, and Italy. On his return, the means of founding a museum and library appeared so scanty that it was determined, in 1830, to solicit the neighbouring patrons of science to extend the plans and usefulness of the Institution. This aid was liberally granted, and the donations of our benefactors, to the amount of £900, were expended in the purchase of preparations, expensive books of plates, and the fitting up of the Museum and Library. The Institution now assumed its present form and feature."

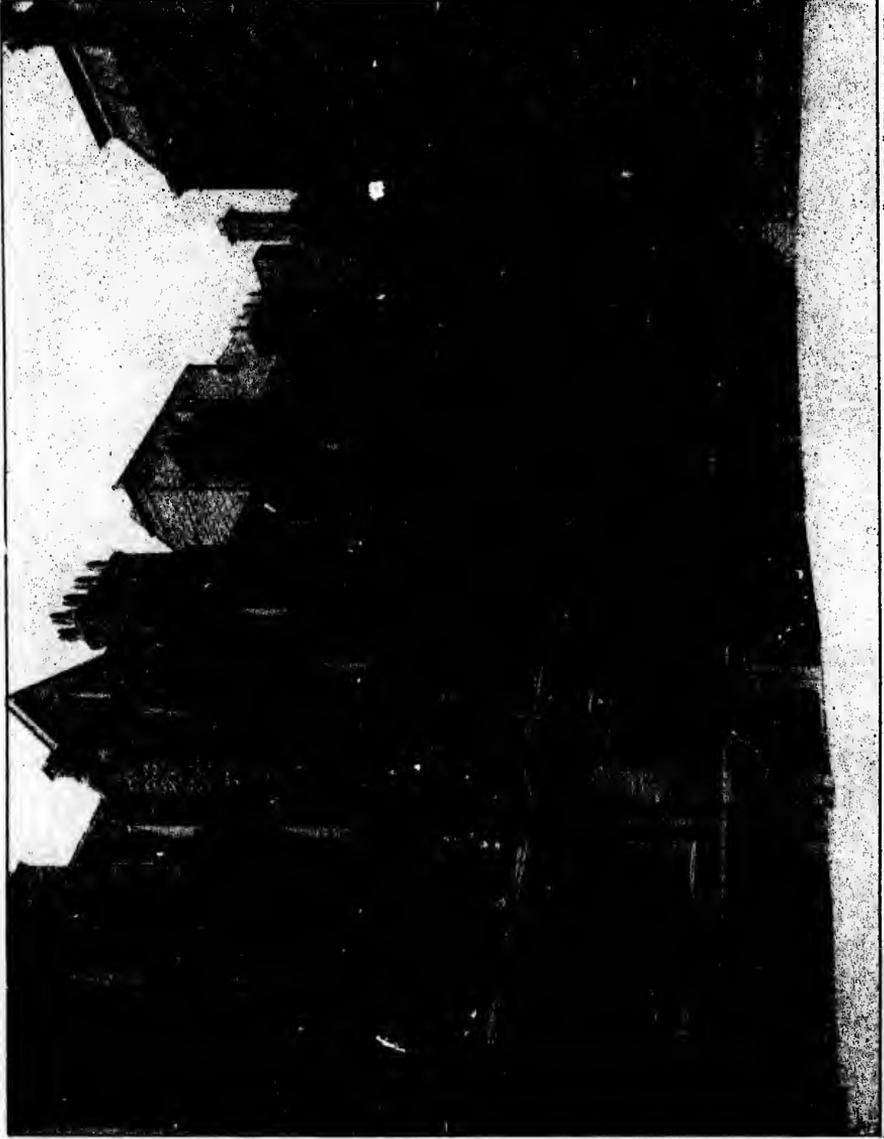
The larger accommodation provided in 1829 was in Snow Hill, which thus became the second habitat of the Medical School, its next being in the same street, though not in the same building, as that which it now occupies. In looking over the names of the nineteen students who attended the classes in 1825, it is interesting to find that of one who still lives to enjoy the respect and regard of his professional brethren, Mr. Dickenson Webster Crompton. The courses of lectures with the lecturers in 1828 were: Anatomy, Physiology, and Pathology, W. Sands Cox; Materia Medica and Medical Botany, Richard Pearson, M.D.; Chemistry and Pharmacy, J. Woolrich; Principles and Practice of Physic, J. K. Booth, M.D.; Principles and Practice of Surgery and Surgical Operations, Alfred Jukes; Midwifery and the Diseases of Women and Children, John Ingleby.

In 1826, William IV., by accepting the position of patron of the school and conferring upon it the title of "The Royal School of Medicine and Surgery of Birmingham," gave to it a definite position amongst the educational institutions of the country which it had not previously possessed. Shortly after this, Mr. Sands Cox succeeded in interesting in his work the Rev. Dr. Warneford, a man of large means, at that time rector of Bourton-on-the-Water. The influence of this gentleman upon the policy and future of the College can scarcely be overrated. In the first place, its managers were indebted to him for large gifts of money, and thus to the possibility of its formation into a "Collegiate Institution for the tutelary care and collegiate residence of its pupils," to quote their own words. Their idea, and that of their benefactor was to create a College with residential accommodation, with faculties of Divinity, Medicine, Law, and Engineering,

in fact to constitute the nucleus of what they hoped might, at no very distant date, develop into a fully constituted and completely equipped university for the Midland counties of England. "I for one," wrote Mr. Chancellor Law, on a subsequent occasion, "dreamt of the cradle of an infant giant, and of a midland university." Admirable as the intentions of Dr. Warneford were, so far, they were accompanied by and interwoven with other ideas which were, when put in operation, a source of serious weakness and difficulty to the institution. Dr. Warneford was permeated as appears most clearly from his letters, with the idea that the College should be conducted strictly and entirely on Church of England principles. Thus, in a letter dated September 14th, 1848, he writes, "I must observe that the inculcation of sound religious principles has been, and is, the basis of all my donations either to your Hospital or your College." Again, under date November, 1848, "I own I feel much anxiety to preserve the spirit of my intentions being perverted by posterity, if so inclined. In the present zealous supporters of the College I have the utmost confidence, but great deliberation is surely required to guard against future satanic subtlety." Finally, January, 1849. "To guard against the subtle designs of the Jesuits, and insidious intrusion of malignant dissenters, imperatively requires much deliberation." Mr. Sands Cox, whether sharing in these views, or willing to obtain the money for the furtherance of his cherished plans on whatever terms it might be offered, acquiesced in Dr. Warneford's wishes. Thus, writing to the last named in 1847, he says, "May we not with the powers we now enjoy, lay the foundation of a great central university, based on sound Church of England principles?" The early regulations of the College shew the influence of these views of its two principal promoters. Most of the officials, including the Dean of Faculty and the Medical Tutor, were required to be members of the Church of England, and the resident students were to attend the services of the College Chapel on Sunday morning and afternoon. All such students, with whatever faculty they might be connected, were also obliged to attend the Warden's lectures on morals and theology. The Warden was to be a clergyman of the Church of England in priest's orders. It may here be said, somewhat anticipatory matters, that whilst most of these regulations were abolished by the "Queen's College, Birmingham, Act" of 1867, the obligation of membership of the Church of England, after that date, applying only to the President, Vice-president and Warden,

and the chapel attendance being no longer necessary, the association of the College with one particular religious body, and the existence within its walls of a faculty for the education of clerics for that body, has not conduced to secure for it that pecuniary support, for which it might otherwise have hoped from persons of all forms of religious belief. Having thus briefly touched upon the religious constitution of the College with its effect upon the fortunes of the school, we may now return to its general history.

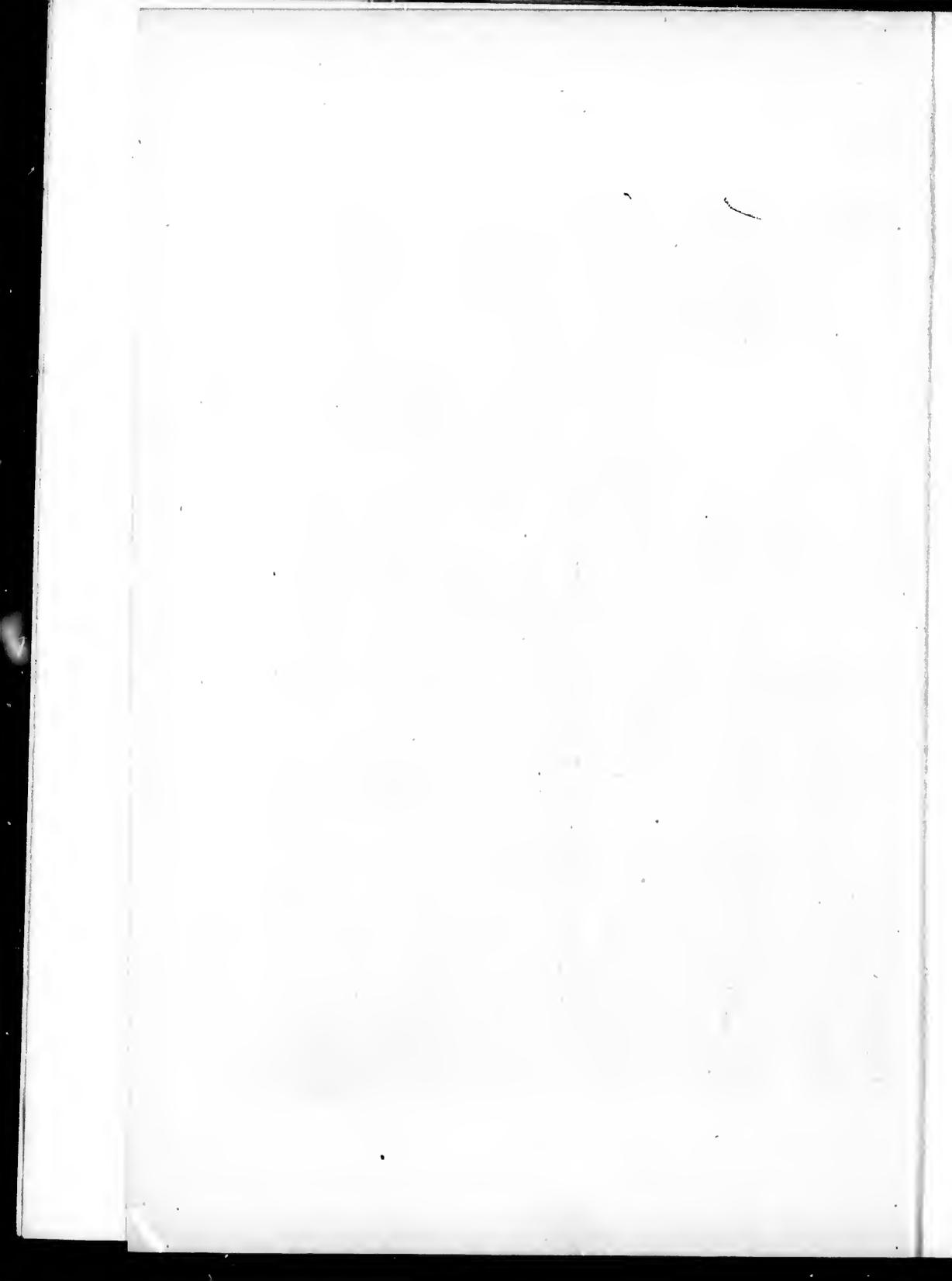
In 1845, the Queen by Royal Charter, conferred upon the Institution the name of "The Queen's College at Birmingham." Her Majesty at the same time naming herself and her successors, should they think fit, its patron. In the same year the foundation stone of the present building was laid, and, in the next, the chapel was consecrated. The subsequent history of the College for some years becomes a modern instance of the fable of the boy and the pitcher of nuts. Instead of being content with firmly establishing the Institution on a stable if comparatively small basis, the governing body plunged, with what now appears to have been recklessness, into the constitution of new faculties. Departments of Arts, Law, Engineering and Architecture were added to those already in existence. Increasing want of funds combined with constant dissensions amongst the members of the governing body to bring the College into difficulties. "Mixed up as I soon became," says Mr. Chancellor Law, in the paper from which quotation has already been made. "in College business, it was some years before I had any knowledge of its pecuniary concerns. Money flowed in rapidly. We seemed to have found in Dr. Warmeford a mine of wealth : and we asked no questions. In fact we became a little tipsy with prosperity." As time went on the difficulties, far from lessening, became more pressing, and many suggestions were considered as to the best way of extricating the College from the unenviable position into which it had fallen. Amongst these was one formulated by Mr. Chancellor Law which, if adopted, would probably have saved much of the trouble of after years. "The time has come," he writes. "for a decisive move. And I ask permission to lay before you my views as one of the oldest members of Council. Will you jump from your chairs when I tell you *I think the College must be sold?*" . . . The College sold and all liabilities discharged, he calculated that a sum of £4,000 or £5,000 might remain over. "With



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THE QUADRANGLE, QUEEN'S COLLEGE.

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that sum I would found a new Medical College somewhere near the Queen's Hospital. Mind, a Medical College only : not arts, not engineers, not law departments. And I would build a Theological College. . . . If I am correct in my general views and calculations, as I believe I am, shall we not emerge from our present difficulties better off than ever ? Having out-grown the Giant's Cradle, and made for him a comfortable little bed, with an income of £443 a year, for the projected new Medical College, and an income of £510 a year for the Theological College, though without a little bed there for the Giant." This scheme, which was laid before the Council in 1863, was not accepted.

Not to linger over a portion of the history of the College, upon which it is no pleasure to look back, it may be said in brief, that after years of impecuniosity, dissensions and difficulties, as the result of an enquiry held by the Charity Commissioners, a scheme was drawn up for the consolidation of the various trusts, the discharge of liabilities and the re-arrangement of the management of the Institution and the qualifications and duties of its officers, which in 1867 became law by act of parliament. Under the provisions of this Act the affairs of the College have ever since been, and still are managed, and though not free from faults and containing clauses which might better have been omitted or framed on different lines, it may at least be said that the Council, working upon its basis, have been enabled to build up a large and successful School of Medicine.

Mention must now be made of a rival school which was opened in 1851, the inaugural address being delivered by J. B. Hayes, its Lecturer on Anatomy. This school, which was named "The Sydenham College," was connected with the General Hospital, near which it was situated. The Queen's College, on the other hand was united with the Hospital of the same name, the two institutions as a matter of fact, being under the same governing body until the passing of the above-named Act. The Sydenham College differed entirely in constitution from its rival, since its governing body was formed of a number of the medical practitioners of the town and district. It was a prosperous Institution with a fair roll of students, and a valuable collection of pathological and other preparations, a large number of which it owed to the energy of the late Dr. James Russell. It was obviously to the disadvantage, however of medical education that the town should possess two rival institutions competing

with one another for favour and pupils, and one of the first labours of the Council of the Queen's College, newly constituted after the Act had come into force, was to bring to an end such a state of affairs. The scheme of amalgamation at first threatened to break down over the question of the position of the school, the managers of the Sydenham College desiring that the teaching should be carried on in their building. This proposition the Queen's College Council very wisely refused to comply with, their school being much more centrally situated both as regards the town itself, and, a still more important point, the two Hospitals available for clinical instruction. After some negotiation, however, this difficulty was surmounted: certain of the Sydenham College body were placed on the Council of the Queen's College, and others were made governors, the Museum of the first named school being taken in lieu of the payment of their money qualification. The necessary documents were signed in 1868, and since that date the systematic teaching in medicine, other than that afforded by the Hospitals has been carried on in the Queen's College.

The residential system, which as we have seen was one of the primary ideas of the College was finally discontinued in 1874. Without entering into the, doubtless perfectly valid, reasons which prompted this action, it may at least be permitted to the well-wishers of the College to regret that no residential hostelry or other accommodation for students is available at the present time, and to hope that before long the Council may see their way to supplying a want which has made itself felt in all schools, and has been recognised in many by the opening of halls of residence for medical students.

For some years after the last mentioned date no noteworthy occurrence marks the quiet progress of the College.

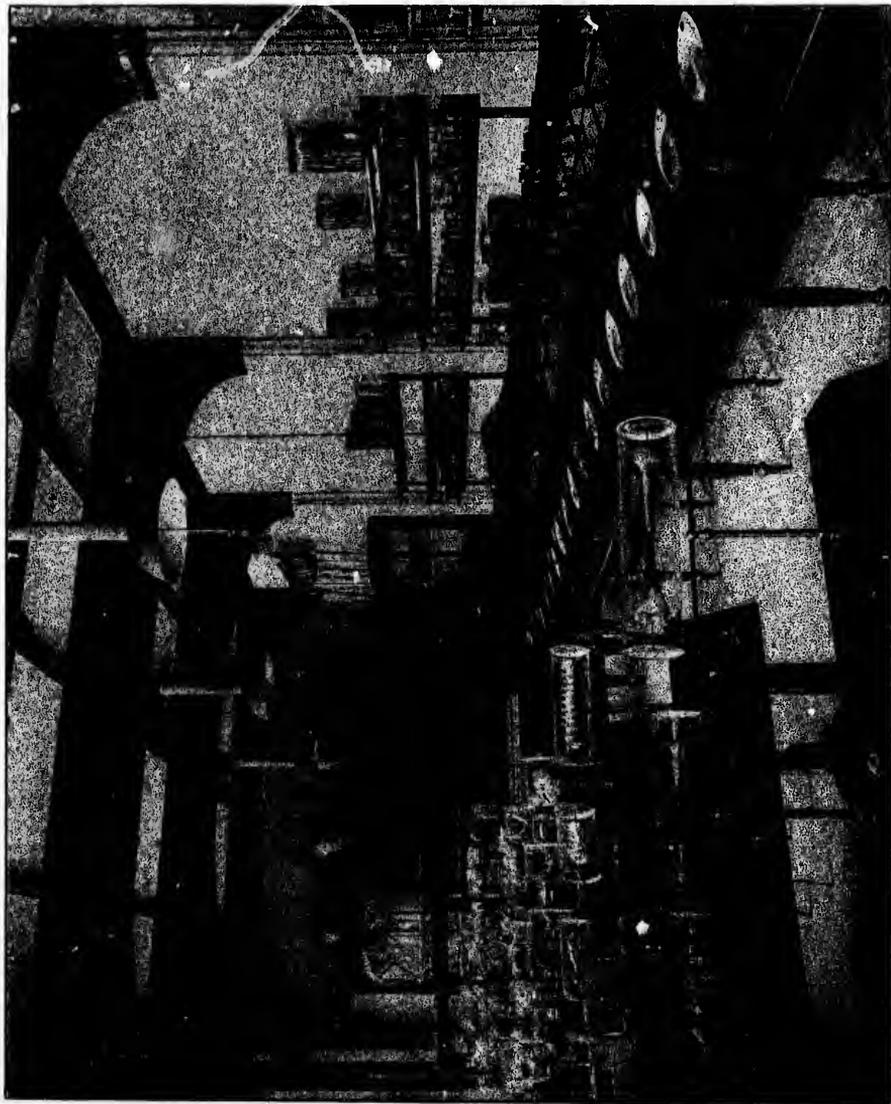
In 1881 the subject of Dental education coming to the front in consequence of the passing of the Dental Act, a fully equipped faculty for the teaching of that subject was constituted. For some years necessarily small in numbers, this department has of late much increased, and bids fair, as its advantages become more widely known, to become an important part of the work of the College. The Dental Hospital of the city is associated with the College in this branch of education.

About this time circumstances led up to what may be

justly regarded as the first step in the path of rapid development which the College has been of late years pursuing. In 1875 the foundation stone of a new College of Science was laid by its founder, the late Sir Josiah Mason. The Mason College, which was opened in 1880, was intended to form one of the group of Science Colleges whose erection and work has been so prominent a feature of the nineteenth century, and it may here, in passing, be said that it has fulfilled, and still continues to fulfil in increasing measure, the promise of its first days. Recognising the mutual assistance which the two institutions might be to one another, and the inadvisability, to say the least, of having in certain subjects two teachers carrying on classes of an identical or at least almost identical nature in such close neighbourhood to one another, the governing bodies of the two institutions in 1882 concluded an arrangement, which received the sanction of the Charity Commissioners, by which the Mason professors of the subjects in question were elected to the chairs of those subjects in Queen's College, the students receiving their instruction at Mason College. The Chairs to which these arrangements at first applied were those of Chemistry, Physiology and Botany, but at later dates those of Physics and Comparative Anatomy have been added to the number. The laboratories in the Mason College for the study of these subjects are large and well equipped, this being particularly the case with that of Chemistry. Thus, the students of the school of medicine have every opportunity for fully and practically studying these important branches of science. The arrangement has been, we believe, of mutual advantage to both institutions, and there is every hope that the ties which unite them, far from relaxing in time to come, will on the contrary, gradually draw the colleges into an even closer connection. Before leaving the subject of the Mason College, there is another point in which its influence is felt by students of medicine, mention of which should not be omitted. Prior to its opening, the question of the instruction of students in the subjects required by the University of London for its Preliminary Scientific Examination had always been one of difficulty, and doubtless some had been prevented from following the courses of that University on this account. With the opening of the Mason College all this was changed, full instruction was afforded in all these subjects, and the influence of the change soon began to make itself evident by the larger number of students entering the Queen's College every year as undergraduates of the University of London.

In 1884, the Council, following the example of some few of the larger schools of medicine throughout the country, determined to introduce an important alteration into the Anatomical Department, by appointing to the chair of that subject, an occupant who should be debarred from the practice of his profession, and should devote the whole of his time to the duties of his office. About the same time, the department itself was enlarged by a much-needed addition to the dissecting room. Since that date, the material for teaching this subject and the accommodation for the same has been considerably increased, the most noteworthy addition having been made this year in the shape of an Anatomical Museum and bone room. The Anatomical collection had previously occupied the same room as the Pathological, but the great increase in both within the last five years, rendering the room over-crowded, further accommodation became necessary. The teaching of Pathology at this time began to occupy the attention of the Council. Courses of lectures had been delivered for a number of years on the subject, but there was no means for instruction in Practical Pathological Histology within the College. It is true that the subject was not altogether untaught, since successive Pathological Officers at the General Hospital had held classes in it annually, but the numbers were limited by the smallness of the room and by the fact that attendance was quite optional. It was felt that this unsatisfactory state of affairs could not be allowed to continue, and accordingly, in 1886, a pathological laboratory of size sufficient for the time was fitted up, and a practical course given for the first time during the summer session of that year. The great increase in number of the students during the past few years having rendered this room far too small for the comfortable accommodation of the class, a new laboratory has been fitted up of a larger size and possessed of much greater conveniences. This has been used for the first time during the past summer session. In 1886 were opened also a new Materia Medica Museum and an Examination Hall. The alterations and additions of the last years, thus briefly summarised, have been at once the result and the cause of the increased number of students attracted to the College.

In 1868, after the amalgamation between the two schools, the number of students on the books was 60. This had increased in 1886 to 139, in 1887 to 178, in 1888 to 193, in 1889 to 224, whilst at the present time the number stands

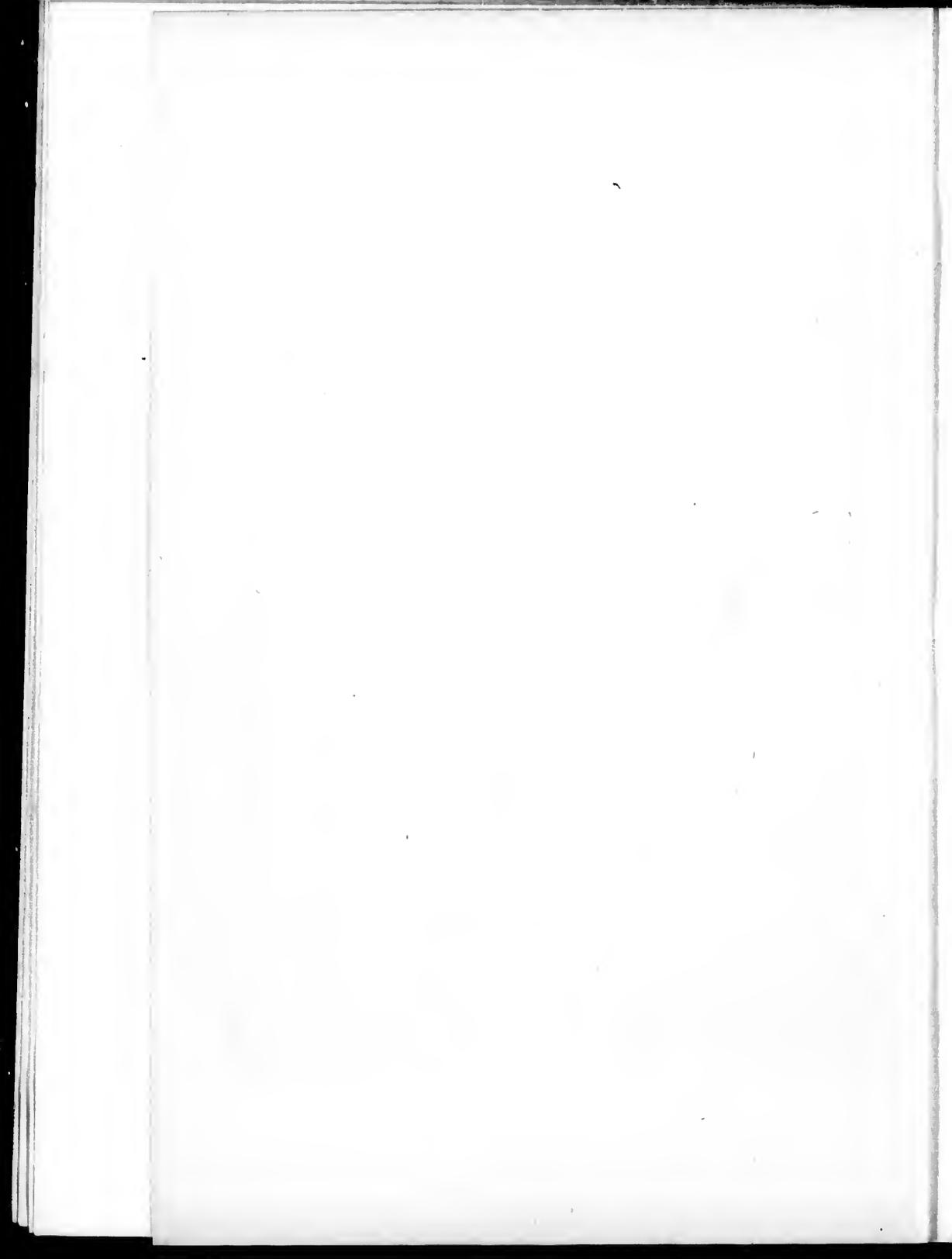


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THE ANATOMICAL MUSEUM, QUEEN'S COLLEGE.

PLATE 3.



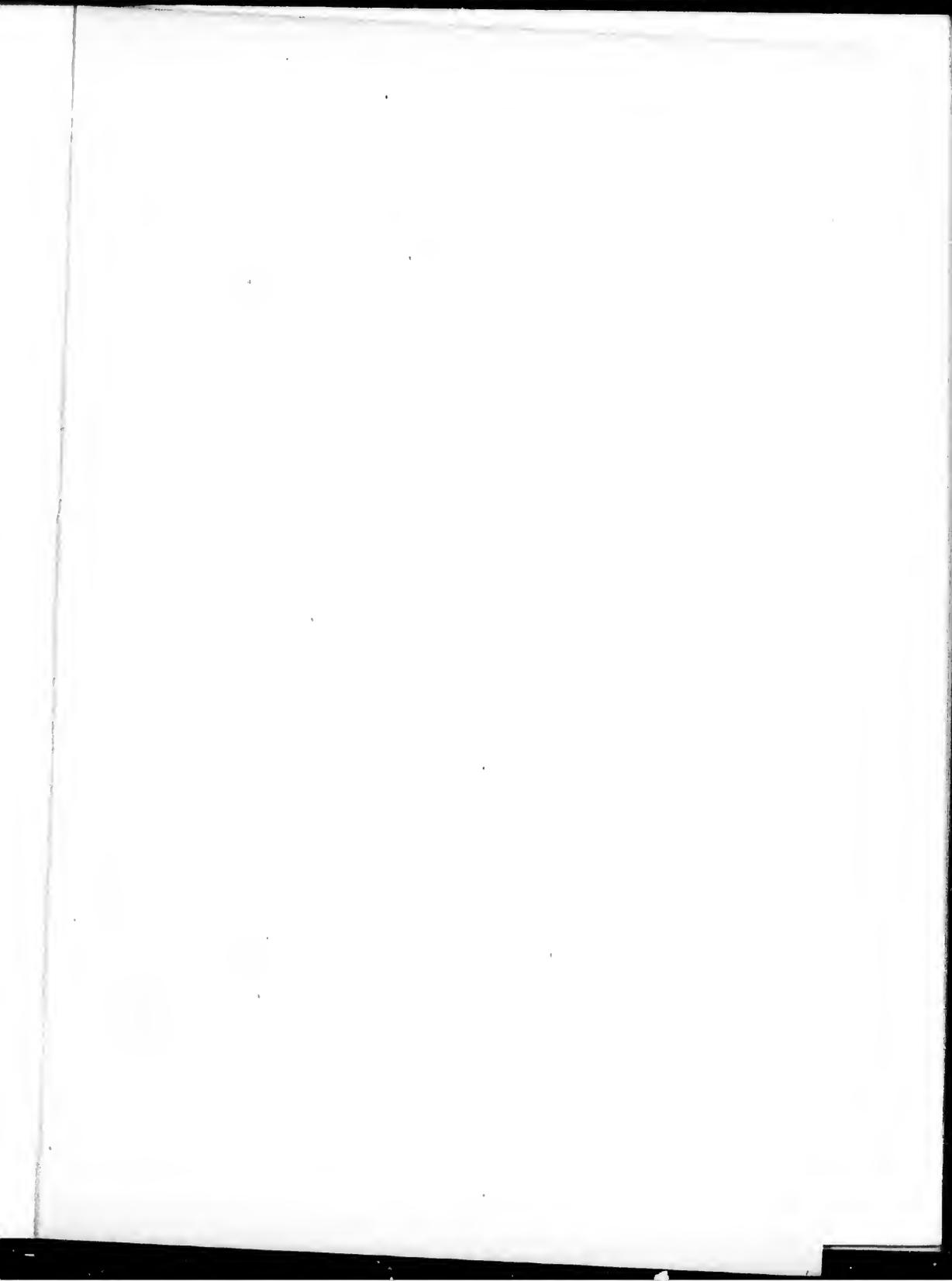
at about 250 medical students—nearly double the figure which it reached five years ago. The affairs of the College are managed by a Council of fifteen members elected annually by the Governors, each member retiring from office at the end of three years, but being eligible for re-election. The head of the College and representative of the Council is the Warden, who is a resident official. He has the entire control of the discipline of the College. The Honorary Secretary is particularly associated with the Medical Department, for the details of the work of which he is responsible. He is also a resident official. The Chairs are for the most part those usually existent in a school of medicine, the chief exception being that the subject of Gynaecology is dealt with by a separate and independent professor instead of being an appanage of the Chair of Midwifery, as is customary in most other schools. This alteration was effected in 1888, on the resignation of one of the co-professors of the former Chair of Midwifery and Diseases of Women. It may here be mentioned that the title of Professor was conferred on the occupants of the chairs in the College by the Royal Charter, and confirmed by the Act of Parliament of 1867. There are lecturers on Operative Surgery and Practical Pathology, and two tutors, Medical and Dental. The former is also Senior Demonstrator of Anatomy, and the latter is charged with the superintendence of the studies of the students of Dentistry.

A few words must now be said concerning some of the larger departments—that of Anatomy, as numerically most important, first claiming attention. The accommodation for this subject consists of a dissecting room with lavatory, the former by no means too large for the numbers now using it during the winter session, about 120 having entered for this course in the last session. It is large enough for the comparatively small class dissecting during the summer session: but it is obvious that if the increase of the school continues at the rate which it has maintained during the past five years, the subject of enlarging the accommodation for dissectors will have to engage the serious attention of the Council. Besides the large dissecting room there is a smaller one for the private work of the Professor and Prosecutors, a private room for the Professor, and a preparing room for the injection and storage of subjects. It may be mentioned that, on the whole, the supply of subjects is good and adequate; and though the recent requirements of the English Conjoint Board with regard to the teaching of

Operative Surgery have thrown an additional strain on the supply, there is no reason to suppose that the School will be in the future worse than, or even as badly off as, many other similar institutions.

The Anatomical Museum and bone room, which, as already stated, has been opened this year, is fitted up with a complete set of bones, coloured to show the attachments of the muscles, &c., and placed in revolving glass cases, with a complete set of permanent brain dissections, also in revolving glass cases, and with a number of permanently mounted dissections and frozen sections of the body. It also contains a number of anatomical and embryological models and a small collection of specimens of Comparative Anatomy, used to illustrate the lectures on Human Anatomy. In this Museum are also placed the specimens, human and comparative, used in the lectures of Dental Anatomy, for which the College is almost solely indebted to the labours of Mr. Humphreys, the Lecturer on that subject. There is finally, in connection with this department, a special Lecture Theatre.

The Pathological Department possesses a large and well-lit Laboratory, which is supplied not only with all the necessaries for histological work, but also with a large number of appliances for the study of Bacteriology. Connected with this Laboratory is a private room for the Professor of Pathology and the Lecturer on Practical Pathology, and a small dark room for photographic purposes. The pathological collection was, six years ago, in a condition which entailed a diligent work of reorganisation. Many of the specimens were old and useless, others were in need of re-mounting, and the labels were in most cases either antiquated or absent. The Curator, with the assistance of Mr. Barling (afterwards appointed Professor of Pathology) set himself to remedy these defects. The collection, almost without exception, has been re-mounted and re-labelled, and a very large number of specimens has been added. Amongst the largest donors during this time have been Mr. Lawson Tait (who enriched the Museum with a large collection of gynaecological specimens of the greatest value, which were entirely mounted at his expense) and the committee of the General Hospital, who, in the course of the past year, placed in the Museum, as a loan collection, the entire group of specimens which had up to that date been in their own institution. Perhaps the most complete groups





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THE DISSECTING ROOM, QUEEN'S COLLEGE.

PLATE 4

in the collection of morbid anatomy are those of diseases of the bones and joints and of the heart and blood-vessels, the latter being especially rich in valuable specimens.

In 1888 Dr. J. S. Billings delivered an address on the subject of Medical Museums to the Congress of American Physicians and Surgeons, of which he was the President. For the purpose of preparing this address he obtained statistics from the leading European and American medical museums. It is interesting and satisfactory to the friends of the school to note that, during the five previous years more specimens had been added to the collection in the Queen's College in the various Museums of Anatomy, Pathology and Materia Medica, than to any other collection in the United Kingdom. The number added was 1,250, the next largest figure being that of the great Museum of the Royal College of Surgeons in England which was 1,068. When the comparatively small staff attached to the Queen's College Museum is considered, this cannot but be reckoned as a most satisfactory result. It may be added that very large additions have been made since that date, the number amounting to between 400 and 500 further specimens. To the profession of the district and to the former students of the College the Museum is largely indebted for the material for this increase, though many additions to the Anatomical Museum have been made by purchase. With the assistance of the friends above named, the Curator hopes before long to make the Museum as complete for teaching purposes, as that of any similar institution. The Materia Medica Museum contains a collection of type specimens kept in glass cases, and a number of others in drawers accessible to the students. In addition to the regular course of lectures on this subject, a series of demonstrations is conducted during the Summer Session by the Medical Tutor on Pharmacopœal tests and other matters related to the subject. The Council have at present under their consideration the project of fitting up a museum containing objects connected with the subject of Public Health, now assuming such importance as a branch of Medical education. A Theatre for lectures in courses other than that of Anatomy, a Class Room in which the Medical Tutor's classes are held, with Professors' and Students' Common Rooms are also part of the accommodation of the College.

There is a Library containing between 3,000 and 4,000 volumes, to which the students have access. A number of

the books therein contained are old and many are of value : there are besides a number of modern works which the students are permitted to take out on loan. The Council have had it in view to keep the Library chiefly for lending purposes, since for reference purposes the students are otherwise well supplied. Thus, they have access to the Mason College Library, which contains a large collection of medical works which are not allowed to be taken out. They can also, if of good repute, by the kindness of the Council of the Medical Institute, obtain admission, for reading purposes, to the large and complete collection of books owned by that body. The students of the Birmingham School are thus unusually well supplied with opportunities of consulting the literature of their future profession, at no other cost to themselves than the small library fee of the Queen's College and the moderate amount charged to students not actually engaged in taking out classes within their walls, by the authorities of the Mason College. The Council of the Medical Institute generously make no charge to students admitted to the privilege of reading in their library, and as this is situated in close proximity to the College, it is largely used.

A Lectureship of one year's tenure, on some subject connected with Midwifery or the Diseases of Women or Children, is in the gift of the Council. It was founded in memory of the late Dr. Ingleby, for many years Professor of those subjects at the College, and is named after him. In commemoration of the same gentleman there were also founded the Ingleby Scholarships, one or two of which are awarded annually to students passing a satisfactory special examination in the subjects of Midwifery and Gynaecology. Another prominent name in connection with the history of the College is commemorated by the Sands-Cox Prize. This, which is justly considered the "blue ribbon" of the College, is awarded after examination in the subjects of Medicine, Surgery, Midwifery and Gynaecology, to the student of not more than four, or, under special circumstances, five years' standing, who passes first with the requisite percentage, provided that his collegiate career has been in every way satisfactory. A third friend and former teacher in the College is commemorated by the Russell Memorial Prize, awarded annually after an examination in the subject of Diseases of the Nervous System. This prize was founded in memory of the late Dr. James Russell, formerly Senior Physician to the General Hospital, and a teacher both in the Sydenham and

Queen's Colleges, by former pupils of these institutions. Three scholarships are offered annually, the regulations connected with which are as follows:—

The *Sydenham* scholarships, of which one or more may be awarded annually, are conferred, not by examination, but by the vote of the Council. They are given only to the orphan sons of medical men, on entrance to the College. The age of applicants must not exceed twenty-three years, and sons of former students of the school have a priority of election. The scholarships are tenable for three years, and are of the annual value of ten guineas. The *Queen's* scholarships are of the same value, and one or more may be awarded annually. They are limited to the sons of medical men, on their entrance to the College. The candidate's age must not exceed twenty years on the day of the examination. The subjects are, Latin, Greek, French or German, Arithmetic, Algebra, Euclid, Chemistry and Human Osteology. The books which are to be examined upon appear a year previously in the calendar. The *Open Entrance* scholarship is also of the same value, and one may be awarded annually. It is open to students who have entered the College in the October in which the examination is held, or in the previous May, provided that their age does not exceed twenty years. The subjects of examination are, Latin, French or German, Mathematics, Arithmetic, Algebra to the end of Progressions, Euclid, Books I. and II., Chemistry of Non-Metals, Elementary Biology. Besides these prizes, medals and certificates are awarded annually in each class, after a special examination, provided sufficient merit has been shown. Two or more Prosectors of Anatomy are appointed annually from the students entering upon their third year of dissections. The holders have the use of the dissecting room free. They are awarded special certificates, if their work has been satisfactorily performed, and the two senior, in addition, receive an honorarium. Two Assistants are also appointed annually in the class of Practical Pathology from amongst the students who have attended that class in the previous year. If their work has been satisfactorily performed they also are awarded special certificates. There are similar appointments connected with the class of Practical Physiology held at Mason College. The portion of this account which deals with the College work may fitly be concluded by a list of the names of the officials and teachers.

President, Lord Windsor.
Vice-President, The Rev. Canon Wilkinson, D.D.
Warden, The Rev. W. H. Poulton, M.A.
Honorary Secretary, Professor Windle, M.A., M.D.

PROFESSORS.

Medicine.—Sir Walter Foster, M.D., F.R.C.P., and Sir James Sawyer, M.D., F.R.C.P.
Surgery.—Oliver Pemberton, F.R.C.S., and Bennett May, M.B., B.S., F.R.C.S.
Anatomy.—Bertram C. A. Windle, M.A., M.D., B.Ch.
Physiology.—F. J. Allen, M.A., M.B.
Chemistry.—William A. Tilden, D.Sc., F.R.S.
Physics.—J. H. Poynting, M.A., D.Sc., F.R.S.
Pathology.—Gilbert Barling, M.B., B.S., F.R.C.S.
Midwifery.—John Clay, M.R.C.S.
Gynaecology.—Lawson Tait, F.R.C.S., M.D., LL.D.
Botany.—William Hillhouse, M.A., F.L.S.
Materia Medica.—C. W. Suckling, M.D., M.R.C.P.
Therapeutics.—Edwin Rickards, M.A., M.B., F.R.C.P.
Forensic Medicine.—J. St. S. Wilders, M.R.C.S.
Toxicology.—Bostock Hill, M.D., D.P.H.
Ophthalmology.—J. Vose Solomon, F.R.C.S.
Mental Diseases.—E. B. Whitcombe, M.R.C.S.

LECTURERS.

Operative Surgery.—T. H. Bartleet, M.B., F.R.C.S.
Practical Pathology.—G. F. Crooke, M.D.

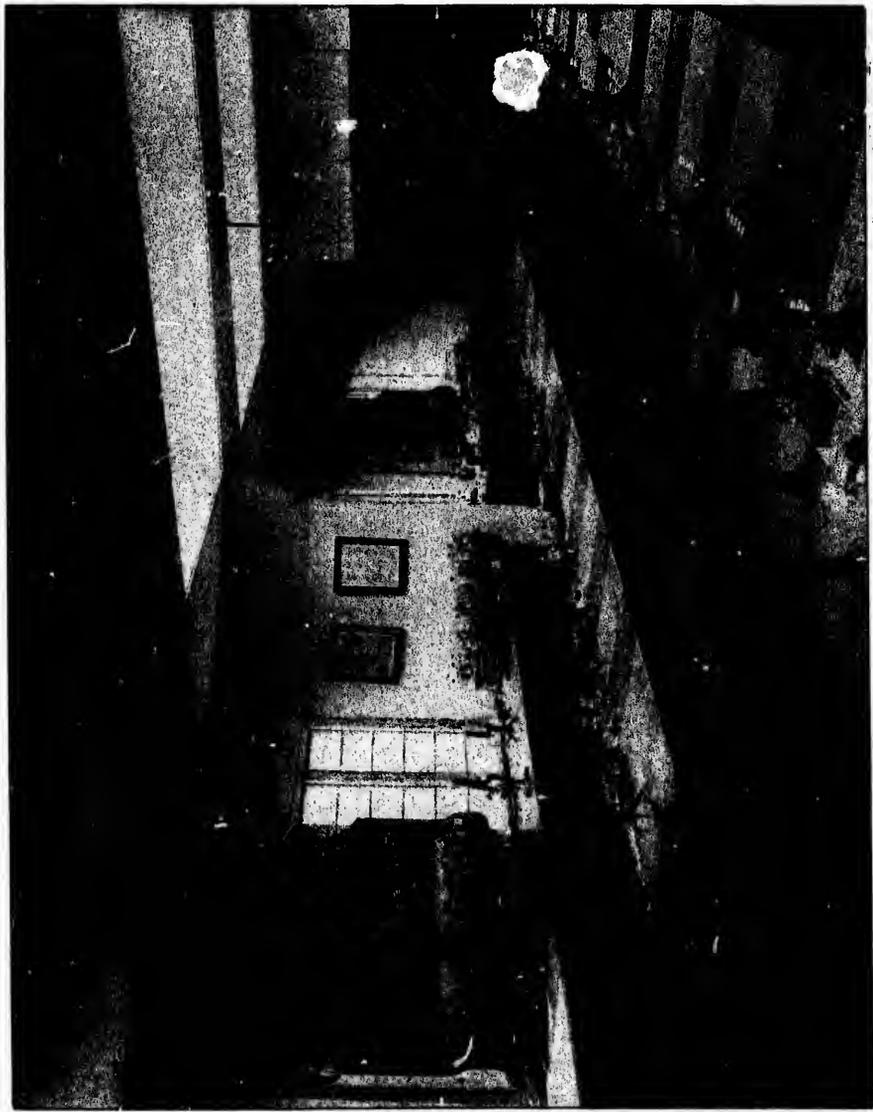
DEMONSTRATORS.

Anatomy.—A. E. Mahood, M.B., B.Ch., M.A.O.; W. F. Haslam, F.R.C.S.; F. Marsh, F.R.C.S.
Physiology.—J. F. Jordan, M.B., B.Ch., B.A.O.
Medical Tutor, A. E. Mahood, M.B., B.Ch., M.A.O.
Honorary Curator of the Museum, Professor Windle, M.A., M.D.

THE HOSPITALS.

Any account of the Birmingham School of Medicine which contained no mention of the facilities for clinical instruction would obviously be incomplete. The following information as to the hospitals of the city is limited to their relation to the education of medical students.

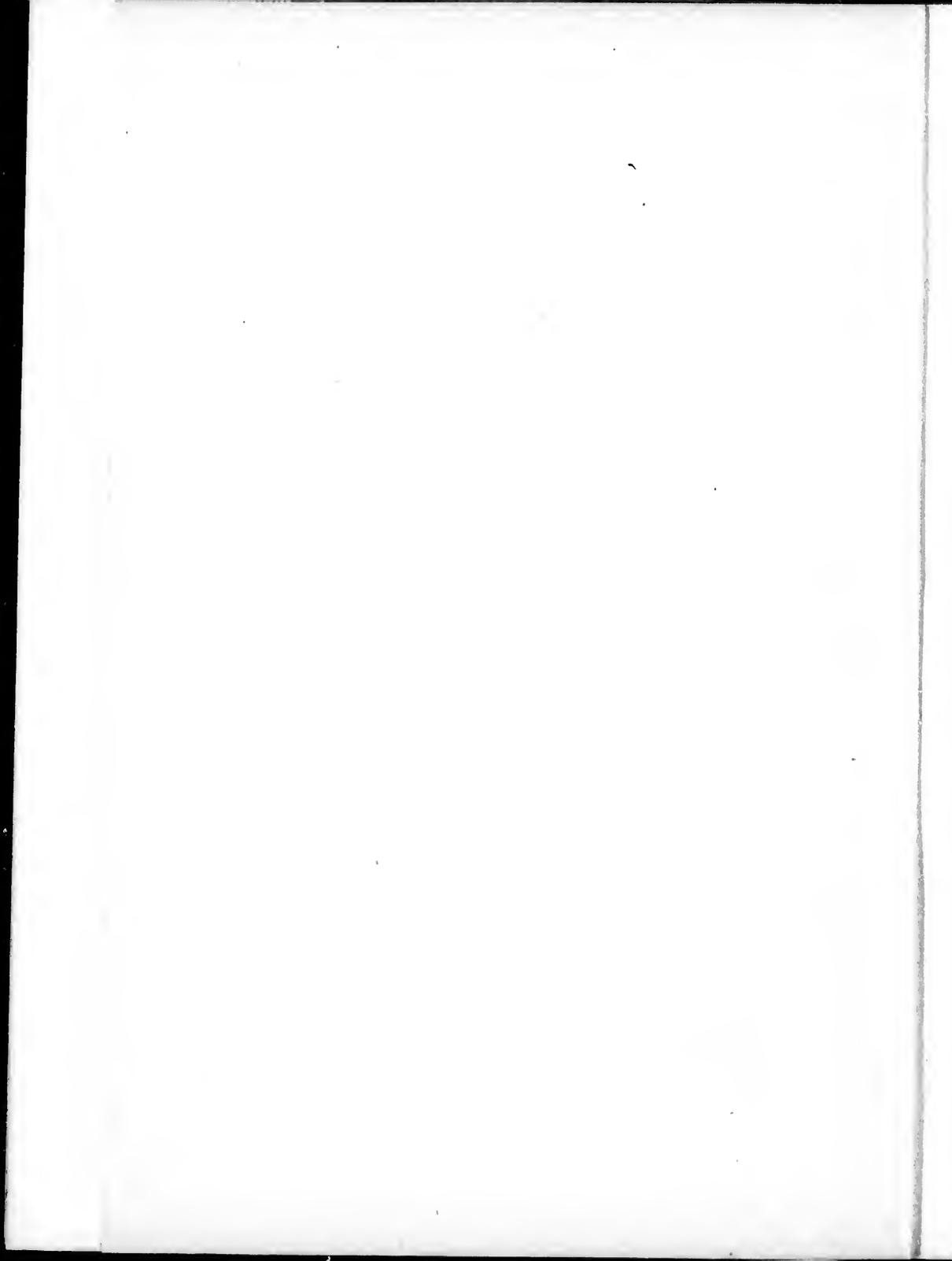
For a considerable part of the history of the medical



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COLLIER, PHOTO BIRMINGHAM.

THE PATHOLOGICAL LABORATORY, QUEEN'S COLLEGE.

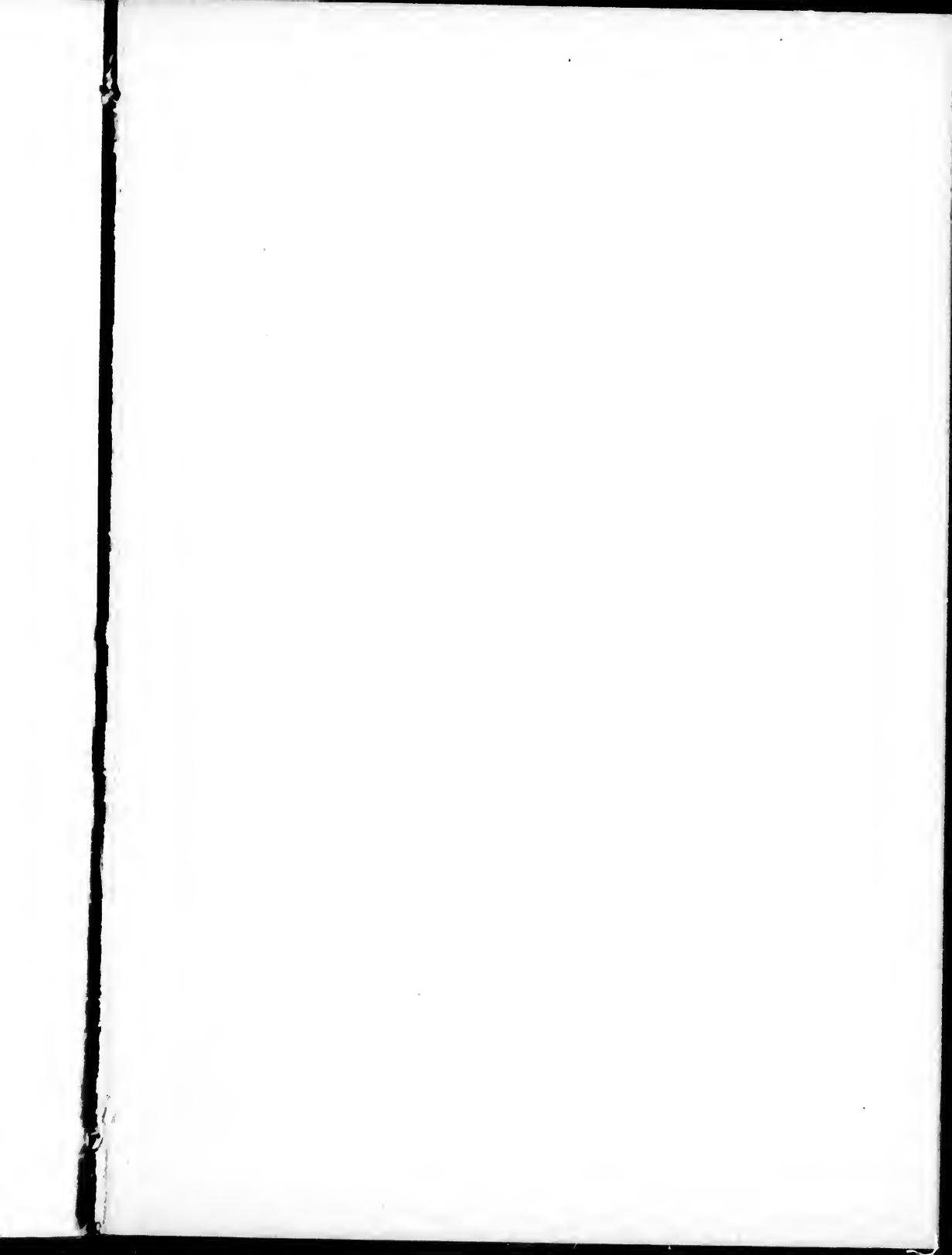


teaching of Birmingham—a period, in fact, of nearly twenty years—each of the clinical hospitals had its own school of medicine for its own students. After the amalgamation of the Sydenham and Queen's Colleges this state of affairs came to an end, and both hospitals were opened to the students of the single school. The clinical instruction at these institutions is managed by a body which is named "The Clinical Board," elected by the conjoined staffs of the two hospitals. Under the present system the students attend the clinique of one hospital for six months, and are then transferred for a similar term to the other. They have thus the opportunity of following the practice of two different institutions and hearing the instruction of two different sets of teachers. There are in these two hospitals over four hundred beds, not counting those in the Jaffray Branch of the General Hospital, and students have therefore no ground for complaint as to the adequacy of the material for clinical instruction. There are, besides, large out-patient departments at both hospitals, upwards of 70,000 patients annually receiving treatment therein. There are special departments for Diseases of the Skin and for those of the Throat and Ear at the General Hospital, and for Diseases of the Eye and Dental Diseases at the Queen's Hospital. There is a special department at each hospital for Diseases of Women, and an out-patient Maternity at the Queen's Hospital, in connection with which students are enabled to study their Practical Midwifery. Special lectures, with practical demonstrations, are given to junior students in Physical Diagnosis and the art of Case-taking, and in minor Surgery and Bandaging, by members of the staffs appointed annually for that purpose. Practical Pharmacy is taught in the dispensaries of the hospitals. There are various appointments open to students prior to qualifying. Thus there are at the General Hospital two Resident Medical Assistantships, tenable for six months, and at its Branch one Resident Assistantship, tenable for three months. At the Queen's Hospital there is a Resident Dressership, tenable for three months. These appointments are conferred after examination, conducted by the Clinical Board. Clinical prizes in Medicine, Surgery, and Midwifery are also awarded by the same body. These appointments and prizes are only open to students of Queen's College. The two hospitals have also a number of resident appointments for qualified medical men, which are open to the students of the school, though, with the exception of the Obstetric Assistancy at the Queen's

Hospital, not confined to them. At the General Hospital there are the following :—Resident Medical Officer, Resident Surgical Officer and Pathologist, each three years' appointments. There are also four House-Surgeonships, each tenable for six months. At the Queen's Hospital there are two House-Physicianships and two House-Surgeonships, each tenable for two years, and an Obstetric and Ophthalmic Assistantship tenable for six months. At the Jaffray Branch there is a Resident Officership tenable for three years.

Besides the two recognised clinical hospitals which have been engaging our attention, there are certain others which are known as Associated Hospitals, to which students of the College have admission without any fee. The following at present are on the list of such institutions. The City Lunatic Asylum, which is recognised by all the Licensing bodies as a hospital where attendance may be made on the subjects of Lunacy and Mental Disease. It deserves to be more widely known than it apparently is, that certain examining boards, the University of London amongst the number, recognise a three months' course at such an hospital as equivalent to the same amount of attendance on the practice of an ordinary clinical hospital. The Birmingham and Midland Eye Hospital possesses 55 beds, and there is a daily average attendance of 117 out-patients. The Birmingham and Midland Counties Orthopædic Hospital has accommodation for 18 in-patients, and an out-patient department. A course of lectures is delivered during the summer session, on the diseases treated in the institution. With the combination of general clinical and special hospitals above described, it may be said without exaggeration that the students have an opportunity for clinical work unexcelled by any school in the kingdom. They have, as has been already shewn, also an opportunity of improving their knowledge after qualifying, by holding one or more of the resident posts mentioned above. But these do not exhaust the list of those available in the City. There are also, at the General Dispensary five Resident Surgeonships, at the Workhouse and Workhouse Infirmary four resident appointments, at the Lunatic Asylum an Assistant Medical Officership and Clinical Assistantcy, a House-Surgeonship at the Eye Hospital, with four non-resident Poor-Law appointments in the gift of the Board of Guardians.

From what has been stated in the foregoing pages, it will be seen that the Birmingham School of Medicine, having





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THE MASON COLLEGE.

PLATE 6.

passed through its troublous youth, is now, unless appearances are singularly deceptive, entering upon a quiet and prosperous middle age. With Birmingham and the immense and thickly populated district around to draw upon for students, with the facilities for systematic teaching afforded by Queen's and Mason Colleges, and clinical material in such rich abundance in the various hospitals, the friends of the school have good reason to hope that its future career may be one of uninterrupted prosperity, and that the intentions of its founders may be completely fulfilled in these later days.

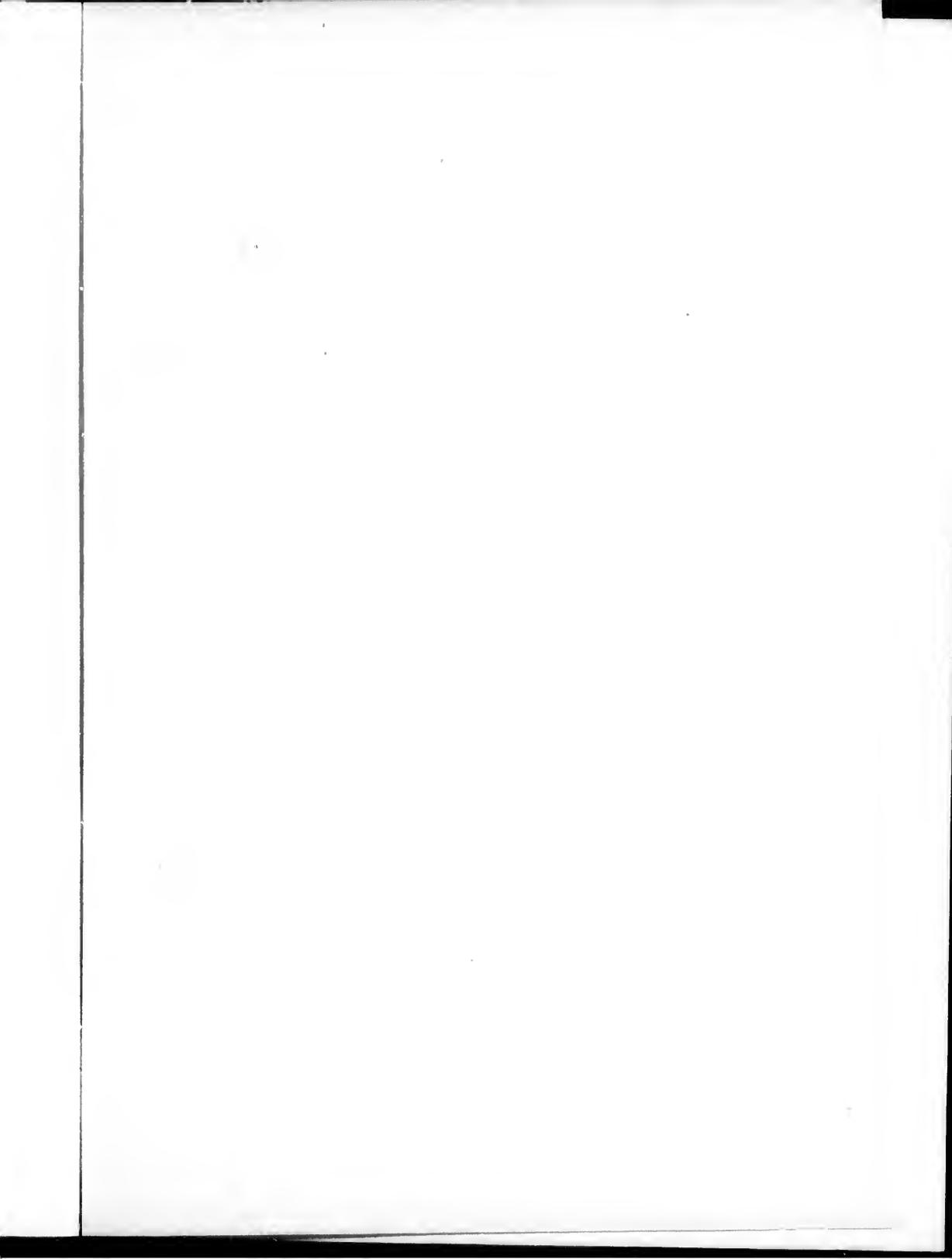
THE MASON COLLEGE.

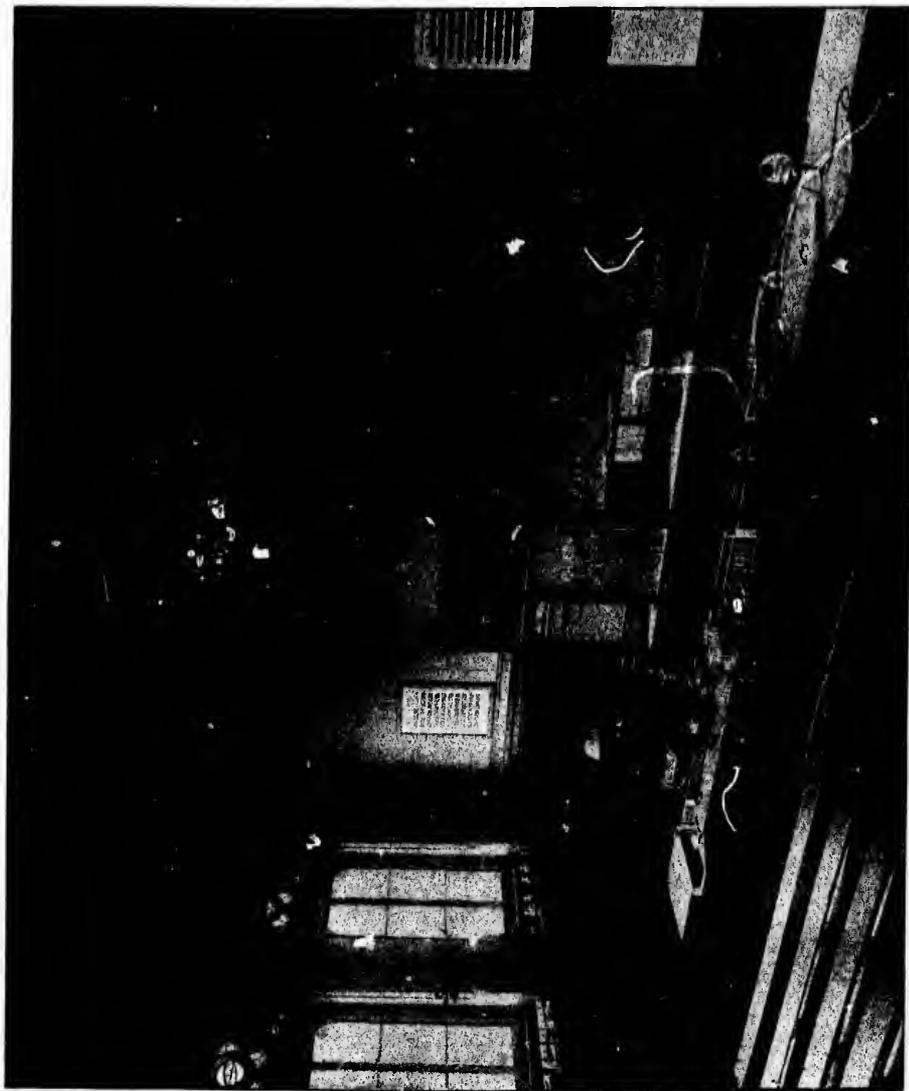
Independently of its function as a seat of general, technical, and university education, the Mason College has a close and threefold connection with the study of medicine. As has been already noted in the article upon the "Birmingham School of Medicine," up to a certain point in the medical student's second year the Mason College takes by far the larger share in the systematic training of the *alumni* of the Queen's College: or, to speak more definitely, provides, with the exception of the subject of Anatomy, the whole of their preliminary scientific training, no matter whether candidates for the diploma of the Conjoint Board or for the degrees of the University of Durham, with which an important connection has recently been opened. In many respects an even more important part is played by the College in medical education, by means of the contingent, at present some twenty strong, which it annually sends up for the Preliminary Scientific Examination for the medical degrees of the University of London. Finally, in their individual capacity, several of the Professors of the College, namely, those of Botany, Chemistry, Physiology, and Zoology, are recognised Lecturers for the degrees in Medicine and Science of the University of Edinburgh, attendance upon whose courses of instruction, or certain of them, is equivalent to attendance in the University itself; and within its walls, therefore, students of medicine who propose subsequently to proceed to Edinburgh can carry on the whole of the earlier part of their studies. To make this reference to the association of the Mason College with the Birmingham Medical School complete, we may add that two of its Chairs, those of Botany and of Physiology, were founded for medical purposes; and although the former has far outgrown its

original purport, the latter is still, to all intents and purposes, a purely medical Chair.

As the Mason College will provide to a great extent the local home of the British Medical Association during its visit to Birmingham, the general aspect of the College building, and its position in the very centre of the city, will already be familiar to its members. The elevation is generally considered by connoisseurs to be the noblest and most artistic amongst all the great public buildings of the city; and, though not free from faults, the internal arrangement does credit to the skill of the architect (Mr. Jethro A. Cossins), and to the use which he made of his visit to the principal science schools of Europe prior to preparing his plans. More seriously than perhaps from any other cause, the building suffers from being "set up on end;" but for this the costliness of the site is alone responsible. The building lies around two small quadrangles: between the quadrangles lie the main corridor, staircase, lavatories, &c.; along the front and back of them are situated the lecture theatres, examination hall, library, and the largest laboratories: while at the sides are most of the smaller rooms, private rooms of the professors, and so on, entered from narrow outside corridors on each of the floors. The basement is largely occupied by the Engineering Department, while the highest part of the building is occupied by the extensive geological collection. This latter, by its weight, presumably serves the useful function of a pinnacle, and keeps the rest of the building steady. As the visitor will find, it is a long way up to this museum. Young as the Mason College is, a few jokes which time will make historic, already cling around it: and one of them is to the effect that the only President of the Council who has deemed it his duty to make periodic visits to this museum was one who, in his day, had been a famous Alpine climber, Mr. William Mathews, M.A. We cannot vouch for the accuracy of the statement, since, according to the Trust Deeds, a periodic inspection of every part of the building has to be made by two members of the Council: and, whether he likes it or not, the President probably has to form one of this pair.

The Departments of the College which are especially associated with medical studies are Botany, Chemistry, Physics, Physiology, and Zoology. These we will briefly consider seriatim.





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THE CHEMISTRY LECTURE THEATRE, MASON COLLEGE.

PLATE 7

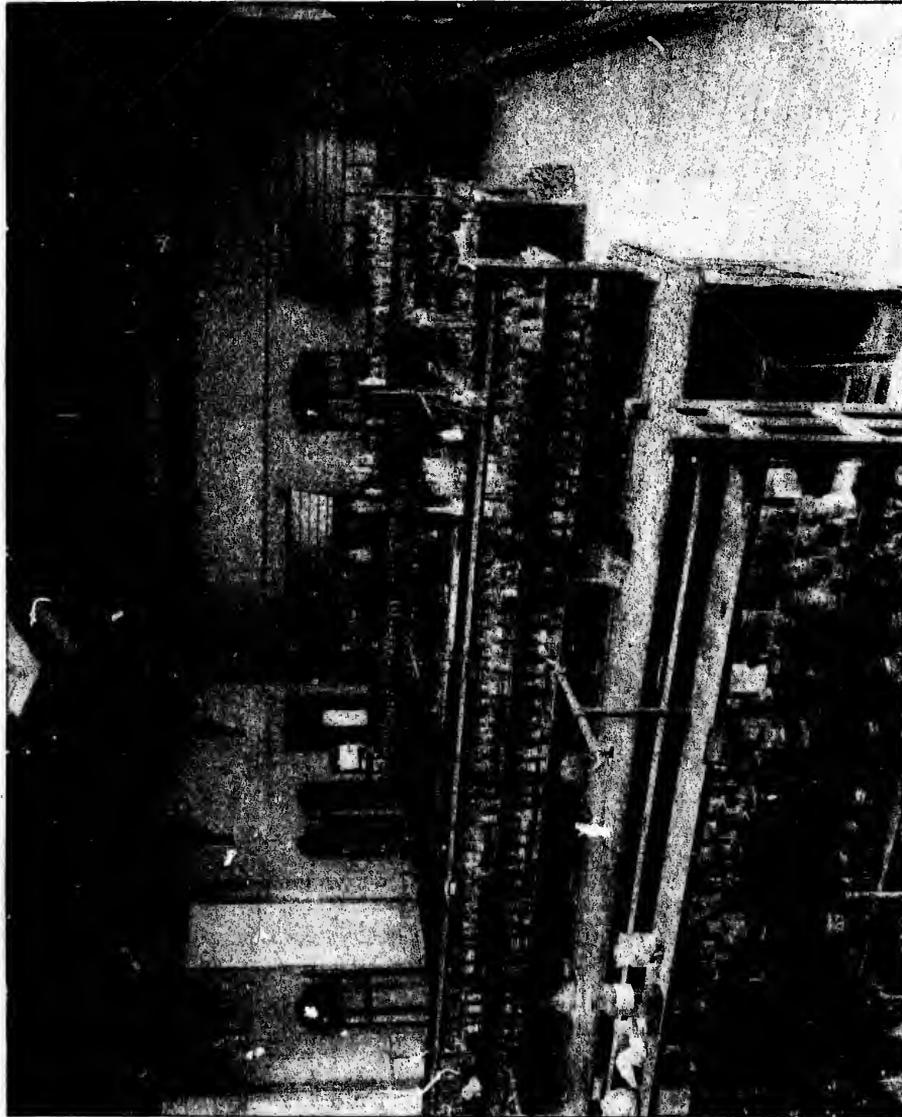
THE CHEMICAL DEPARTMENT (*Professor*, W. A. Tilden, D.Sc., F.R.S., F.C.S.; *Lecturers*, W. W. J. Nicol, M.A., D.Sc., F.R.S.E., F.C.S., and Thos. Turner, F.C.S., F.I.C., A.R.S.M.; *Demonstrator*, T. R. Marshall, D.Sc.) occupies, with the exception of the Examination Hall and a couple of geological class rooms, the whole of the upper general floor of the main College building and a portion of the floor below. Besides the Professor's private room and laboratory, the Department includes, upon the upper floor, a large Qualitative Laboratory with separate places for 48 students, a Quantitative Laboratory with places for half as many, with supplementary accommodation in other rooms. In this Department there are actually at the present time about 130 students working, of whom rather more than one-half are medicals. The large Chemistry Lecture Theatre occupies the front centre of the building, and is capable of holding at least 250. Behind it are two rooms containing an extensive chemical and metallurgical collection, by means of which, and of copious experiments, the lectures are illustrated. It is perhaps worthy of mention that this theatre is capable of being darkened, so that lectures can be illustrated by the oxy-hydrogen lantern (one of which the Department possesses), by enlarged spectra, &c.; while a powerful Ruhmkorff coil and a Dubosc electric lamp are also provided for lecture and other supplemental purposes. For ordinary laboratory purposes there exists an abundance of all the ordinary apparatus; while in the Balance Room and elsewhere are ten chemical balances, besides a number of "rough" balances for ordinary purposes. For medical students who know no chemistry there is an introductory course in the Spring Term; while those belonging to the Medical School receive their instruction by means of a complete course during the Summer Session, and attend in the Laboratory on three afternoons in the week. In the whole of the laboratory work, excepting that part dealing with volumetric analysis, the students are treated independently, each working at his own special rate of speed, and being looked after quite separately from his fellows. For the Preliminary Scientific Examinations of the University of London, and for general purposes, a course of about 100 lectures runs through the Winter and Spring Terms, and is accompanied by laboratory work throughout the Session. A great many students, of course, work in the Chemical Laboratory for purely technical purposes, such as brewing, &c.; and there exists also a small metallurgical laboratory for those whom it concerns.

At this point it may be worth while to note that the College keeps two kinds of "Session," which, in the Summer Term, differ to some extent. The ordinary Session commences on October 1st, and consists of three Terms, Winter ending just before Christmas, Spring commencing in mid-January and ending about the first week in April, and Summer, which for ordinary purposes, begins somewhere in the neighbourhood of April 20th and closes about the 1st of July. For medical purposes proper this Summer Term constitutes a Summer Session, and opens on May 1st and continues till approximately July 20th.

THE PHYSICS DEPARTMENT (*Professor*, J. H. Poynting, M.A., D.Sc., F.R.S.; *Demonstrators*, B. B. Skirrow, B.A.; R. H. Housman, Assoc. Mas. Coll.; and A. V. C. Fenby) has not much connection with the Medical School in its more restricted sense. For the purposes of the students of Queen's College there is a short course of about 20 lectures on Matter, Heat, and Electricity, designed to prepare students for the examination in Chemical Physics by the Joint Examining Board of the Colleges of Physicians and Surgeons. For the purposes of the candidates for the London medical degrees there is a sessional course of 90 lectures: in addition to which they have a course of elementary laboratory work of two hours a week, in which they learn the use of the simpler physical instruments. In this Department there are about 90 students, of whom half have medicine in view. The Department has a large lecture theatre, capable of accommodating 150 students, on the first floor, with apparatus rooms attached, and on the ground floor is an extensive laboratory fitted with a large amount of apparatus, not merely for the teaching of all the ordinary branches of Physics, but also of the more modern science of electric lighting, amongst the appliances for this latter purpose being a dynamo and gas engine for driving it.

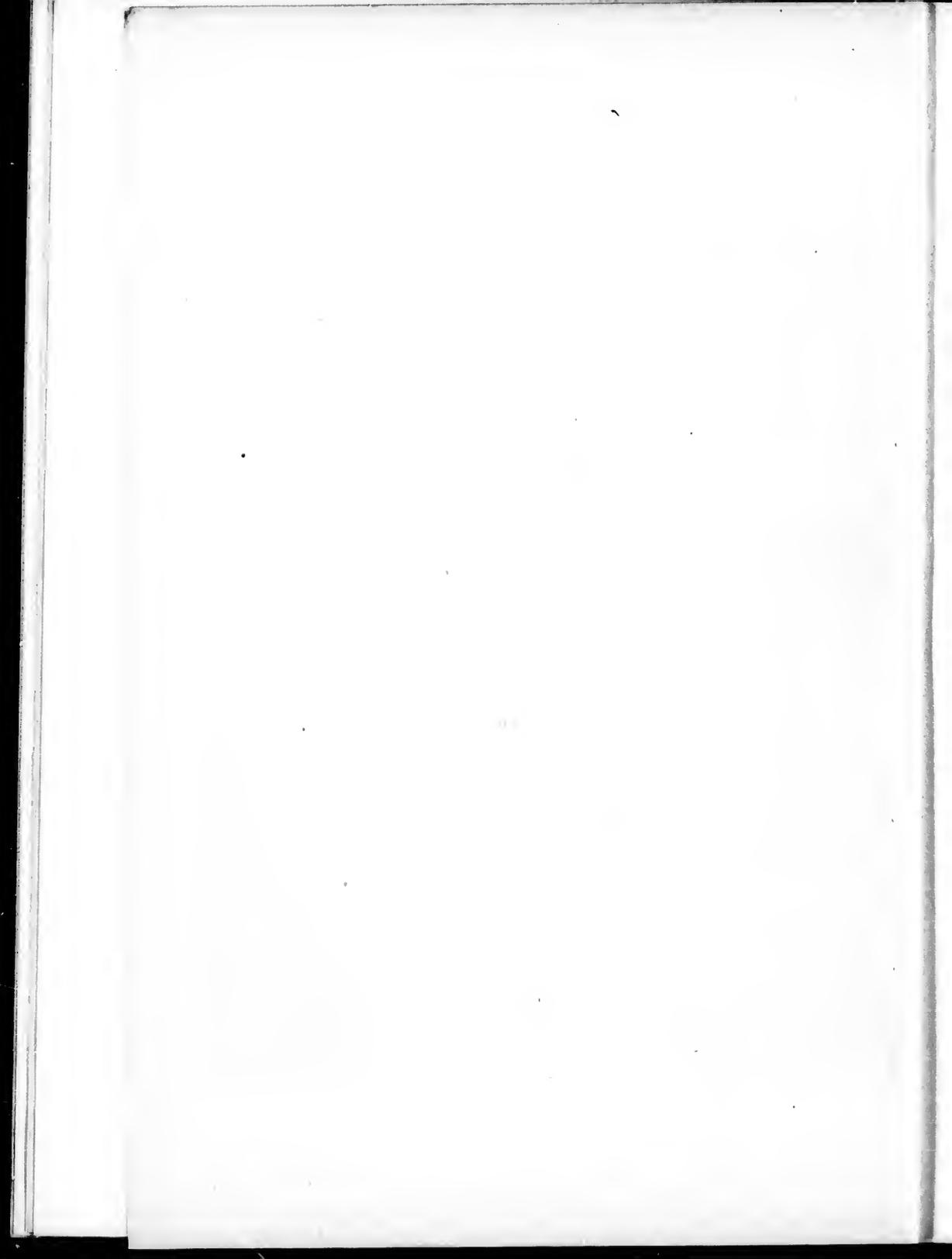
The three BIOLOGICAL DEPARTMENTS, occupying nearly the whole of the west side of the College, have a large lecture theatre in common situated on the first floor, and capable of seating 200 students. These Departments are all particularly rich in diagrams, many hundreds of which have been specially painted for lecture purposes, the proper display of which in the lecture room is provided for by roller curtains covering the entire end of the theatre.

In the PHYSIOLOGICAL DEPARTMENT (*Professor*, F. J. Allen, M.A., M.B.; *Demonstrators*, J. F. Jordan, M.B.,



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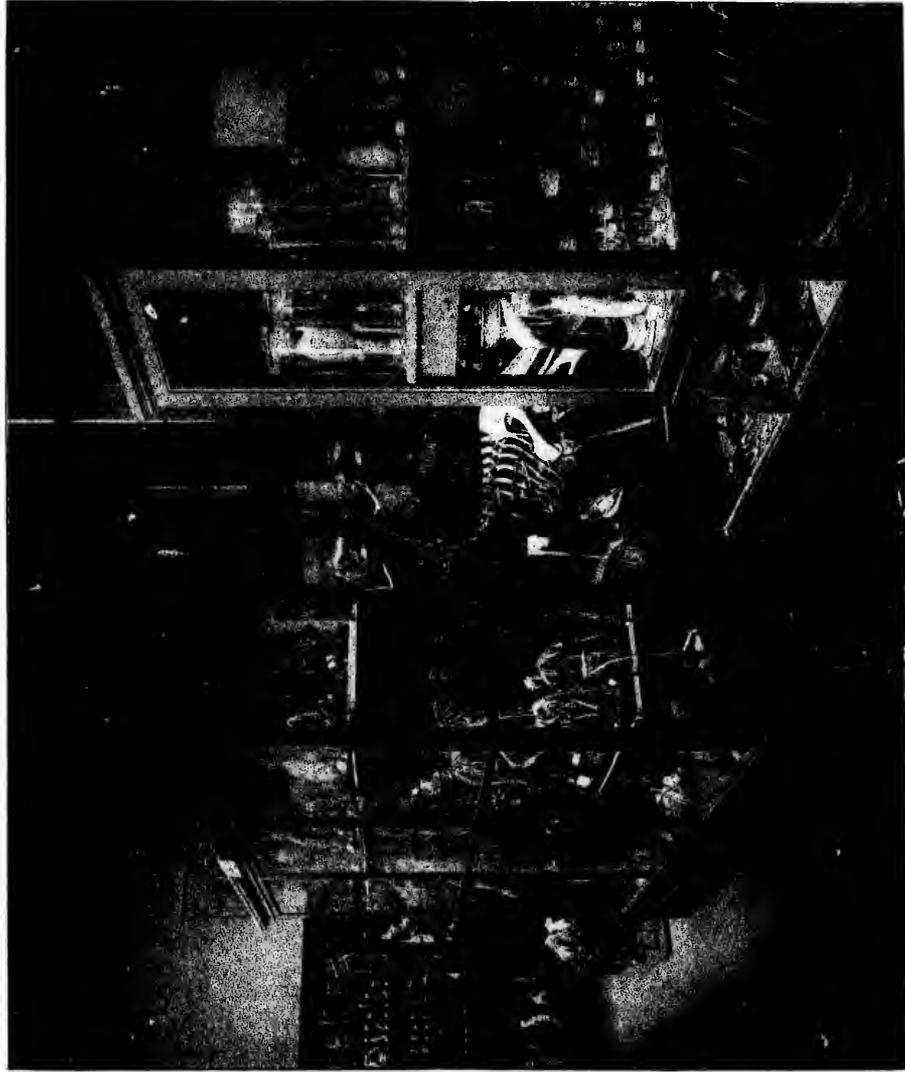


B.Ch., and E. Teichelman, M.R.C.S.) practically all the students, about 100 in number, are preparing for the medical profession. Those who are working for the ordinary diploma of the College of Surgeons and Physicians take their work in three steps. During their first Winter Session (Winter and Spring Terms) they take a course of lectures in Elementary Physiology combined with Practical Histology, each student mounting for himself a set of preparations of the elementary tissues of the body. During their first Summer Session they take general Practical Histology, Chemical Physiology, and Experimental Physiology, in which course each student prepares for himself a set of microscope specimens of the tissues in general. He is required to perform for himself the chemical tests for the important constituents of the body, the secretions, &c., and is taught the use of simple instruments of investigation, such as the sphygmograph. During his second Winter Session he attends a course of more advanced Physiology, with demonstrations of methods of investigation and incidental laboratory practice. Students who are preparing for a higher qualification, such as the M.B. of London, Edinburgh, or Durham, or the F.R.C.S., take also in their second Winter Session a Tutorial Class in Advanced Physiology, and, after passing their first examination by the Conjoint Board, &c., a class in advanced Practical Physiology, including Higher Histology and the methods of histological research, advanced Physiological Chemistry with quantitative analysis, and the methods of experimental research. Since the value of physiological knowledge is in proportion to its applicability to medicine, great care is taken to indicate the application of physiological discovery to medical practice, and students are carefully taught those methods of chemical testing which are found most useful for clinical purposes. The Laboratories, of which there are three, are well appointed, each student having the use of a separate microscope. The apparatus includes the most useful and valuable instruments for teaching, such as the Pendulum Myograph, Kühne's Artificial Eye, &c. The most approved methods of microscopic preparation are practised, and thus the histological specimens given to every student are of exceptionally high quality.

THE ZOOLOGICAL DEPARTMENT (*Professor*, T. W. Bridge, M.A.; *Demonstrator*, C. F. M. Ward) occupies a considerable proportion of the first floor on the west side of the College, the Museum and Laboratory occupying jointly two large

rooms, while there is the usual preparation-room for the assistant. The lecture courses in this Department which have special reference to the Faculty of Medicine are a junior course for candidates for the Preliminary Scientific Examination of the University of London, a middle course qualifying for the first Professional Examination at Edinburgh, and a special course for candidates for the F.R.C.S. The Laboratory is well lighted, and has accommodation for about 30 students working at the same time. The practical work is conducted in connection with the various lecture courses. The Museum includes in its collections a fairly complete series of spirit-mounted specimens illustrating systematic Zoology: a series of skeletons and parts of skeletons, both bony and cartilaginous, for the student of Comparative Osteology; and collections of birds' eggs and birds' skins, and spirit-preserved and stuffed fishes. The students number rather more than 40, of whom about two-thirds are entering the medical profession.

THE DEPARTMENT OF BOTANY AND VEGETABLE PHYSIOLOGY (*Professor*, W. Hillhouse, M.A., F.L.S.; *Demonstrator*, A. W. Haines, B.Sc) adjoins that of Zoology and Comparative Anatomy, and is entered from the west corridor on the first floor. Lecture courses are planned to cover the requirements of the general medical students, of candidates for the degrees of the Universities of Durham and Edinburgh, and of those for the Preliminary Scientific Examination of the University of London. The most important courses, therefore, from the medical standpoint, are, on the one hand, a course of lectures, with demonstrations, carried on from three to five times weekly during the Summer Medical Session, and especially arranged for the purposes of the Medical School proper, including, therefore, a study of the most important indigenous and other medical plants in their living state; and, on the other hand, a course of about 80 lectures continued throughout the College year, and accompanied by systematic work in the Botanical Laboratory, this latter course being intended for students for London and Edinburgh. Perhaps the most striking feature in the teaching method of this Department is a systematic attempt to strip the subject of the mass of dry and often useless detail which forms such a large proportion of ordinary botanical lectures. The teaching throughout is from a biological standpoint, and an endeavour is made to train at the same time the faculties of observation and of reasoning



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by associating the study of structure and of function, and looking upon each of these as providing to a large extent a key to the other. The Laboratory is a long, narrow, low room, outside the College building proper, but entered through iron doors, well lighted from side and roof, and provided with separate table accommodation for about 30 students, each having a microscope, reagents, and general appliances. Recognising the almost indispensable character of the microscope to the medical man, in common with nearly all scientific men, and that plants provide the best of all means for thoroughly mastering the use of this instrument, the laboratory work is of a carefully graduated character, and is intended to give not merely a complete insight into the use of the microscope as an implement for anatomical research, but also into the general use of micro-chemical reagents as an aid to the identification of structure and cell-constituents, glandular secretions, &c. There is also the nucleus of a museum collection, including especially a good series of teratological preparations. The students in the department number more than 60, rather more than half having medicine in view, so that, apart from the medical students from Queen's College, this is the largest botanical school in England outside London and the University of Cambridge.

Although we are here concerning ourselves with the Mason College as a constituent part of the Birmingham School of Medicine, it is not possible to avoid a passing reference to the other work which is carried on within its walls. With the exception of the Physiological Department, the figures given under each heading will shew that the medical students form only a percentage of the whole, and the residue are provided for in part no doubt by the courses of lectures and laboratory work already detailed, but in part also by other courses as carefully and systematically organised as those to which reference has already been made. And besides these Departments the College has "sides" or "faculties" devoted both to Language and Literature and to Technics. Thus there is a Department of LATIN and GREEK (*Professor*, E. A. Sonnenschein, M.A.), with 40 or 50 students: a Department of ENGLISH LANGUAGE and LITERATURE (*Professor*, Edward Arber, F.S.A.), with about 60 students: one of FRENCH (*Professor*, C. Bénévoit), with 50; and of German (*Professorship* vacant), with 40 students. To a large extent these four Departments, and

especially the first and second, carry on systematic work for the examinations of the University of London. Then there is a Department of MATHEMATICS (*Professor*, R. S. Heath, M.A., D.Sc.; *Lecturer*, A. A. Mutimer, M.A.), with about 80 students, partly university, partly technical, partly general: one of GEOLOGY (*Professor*, Charles Lapworth, LL.D., F.R.S., F.G.S.; *Demonstrator*, T. C. Cantrill, B.Sc.), with 50 students, who have the advantage of a large and very valuable museum collection: and one of ENGINEERING (*Professor*, Robert H. Smith, M.I.M.E., A.M.I.C.E.; *Demonstrator*, J. T. Newman, A.M.I.C.E.). This Department is of such importance, and, owing to the thorough systematisation of its studies, affects so many others, that a brief reference to it will be valuable to visitors to the College. Having joint use of the Physics Lecture Theatre, the engineering work is done partly in the basement, partly on the ground floor. On the latter is a large, airy, and well-appointed Drawing Office: on the former, a Workshop, Museum, and Engine and Boiler House. The engine, which is of the inverted marine type and is compound and surface-condensing, is elaborately fitted with appliances for complete engine tests of many different kinds, and the boiler is similarly fitted. The Workshop contains various machine tools, and machines for testing materials in tension, compression, torsion, and bending, as well as for measuring the frictional efficiencies of parts of machinery. Other interesting experiments made by the students consist in the measurement by special forms of dynamometers of the working forces in various classes of machines. The Museum is found useful in studying the qualities and appearances of constructive materials, and contains also many samples of failures—parts of machines, boilers, &c., which have come to grief. The junior students examine week by week the large engineering works in the neighbourhood, and calculate the power of the engines and other machines used in these works. The students number about 40.

A part of the College appliances, of which all are proud, is its LIBRARY (*Librarian*, W. H. Cope). Though, like the College itself, not yet ten years old, this Library has already attained very creditable dimensions. Upwards of 20,000 volumes are now upon its shelves: and though at present unduly cramped in its finances, the additions average little short of 1,000 volumes annually. More than one half of these were given from time to time by a former President

of the College, the late Thomas Pretious Heslop, M.D., for years the leading consulting physician in the Midlands, a man of profound sagacity and the most liberal and far-reaching culture, whose sympathies flowed in a channel which advancing years seemed alike to broaden and to deepen. Let the casual visitor take down from the shelves of the Library books in any department, whether medicine or history, philosophy or philology, travels or education, textbook or serial, and the plate indicating the donor will bear witness to the liberality both of mind and purse of Dr. Heslop. During the later years of his life no sight was more common than that of Dr. Heslop driving down from his residence in Edgbaston with the seats of his carriage piled up with books, and himself immersed in the study of some book-dealer's catalogue, from which he was culling information as to prices or probable purchases. We have heard a second-hand bookseller in Birmingham say that no one in the trade knew more accurately the value of a book than Dr. Heslop did; and the closeness of his study and retentiveness of his mind made this verdict more than probable. His death four years ago deprived the College of a most ardent and liberal supporter, and the students of a real friend. The visitor will notice a memorial of him in the form of a very fine and strikingly accurate bust, by Williamson, which was provided by the subscriptions of the students and teaching staff, and occupies a prominent place amongst the books, as, when alive, they occupied a prominent place in his thoughts. A glance round the shelves will show that the purchases have been in the main governed by utilitarian principles—not the principles of that narrow and restricted utilitarianism which looks alone to present value, but with the broader and wiser spirit which looks also to the future and its probable needs. Governed by these principles, then, the Library is peculiarly rich in serials, hardly any Department of the College work being devoid of a complete set of its most important periodical publications. For similar reasons the "Journals" and "Transactions" of learned societies are abundantly represented by complete sets. The *leit motif* has been to equip the Library with works which are beyond the purchasing power of those who will use it. The arrangement adopted is departmental, following, so far as it goes, the arrangement of the College teaching work, but not stopping there, so that the departments of the Library are at the same time more numerous, and cover a wider range, than the present work of the

College does. This Library is open to all students during the whole time that the College building itself is open, independently, that is, of whether teaching work is going on or not. The students have full liberty to remove any books from the shelves, but are desired not to replace them, nor to remove them from the Library rooms themselves or their precincts. They are not, therefore, at liberty to take them home, as the books are intended mainly for reference. For the purpose of study, a considerable number of small tables are provided, and the extent to which these are usually occupied is striking evidence of the utility of the collection to the student-body. The Professors, for whose use the bulk of the books are specially fitted, have the liberty of borrowing them from the Library, and in this way derive most valuable assistance in their work. Non-members of the College, who are engaged in any special work, can also obtain the privilege of using the Library for reference and study; and though the limitation of library-space compels the Council to carefully consider each application, this "free list" includes a very considerable number of names, and the privilege is both well-used and highly valued.

Very shortly another memorial will be added to the Library in the form of a bust of one of the most gifted lady students this or any college has yet produced, the late Constance C. W. Naden, poetess and philosopher, whose untimely death literary and scientific circles in the Metropolis, and her many personal friends and fellow-students in Birmingham, still mourn. This bust (by Tyler) is the gift of Surgeon-Major R. Lewins, M.D., Miss Naden's literary executor, and, at the time this article is written, is on exhibition in the Royal Academy.

Speaking of a lady student reminds us to draw attention to what is, to strangers, perhaps the most striking feature of the Mason College, namely, that within its walls male and female students mingle on terms of perfect equality.* All the classes and laboratories are open to both sexes alike; they compete together for all the College prizes; in no direction, indeed, is anything restricted to the separate use of either sex, excepting the students' common rooms alone. Of these, given up to the sole use and exclusive control of the students, there is a large and nearly isolated room at the

* In certain branches of Physiology separate classes are, if necessary, temporarily formed.

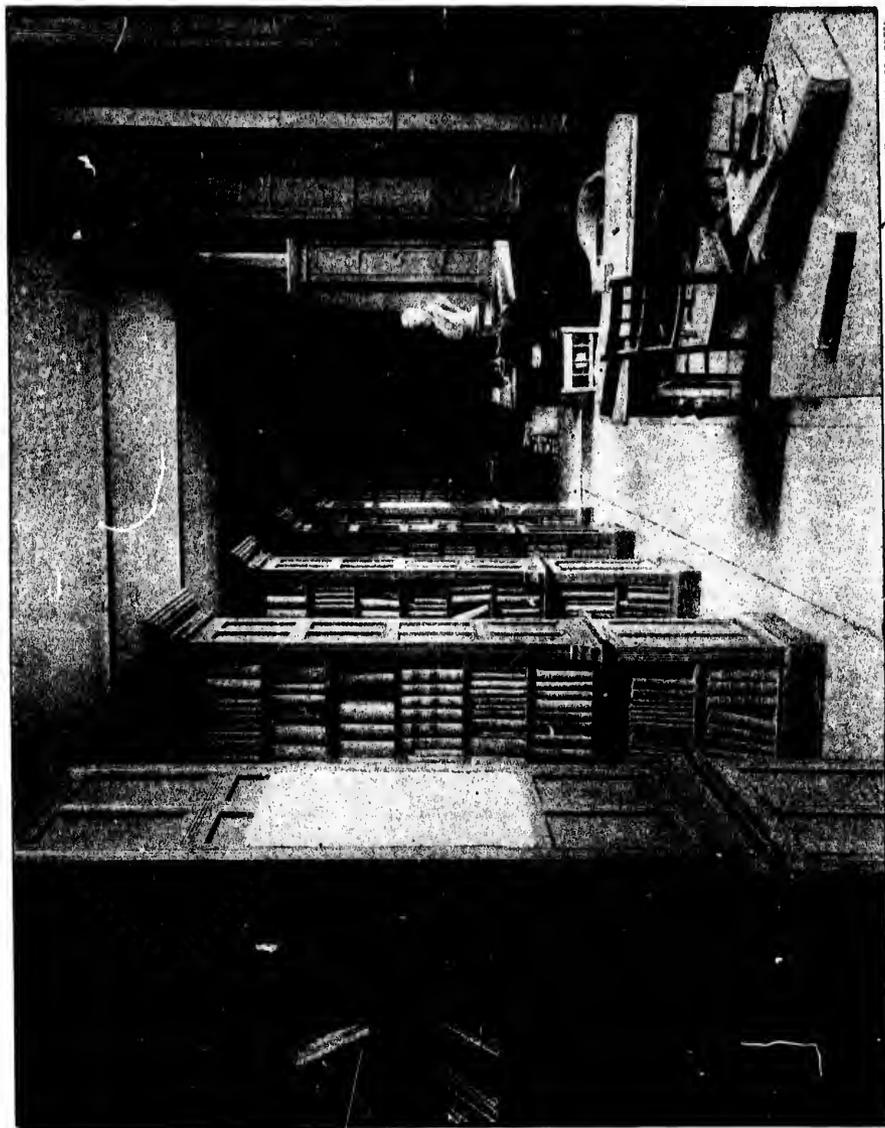
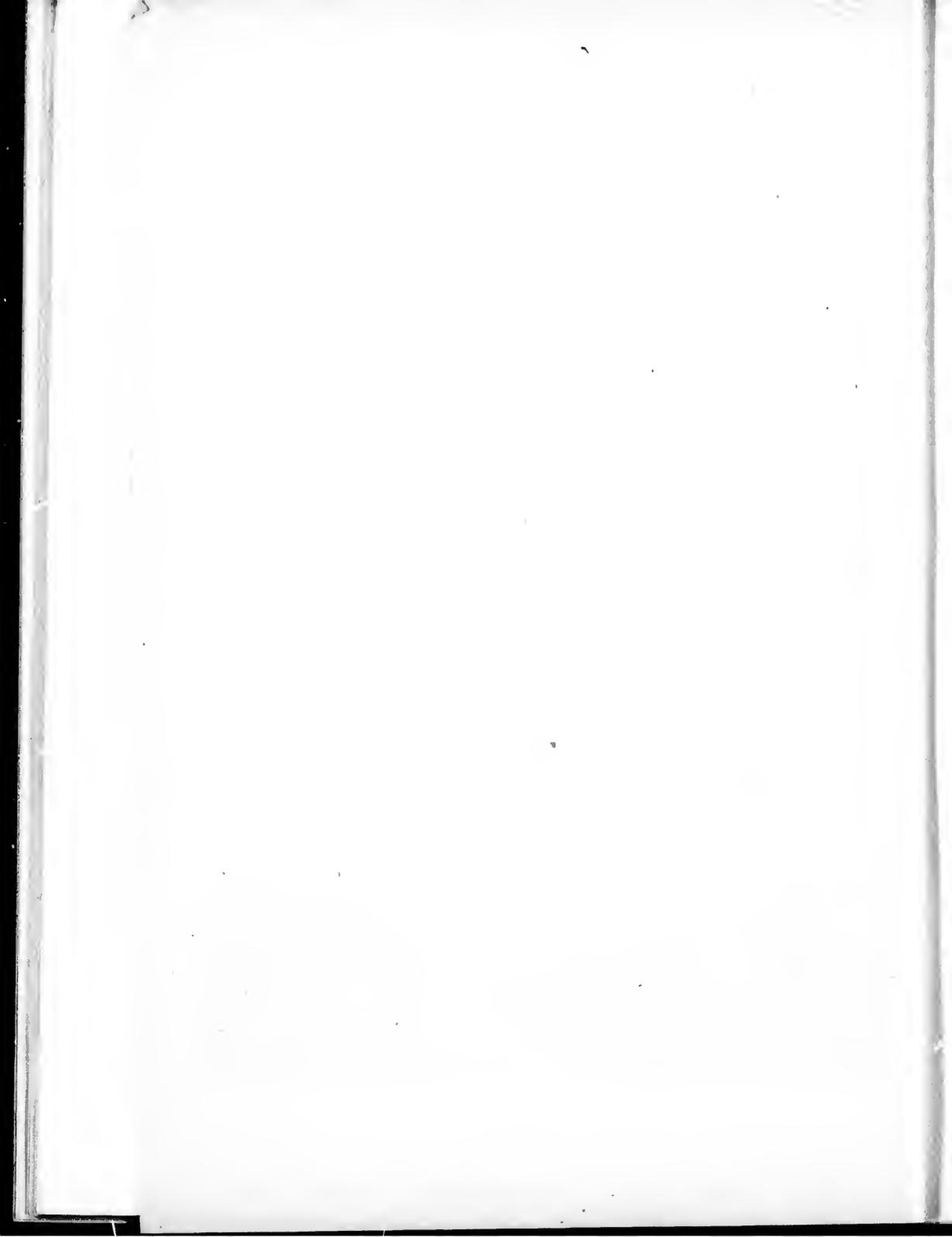


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THE LIBRARY, MASON COLLEGE.



back of the College for the use of the men, and a comfortable suite of apartments adjoining the Library for the lady students. The Mason College was the first institution of importance in which the experiment of mixed education was given a fair trial, and the bitterest opponent of the system cannot in this case deny its success. For the first few years the free admixture was, no doubt, a source of some anxiety to those responsible for the control of the College, but this stage has been long outgrown. To recent generations of students it has come as a matter of course, and there can be no doubt whatever that the mutual influence of the two sexes has been for good: and in no class of students has this been more noticeable than in those who have selected medicine for their future career. Whatever he may become after he quits the walls of the Mason College, while within them all the traditions of the place are orderly, and orderly even the medical student becomes, to the undoubted advantage not merely of himself, but of all who are connected with him.

Thus far we have dealt with the students rather in their relations with the several Departments; a few words may now be said as to their relations with the College as a whole. Speaking roughly, we may say that the Mason College now includes 450 day students. Of these approximately 250 are what are technically called "systematic" students, that is, spend the whole or the greater part of their working time within the College, and with some definite aim in view; and of these, again, about one-half have the practice of medicine as their ultimate object. More than 100 of the systematic students are University students, that is, have a University degree in view. Of the remainder a considerable proportion are technical students.

The discipline of the College is no doubt stricter than is the case in most medical schools properly so called; but here, again, it is a question mainly of tradition; and although the reins undoubtedly exist, the habits of the place make it rarely necessary to show their existence. As the successive generations of students of course greatly overlap, the newcomers take their tone from their predecessors, and thus is produced a continuity of habit which renders disciplinary measures unnecessary. But probably an even more potent factor in the problem is the perfect sympathy which exists personally between professors and students. What in the older universities is called "dominism" is here unknown.

The professor is the friend and adviser of the student, and in many cases remains so long after the student period is passed. Still another factor is the presence of ladies in the College, not as new-comers, whose presence may conceivably be by some more or less resented, but as co-equals with their male fellows, and not infrequently the better men of the two.

Having a not unimportant bearing upon student-life at the Mason College are the various College societies, by means of which cohesion and friendliness are brought about. First and foremost is the "Students' Union"—what its name implies, a "union" of past and present students, who meet five or six times in each term, and, after discussing a stand-up tea in one of the large laboratories, and the private gossip which is associated therewith, hold a meeting in one of the lecture theatres for the purpose of debates, essays, concerts, *et hoc genus omne*. At these gatherings students and professors meet on perfectly equal terms, to their mutual profit in the maintenance of friendly relations. Then there are half a dozen, or more, more or less Departmental societies, such as the Chemical, Physical, Biological, and Engineering Societies on the Scientific side, and the French Debating, and German Societies on the Literary side, with the "Psy Club" as a common ground upon which all with literary tastes can freely meet: all these societies commencing their meetings with the orthodox "stand-up tea." Various athletic clubs also are in existence for such purposes as cricket, football, cycling, lawn tennis, and so on. But enough has been said upon this point to show that in the Mason College a systematic attempt is made to care for the social as well as the intellectual needs of its members, to introduce cohesion into the mass, and to afford a connecting tie which shall bind to the College its past students.

We will turn now to another branch of our subject, viz., the prizes which are offered to the diligent student. It is perhaps to some extent unfortunate that labour should have so constantly to be sweetened by the hope of reward: and many will consider the College fortunate in that its finances do not admit of the wholesale bribery which exists in some places; but while human nature retains its present composition, some prizes must be held out to the deserving. In the Mason College these prizes are perhaps not great, and reliance is chiefly had upon the quality of the training to be obtained within its walls. But besides the annual Departmental Prizes, awarded in the sessional examinations, and

certain special prizes and Scholarships, eight *open Scholarships* are offered yearly, of the value of £25 or £30; and as the cost of an organised system of instruction in the College varies from £15 to £30, rarely attaining the latter figure, it follows that these Scholarships in all probability pay the entire education bill (including books) of the holders. Two of the open Scholarships offered annually are Entrance Scholarships, the subjects of examination being any three of (A) Latin, Greek, English, French, German, Mathematics; or of (B) Mathematics, Physics, Chemistry, Zoology, Botany, Physiography, French or German. Though hardly mundane to our subject, it must be added that the College also gives free education for three years to a certain number of students sent by the Birmingham School Board. Other Scholarships exist which are not however of an open character, and the Scholarships of many of the endowed and other schools of the district are tenable at the College. In connection with the examinations of the University of London (subsequent to matriculation) there is a system by which every student who takes first-class honours in any subject gets a prize of £5, and second-class honours one of £3. It is a matter of pride to all interested in the work of the College that the demand for these prizes is brisk. In common with all other students of suitable standing, past medical students are eligible to election as Honorary Associates of the College. Besides the distinction, which is highly prized by its recipients, this honour confers certain valuable rights in connection with the College Library, Lectures, and Laboratories. At the present time (July, 1890) the Associates number 54, of whom 12 are past or present medical students. This proportion seems at first sight to be somewhat small; but the regulations as to the standing or seniority of the candidates for the Honorary Associateship has, until quite recently, been a grave stumbling-block to medical students; but recent alterations in these regulations have removed in good time what might ultimately have come to be a grievance.

The highest honour the College can at present bestow is unquestionably the *Heslop Gold Medal*. This is awarded annually for the best thesis, investigation, or essay upon some subject, selected by the candidate, having bearing upon one of the following groups of subjects, taken in annual rotation, viz., (a) Language, Literature, and Philosophy; (b) Mathematical and Physical Science, including Metallurgy and Engineering; and (c) Biological and Geological Science.

It was a matter of no small jubilation to the advocates of female education that, when first offered in 1887 and open to all past students of the College without any restriction as to subject or standing, this Medal was carried off, and easily carried off, by the late Miss Naden, whose bust has already been referred to as shortly to adorn the Library. In memory of this pre-eminently gifted lady another Medal, called the *Constance Naden Medal*, has just been founded by Surgeon-Major Lewins, and is open for competition for the first time this year.

Such then is the Mason College as it exists in this year of grace, 1890, and with a short reference to its history, and the history of its inception, we will bring this article to a close. The College is the outcome of that remarkable movement in favour of higher, and especially scientific education, which characterised especially the years which immediately followed the passing of the Elementary Education Acts in 1870, and upon the need of which an abundant side light was thrown at the time by the various reports of the Endowed Schools Commissioners. Its founder, JOSIAH MASON, was more or less known to the world at large in two capacities. In the more important of these, as a steel pen-maker, he was indeed hardly known at all, for though for many years by far the largest pen-maker in the world, the bulk of his pens were stamped with the name of "Perry" upon them, Mason being the manufacturer for that world-known dealer. At the present time Mason's pen works are known only as "Perry and Co. Limited." In his second capacity, that of electro-plater, Mason was no doubt more widely known, for he was the partner of the brothers Elkington in that famous firm which first made electro-plating practicable (1842), which first made electro-plated articles popular, and which to this day has a repute for quality and artistic merit far and away beyond any of its more modern competitors. To this firm, while the Elkingtons apparently brought the scientific and inventive ability, Mason brought the capital and the business capacity.

Born in 1795, the child of a Kidderminster artisan, a carpet weaver, and taught only at one of those now defunct institutions, a dame-school, Josiah Mason was in the strictest sense of the term, a self-made man. As his biographer and friend, Mr. J. Thackray Bence, says in the opening chapter of his "Life":—"He had no advantages of birth, or connection, or education, or means. So far as regarded the probability of wealth or of personal eminence, no life could have begun in a manner less promising. He started, indeed,

not so much upon the lowest round of the ladder, as at the very foot of it, with little chance, as it seemed, of getting so high as the first round. He was not even a mechanic by any formal training, for he was taught no trade, and served no apprenticeship, was inducted into no 'art,' or 'mystery' of handicraft." He began his working life at the age of eight, as a peripatetic salesman of penny cakes, exchanging at a later period this occupation for the equally lucrative one of a cobbler. The deficiencies in his education he early realised, and by evening and Sunday reading and lessons he endeavoured to make them up. Cobbling was exchanged for carpentry, this for blacksmith work, this again for house-painting, till at the age of 19 he fell back on his father's trade of carpet-weaving. These constant changes were not however, the outcome of natural shiftlessness (for in each and all he appears to have been a capital workman), but merely the expression of a desire, to use a popular phrase, to better himself. At the age of 21, he left Kidderminster for Birmingham. After for six or seven years working for an uncle who was engaged in the gilt-toy trade, Mason, with an accumulated fortune of £20, made his first solid step in life by becoming manager, and shortly afterwards proprietor of some small split-ring works in Lancaster Street, Birmingham, on the very site where years afterwards his pen works covered more than an acre of ground. From this time his success was assured. Every successive step added to his reputation and to his wealth, and as pen-maker, electro-plater, and engineer, he accumulated year by year a constantly enlarging fortune.

Blessed with no children, this fortune, well-nigh to the uttermost farthing, but in another and far finer form, Mason returned to the source from whence it came—the public. "Conscious that the brain is the true origin of all material wealth, other than that which springs spontaneously from the bounty of nature, he devoted a moiety of the results of his lifetime of labour to endowing this seat for the higher development of the intellect; conscious that the accumulation of wealth constantly brings poverty in its train, he devoted the other moiety to the foundation and endowment at Erdington of those institutions (Orphanage and Almshouses) for the relief of physical distress by which, in common with this his College, Mason's name will be handed down to the love and reverence of a posterity which will

know nothing of, and will care nothing for, his share in the weaknesses of our common humanity."*

The serious inception of the plan of founding a College began about the year 1868, and took first the form of a desire to purchase the building occupied by the Queen's College. This being impracticable, as also was one to append the College to the Birmingham and Midland Institute, the foundation of the present separate institution was decided upon. In 1870 the Foundation Deed was executed, with two Trustees, Dr. J. Gibbs Blake and Mr. G. J. Johnson. In 1873 four more Trustees were appointed, of whom one only, viz. Mr. J. Thackray Bunce, is still acting. After these formalities were completed, the site and architect were quickly decided upon. The site, be it mentioned, it was wished should stretch over a broader frontage than it actually occupies, and extend to the corner of Congreve Street, now occupied by the *quondam* Liberal Club buildings, and on February 23rd, 1875, his 80th birthday, the foundation stone was laid by Sir Josiah Mason himself. The erection of the building occupied five years, and on October 1st, 1880, in the presence of the Founder and with extensive celebrations, the building was opened, the Inaugural Address being delivered by Professor Huxley, and with, in its first Session, the names of 95 students upon its books.

The site of the College which thus was opened consists of about one acre, of which only half is occupied by the present buildings. The whole frontage of 50 yards is built on, but of the depth of rather more than 100 yards the hinder half is still occupied by various buildings, which some day will have to disappear for the purpose of extension. As it was opened, the College site cost about £20,000, its buildings £60,000, and its endowment was approximately £110,000, bringing in an annual income of £3,700. Subsequent additions to the buildings have been made for the purpose of the establishment of the Physiological Department and the provision of a Botanical Laboratory; and increments to the Endowment Fund have accrued, and will still accrue, which it is estimated will raise its total to £150,000. It opened with four Professors, those of Mathematics, Physics, Chemistry (since amplified to include Metallurgy), and Biology; but in the next Session the

* Extract from the Inaugural Address to the Students, Session 1888-9, by the writer.

Chair of Biology was divided into those of Zoology and Botany, and Chairs of Classics, English, Geology, and Engineering were established, together with Lectureships (subsequently altered into Professorships) in French and German. A Chair of Mining was established in 1884, but, owing to its want of success, was suspended in 1889. Thus the whole of the subjects of study specially referred to in the Foundation Deed, with the sole exception of Anatomy, were supplied before the College had been opened a couple of years, and no further change has since been made, with the exception of Mining, referred to. It may serve to illustrate the semi-utilitarian views of the Founder if these subjects are given in his own words: "Mathematics, abstract and applied; Physics, both mathematical and experimental; Chemistry, theoretical, practical, and applied; the Natural Sciences, especially Geology and Mineralogy, with their application to Metallurgy; Botany and Zoology, with special application to manufactures; Physiology, with special reference to the Laws of Health: the English, French and German languages;" and, by a subsequent deed of enlargement (1874), also Anatomy and the Greek and Latin languages: and, by a still later deed (1881), "certain other subjects not specifically included in the Foundation Deed, for the purpose of making in the institution established by the said Deed of Foundation provision for the systematic instruction of students of medicine and surgery." The Trustees are however empowered to add from time to time to these subjects, always providing that purely theological questions and those of party politics are to be rigidly excluded. An interesting point of comparison with the foundation of the Queen's College, as modified by the influence of Dr. Warneford, is provided by the declaration that it shall be a fundamental condition of the institution that no religious test shall be applied to any member of the staff, teaching or otherwise, and that no theological opinions shall be a disqualification. By the terms of the Deed, also, the Trustees are empowered at the end of each term of fifteen years to reorganise the educational work of the College, so that, with certain fundamental reservations, their powers are practically unlimited. They would, for instance, be acting quite within their lawful powers were they to organise within the walls of an enlarged Mason College a complete Medical School. Complaint has often been made of "the fetters of a dead man's will:" here there are no fetters, unless anyone is eccentric enough to consider the exclusion

of theology to be a "fetter." Possibly, though, there are one or two conditions which, if not exactly "fettters," at least act disadvantageously. One is a clause excluding all clergy, of whatever denomination, from the governing body of the College; and another, restricting the Trustees to a number which is generally considered inadequate, not for the purpose of Trusteeship, but for their functions, as hereafter noted, as a Council.

The property of the College is vested in eleven Trustees, presided over by an annually elected Bailiff: six being appointed by the Founder, any vacancies being filled by co-opting; five appointed by the Town Council. Nine of these Trustees form the Council, their chairman being the President, *i.e.* the Bailiff under another name, and with different functions, and by them the general management of the College is carried on. The Professors constitute a Senate, and have, subject in everything to the confirmation of the Council, general control of the education and discipline of the students. Until recently the Professors constituted a republic, electing their own presiding chairman: now the College has a Principal, who, *ex-officio*, is chairman of the Senate. It may be interesting, perhaps, to record the changes which have taken place in the *personnel* of head of the College. Until his death in June 1881, Sir Josiah Mason was himself Bailiff: since then the successive Bailiffs have been Dr. J. Gibbs Blake (2 years): Mr. Richard Chamberlain, M.P.: Dr. T. P. Heslop (1½ years): Mr. J. Thackray Bence, J.P. (1½ years): Mr. William Mathews, M.A.: Dr. Blake (re-elected): and Mr. Lawson Tait. The office of President of the Council was instituted during the regime of Dr. Heslop. Originally known as "Sir Josiah Mason's Science College," by deed of February 23rd, 1881, the title was shortened to the "Mason Science College," but the title in common use for other than official purposes is that which heads this article.

Since its opening, less than ten years ago, the progress of the College has been almost phenomenal. Were the whole of the Medical School of Queen's College amalgamated with it, the total number of day students would be little inferior to that of the old and far wealthier foundation of the Owens College, Manchester, with the Medical School which it includes. What its future may be no one can foretell; but, seated in the midst of a great, thriving, and intelligent community, who can doubt its influence upon the educational future of the Midlands? The time may come, and probably

will, when the Midlands will demand, and will obtain, a central university of their own : but, whether this time comes or not, the fortunes of the Birmingham School of Medicine are safe from any recurrence of those reverses which have marked their earlier history, and in those fortunes, whatever they may be, the Mason College will have its full share.

Those who wish to know what Sir Josiah Mason has done, will find an answer in these pages: do they wish to know what he was like, two portrait paintings of him exist, one in the Art Gallery, and the other in the Council Room of the College, while in front of the College building is a seated statue of excellent quality; do they wish to know what his desires were for the people whose benefit he sought, they will find their answer in his own declaration that, though himself childless, he might, "in the students of his College, leave behind him an intelligent, earnest, industrious, and truth-loving and truth-seeking progeny for generations to come."

