

Regulations for the guidance of officers and surgeons on probation attending the Army Medical School at Netley

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1898

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REGULATIONS
FOR THE
ARMY MEDICAL SCHOOL,
NETLEY.

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R.A.M.C.
MUNIMENT
ROOM



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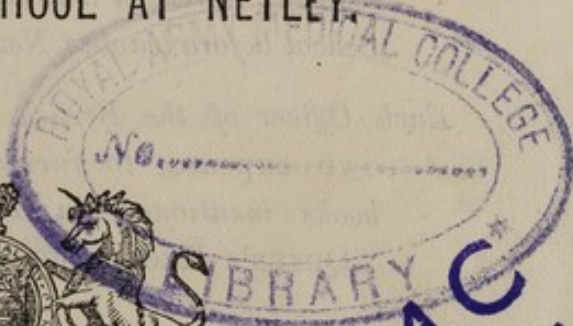
GUIDANCE OF OFFICERS

AND

SURGEONS ON PROBATION

ATTENDING THE

ARMY MEDICAL SCHOOL AT NETLEY.



R.A.M.C.
MUNIMENT
ROOM

LONDON:
PRINTED FOR HER MAJESTY'S STATIONERY OFFICE,
BY HARRISON AND SONS, ST. MARTIN'S LANE,
PRINTERS IN ORDINARY TO HER MAJESTY.

1898.

1895
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REGULATIONS

FOR THE

GUIDANCE OF OFFICERS

CXXI

A copy of these REGULATIONS will be furnished to each Surgeon on Probation on joining the courses of instruction at Netley, and they are required to make themselves familiar with them, and to use them for their guidance and direction throughout the session.

THE SECRETARY

Each Officer is held responsible for the good preservation of the copy of these REGULATIONS entrusted to him, and he will be required to return it to the Secretary of the Army Medical School before leaving Netley.

Each Officer of the British Service is also required, at his own expense, to furnish himself with a copy of the books mentioned in Para. 22a and g, Section VII, "QUEEN'S REGULATIONS," 1895.

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1895

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ADDENDUM.

The formation of the Army Medical School was determined at a meeting held at the War Office on 31st March, 1860, when the Senate of the Army Medical School was constituted by the Right Honourable Sidney Herbert, M.P., Secretary of State for War.

The following are the names of the Members who then composed the Senate:—

Sir J. B. Gibson, M.D., K.C.B., Director-General Army Medical Department.

Sir J. R. Martin, C.B., Physician to the Council of India.

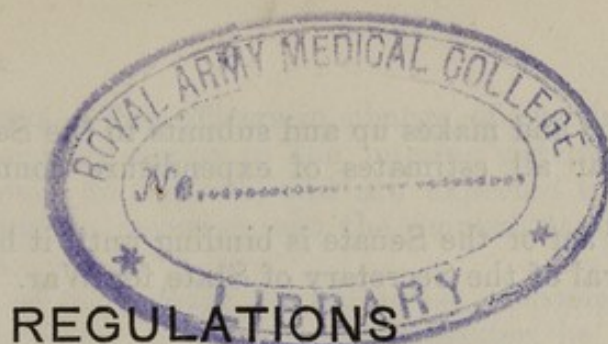
Thomas Longmore, Esq., Deputy Inspector-General, Professor of Military Surgery.

Dr. W. C. Maclean, Deputy Inspector-General of Hospitals, Professor of Military Medicine.

Dr. E. A. Parkes, Professor of Hygiene.

Dr. W. Aitken, Professor of Pathology.

Principal Medical Officer at Chatham, *ex officio*.



REGULATIONS

FOR THE

GUIDANCE OF OFFICERS

AND

SURGEONS ON PROBATION

ATTENDING THE

ARMY MEDICAL SCHOOL AT NETLEY.

Section I.

**CONSTITUTION, GOVERNMENT AND GENERAL DISCIPLINE OF THE
ARMY MEDICAL SCHOOL.**

The Army Medical School has a distinct and independent existence under the Secretary of State for War, and is governed by its own SENATE, which holds a meeting for the dispatch of business once every three months, or oftener if necessary.

The SENATE consists of the Director-General Army Medical Service, who presides at its meetings; the Physician to the Council of India; the Professors of the School; and the Principal Medical Officer of the Royal Victoria Hospital *ex officio*.

The SENATE regulates the routine business of the School; decides, subject to the sanction of the Secretary of State for War, on the arrangement, number, hours, &c., of the lectures and instructions; makes and amends rules for the conduct of the Officers; preserves discipline; has the regulation and direction of the Army Medical School Library, of the Museum, Model-room and Laboratory; selects books, models, chemical and other apparatus necessary for the

School; and makes up and submits to the Secretary of State for War all estimates of expenditure connected with the School.

No act of the Senate is binding until it has received the approval of the Secretary of State for War.

Section II.

CONSTITUTION AND ADMINISTRATION OF THE ROYAL VICTORIA HOSPITAL IN RELATION TO THE ARMY MEDICAL SCHOOL.

A Staff Officer of the District will be stationed at Netley, who will receive his orders from, and be the representative of, the General Officer Commanding the District; he will also command the station and troops (Royal Army Medical Corps excepted) external to the Hospital. He will be styled the Assistant-Adjutant-General, Netley (Queen's Regulations, Sect. XIV).

Subject to the General Officer Commanding the District, the Principal Medical Officer will have command

- (1) Of all officers and soldiers of the Royal Army Medical Corps attached to the Hospital; (2) Of all patients in hospital, and officers and soldiers of other corps attached to the Royal Army Medical Corps for duty; and he will be responsible for the discipline of the whole establishment. Para. 353, Part I, Regulations for Army Medical Services.

The hospital is divided into two divisions, medical and surgical.

ASSISTANTS TO THE PROFESSORS.—The professors are assisted by medical officers. Two of these officers hold special appointments of Assistants to the Professors of Military Medicine and of Military Surgery. They have to assist the professors in their clinical duties.

The WARDMASTER of each division attends to the discipline of the patients, and of the orderlies, and sees that the latter carry out the instructions of the nurses in the terms of the regulations.

The ORDERLIES attend on the sick and conform to the requirements of the nurses in all matters contained in the regulations for nurses.

NURSING SISTERS.—The officers in charge of wards are required to deliver very clearly to the nursing sisters their orders with reference to the sick, and are expected to give them every support in carrying out the important duties entrusted to them.

In the event of any officer having cause of complaint against a nursing sister, orderly, or wardmaster, he shall report the same to the officer in charge of the division, who will deal with the case according to regulation.

PAYMASTER.—Officers of and Surgeons on Probation for the Royal Army Medical Corps draw their pay through the Army Agents; Surgeons on Probation for the Indian Medical Service are paid by the Chief Paymaster of the District.

Any complaints with regard to the issue of pay must be made, in writing, through the official channel pointed out in Section XI of these Regulations.

The ARMY SERVICE CORPS OFFICER IN CHARGE OF BARRACKS is in charge of the public buildings when not dismantled. This officer gives over to each officer the quarter which he is to occupy, with a list of all articles of furniture, utensils, &c., which are contained in the quarter and are the property of the Government, and for the good preservation of which the occupant is held responsible.

In entering on the occupation of quarters, an officer ought to satisfy himself, by comparing the inventory board supplied by the A.S. Corps Officer with the contents of the room, that everything is in good condition, and that the doors, windows, locks, and window glass are in proper repair. When once the quarter has been taken over by an officer from the A.S. Corps Officer, no change can be made without the permission of the Principal Medical Officer, and with the concurrence of the A.S. Corps Officer.

The injuries which the quarter or its contents may sustain during occupation by the officer, are assessed at the end of the session by the A.S. Corps Officer, and under the name of "barrack damages," he recovers the amount of this assessment from the officer concerned.

HOSPITAL DUTIES.

The DIET SHEETS must be filled up and the daily abstracts of diets must be sent in from each ward before 11 a.m. daily. medical officers will be careful to fill up all the headings of the Diet Sheet.

The Diet Sheet is to be *initialed* daily by the Surgeon on Probation in charge of the ward, but the *signature* at the

bottom must be always that of a *commissioned* medical officer.

EXTRAS are only to be given in accordance with the authorized scale. No unauthorized extra is to be ordered for any patient without special reference to the officer in charge of the division. The reasons for giving any extras must be stated in the particulars of the case. Every change of diet and of extras must be invariably noted in the Case Book on the day the change is made.

Prescriptions.

In prescribing medicines the following rules are to be adhered to as far as practicable:—

- (a) The prescriptions are to be written in Latin; the directions in English.
- (b) The quantity of a mixture is usually to be six ounces, and the dose one ounce.
- (c) Pills and powders are not to be ordered in larger quantities than are necessary for the ensuing day, or two days at the utmost.
- (d) The total quantities of the ingredients for mixtures, pills, or powders are to be written, and not merely the quantity of each ingredient for a single dose.
- (e) The prescriptions should, as far as possible, be confined to the list of drugs mentioned at page 127, Appendix 13, of the Regulations for Army Medical Services. Medicines not mentioned in the official list are liable to be expunged.
- (f) Cod liver oil and the ordinary liniments are kept by the Sisters, who will issue or apply them to the patients when the necessary directions are written in the Ward Book.

Respecting the WARD BOOK the following instructions are to be observed:—

1. The medical officer of the ward shall enter the prescription for each patient under his number, name, and regiment, with distinct directions for their administration or application on the left hand page of the book, and all directions for the guidance of the Nursing Sister or Orderly in attendance on the case on the right hand page, with especial reference to extras and the hours at which they are to be given. The Ward Book is to be open at all times to the Nursing Sister, Wardmaster, and Orderlies.
2. The Ward Book must enable the Inspecting Officer to

ascertain, at any time after the morning visit, what has been ordered for each patient for the day, so that it may be determined whether the directions for the administration of medicines, applications of dressings, and other surgical remedies, have been attended to by the Nursing Sisters, Orderlies, or others concerned.

The Officer will then proceed to enter the detailed history of each case in the CASE BOOK and in the ADMISSION AND DISCHARGE BOOK. These two books are made the subject of examination at the termination of the Session, and marks are awarded for the manner in which they have been kept.

The ADMISSION AND DISCHARGE BOOK explains itself. The Officer has merely to fill up the blank spaces according to the printed headings.

The following are the points to which the examination of the Case Books is particularly directed:—

- (a) Professional merit;
- (b) Literary merit;
- (c) Attention to the details of the regulations; and
- (d) General neatness.

Regulations referring to the general objects and management of the Case Book will be found at page 30, para. 234, of the Regulations for Medical Services; there are also printed instructions on these subjects on the first page of the Case Book itself. The following detailed instructions will guide the officer in certain particulars as to the manner of entering cases in his Case Book:—

1. The number of the folio is to be inserted at the top of each page of the Case Book.
2. In addition to the surname, the christian name of each patient must be inserted in full. The man's rank and regiment must be also noted.
3. In entering "years of service," after the number of years, the number of months must be inserted, thus, $\frac{4}{12}$, $\frac{9}{12}$, &c.
4. The "Station" signifies the station where the disease or disability was contracted.
5. The "Time on the Station" also refers to the time on the station where the disease was contracted. (This also only applies to cases at the General Hospital at Netley.)
6. "Completed days of disease." Here must be inserted the number of days since the disease was contracted.
7. After the printed word "Disease" must be inserted

the name of the disease or disability for which the man is under treatment or observation. This name must be taken from the list of names in the authorized nomenclature of diseases, and must correspond with the name of the disease written on the patient's bed-head ticket by the officer in charge of the division.

8. Under the space in which is printed "Particulars of Case and Prescriptions," must be entered:—

(a) A complete history of the case obtained from the patient's own statement. The officer's professional acumen must of course be employed in sifting the evidence so obtained. The "Condition on Admission" of the patient is next to be carefully noted. If a *surgical* case, an exact description of the wound or injury is to be given; if a *medical* case, the symptoms are to be detailed under the following heads, viz.:—

Circulatory system.

Respiratory "

Digestive "

Genito-Urinary system.

Nervous system.

The officer's diagnosis and prognosis of the case will then be inserted.

(b) When the Officer's own account of the history of the case, diagnosis, and prognosis are completed, the detailed medical history of the case, forwarded with the patient from the station or corps whence he came, is to be obtained and entered in the Case Book as part of the record. The name of the officer signing the report, and the place and date of signature, are to be invariably added.

9. When cases are transferred from one folio to another, the headings referred to in paras. 1 to 7 must be continued.

10. Whenever a case is carried forward to another folio, even though it may be an adjoining one, "To folio," naming the number of the fresh folio, must be written at the bottom, in the right-hand corner of the page from which the report is carried on. In like manner "From folio," must be written at the top of the page on which it is continued on the left-hand corner.

11. As soon as the name of a patient is entered in the Case Book, it must be registered in the index. The index must be kept up continuously in the following form, lines being ruled to make the indications more distinct :

Regt.	Regtl. No.	Rank.	Surname.	Christian Name.	Folios.

12. At the conclusion of each case, the destination of the patient must be stated, whether "discharged to duty," or "as an invalid," "transferred elsewhere," or "died."
13. The registering medical officer's name is to be signed at the conclusion of the report of each case.
14. All records of cases must be made in the wards, and on no account are any of the hospital books to be at any time taken from the hospital.
15. When fatal cases occur, the officer in charge of the ward will prepare an abstract report of the case upon a printed form for this purpose, which is to be obtained from the office of each division. This abstract is to be read at the post-mortem examination by the officer in charge of the case, and then to be handed over to the Professor of Pathology.

As the greater number of patients at the Royal Victoria Hospital have, generally speaking, been subjected to a long course of treatment before admission, Officers are cautioned that it is *not always necessary to prescribe medicine* in every case on admission. This caution, however, is not to interfere with his discretion in ordering what he may consider necessary in any particular case.

In the Surgical Division each officer is to provide himself with a regulation pocket case of surgical instruments.

In the Medical Division he is to furnish himself with a stethoscope. He will also be held responsible for the care of the thermometers and other public instruments and apparatus used for clinical purposes in the wards.

On no account is urine to be examined in the wards. All the reagents necessary for that process will be found

in the testing room of the Medical Division, where these examinations have to take place, and from whence none of the reagents are to be removed.

As part of the WARD DISCIPLINE the medical officer will take care that

No patient is allowed to make his bed down during the day unless, in the opinion of the medical officer of the ward, he is unfit to walk about, and that no patient leaves his ward during the morning visit, between 9 in summer, or 10 in winter, and 11.30 a.m., unless sent for by proper authority.

Officers are to *remain in their wards* for the full time allotted for their duty daily.

The EVENING VISIT is to be made between the hours of 6 and 7 daily. The duties connected with this visit are defined in para. 306 of the Regulations for Medical Services.

Any officer requiring to be absent from the evening visit must obtain the permission of the officer under whom he is serving, and acquaint him with the name of the officer who will undertake the duty in his stead. The substitute must always be one of the officers belonging to the Division.

HOSPITAL DUTIES OF OFFICERS WHEN ACTING AS ORDERLY OFFICERS.

Medical Officers will be called upon in rotation to perform the duties of Orderly Medical Officer, and in the performance of these duties they will be guided by the following instructions:

If an accident or any serious case is reported, the Orderly Officer is empowered to call upon any medical officer attached to the hospital for assistance or advice, pending the arrival of the officer in charge of the division, who should be immediately sent for.

The Orderly Medical Officer is not to apply for leave of absence, and is on no account to delegate any part of his duties to another officer. Should sudden illness, or other accidental cause, prevent the orderly officer from completing his tour of duty, such occurrence is immediately to be reported to the Principal Medical Officer, who will detail another officer to complete it for him; but he is not to leave the hospital until so relieved.

On no account are parties or noisy meetings to be held in the Orderly Officer's Room.

Section III.

SCHOOL DUTIES OF SURGEONS ON PROBATION.

IN THE LECTURE ROOM.

Surgeons on Probation are expected to be present in the Lecture Room *prior* to the commencement of each lecture. No excuse for not attending a lecture is admissible, excepting duty elsewhere, or authorized leave of absence.

The Surgeons on Probation of each session, severally and collectively, are held responsible for any damage done to the seats or desks in the Lecture Room, by marking with ink or otherwise defacing them. The amount of damage done is assessed by the A.S. Corps Officer at the termination of each session, and the charge is divided among all the Surgeons on Probation occupying the seats, unless the damage is known to have been done by any particular individual.

IN THE LABORATORIES.

The practical work in the Chemical Laboratory is intended to familiarise the Candidate with the processes he may be called upon to perform in the analyses of drinking water, air, food, and soils.

The *regular hours of attendance* are published in the Order Book at the commencement of the session, and Surgeons on Probation are expected to be punctual in their attendance; but they are permitted to work in the Laboratory during other hours, and as late as 7 p.m. if they please.

Surgeons on Probation have to be careful of the apparatus put into their hands and not to waste material or gas. When not required for use, the gas should be turned off.

IN THE PATHOLOGICAL LABORATORY.

The meetings for practical pathological instruction will be held, at the hours published in the Order Book, in the Pathological Laboratory.

The Surgeons on Probation are required to be in their places punctually at the hour fixed for assembling, at which time precisely the demonstration begins. This demonstration describes the work for the day and the manner in which it is to be done.

Absence from the demonstration is only excusable in the event of the officer being actually on the Sick List, or having obtained leave of absence in the usual manner.

Each Surgeon on Probation is provided with a microscope and other instruments for his sole use during the course, and he has also handed over to him a press (with a lock and key), wherein to keep his microscope and his instruments when not in use.

Each officer is responsible for the careful preservation of all instruments entrusted to his care, and receipts will be taken for the microscopes and instruments supplied for his use during the course. At the termination of the course he will be required to replace any article missing, and to make good any damage done.

Surgeons on Probation are required to continue at work in the Microscope Room all the time specified in the orders. The last quarter of an hour of the time fixed for instruction in the Microscope Room is allowed for cleaning and clearing away the instruments. Independent of the time fixed for demonstrations, opportunities are afforded for officers to return to their work in the afternoon.

Section IV.

DIVINE SERVICE.

Agreeably to the Queen's Regulations, Officers and Surgeons on Probation are required to attend Divine Service every Sunday morning.

The hours of service will be notified in Corps Orders.

Section V.

OFFICERS' LIBRARIES.

The Officers and Surgeons on Probation have access to the Libraries, viz.:—

The Royal Army Medical Corps Library, and
The Army Medical School Library.

THE ROYAL ARMY MEDICAL CORPS LIBRARY.

This Library is the property of the Officers of the Royal Army Medical Corps, and maintained by their donations and entrance fees, and by their contributions during their stay at the Royal Victoria Hospital, which latter are assessed upon their daily pay.

For the use of the books in this Library all Surgeons on Probation (both of the British and Indian Medical Services) have to contribute a subscription of 2s. per month.

In addition to this monthly subscription, the Surgeons on Probation for the Royal Army Medical Corps have to pay an entrance fee of 10s.

This entrance fee will be returned to any Surgeon on Probation who should fail to obtain a commission.

Regulations respecting the Use of the Library.

1. No book is to be taken out of the Library without being shown to and duly entered by the Librarian.

2. No book ought to be kept beyond a fortnight; but if, at the expiration of that period, it is not claimed by another subscriber it may be retained for some time longer.

3. As the applicants for books enter their names, in chronological order, into a register kept by the Librarian for that purpose, a system of interchanging books among the subscribers cannot be permitted. All books must be returned to the Librarian.

4. The following books, prints, and other publications cannot be taken out of the Library* :—

(a) Books of Reference, as Dictionaries, Cyclopædias, Maps, Atlases, &c. ;

(b) Loose periodicals and pamphlets ;

(c) New works which have not been exposed on the Library table for at least one month ;

(d) All such publications or MSS. which are specially marked "Not to be removed from the table."

5. Any Officer or Surgeon on Probation desirous to have a particular book added to the Library may enter its title and approximate price into a Proposal Book kept for that purpose. *But the proposer will take care, by previously consulting the Catalogue, to ascertain whether such work be not already on the Library shelves.*

Such proposals will be submitted to the Members of the Library Committee of the Royal Army Medical Corps Library, when the propriety of purchasing the publications in question will be discussed and decided.

(See Over)

* Except in special cases during the time the Library Room is closed, viz., between the hours of 6 p.m. and 9 a.m. the following morning, and from Saturdays at 1 p.m. until the following Mondays at 9 a.m.

THE ARMY MEDICAL SCHOOL LIBRARY.

This Library has been established by Government for the purpose of assisting the officers attending the Army Medical School in the pursuit of their studies. This Library is the property of Government; it constitutes part of the Army Medical School.

Officers and Surgeons on Probation have to contribute neither entrance fee nor monthly subscriptions towards the maintenance of this Library, as its expenses are defrayed by an annual grant voted in the Army Estimates of each year.

There is no Proposal Book placed on the table of the Army Medical School Library; the applications for additional works to this Library being made by the Professors (who form the Committee of the Army Medical School Library), and periodically forwarded to the War Office authorities.

The Rules regarding the issue and exchange of books from the Royal Army Medical Corps Library hold equally good with respect to issues from the Army Medical School Library.

See page 15 for Rules

Section VI.

DUTIES OF SURGEONS ON PROBATION IN RELATION TO THE ROYAL ARMY MEDICAL CORPS MESS.

Every Surgeon on Probation on joining the Army Medical School becomes an EXTRA MEMBER of the Royal Army Medical Corps Mess, and is furnished with a copy of the Mess Regulations.

Section VII.

DRESS REGULATIONS.

Surgeons on Probation are to appear in their authorized uniform during all hours of duty.

They are on no account, at any time, to appear dressed partly in plain clothes and partly in uniform.

The uniform to be worn at mess is laid down in the Mess Regulations, Sect. III, para. 32.

Section VIII,

RULES RESPECTING OFFICERS' QUARTERS.

Order and propriety are to be maintained at all times in the Officers' Quarters and their vicinity.

Surgeons on Probation residing within the precincts of the Hospital, on returning to their Quarters at night, are to pass along the lower corridor of the building, in order to avoid disturbing the patients in the Medical and Surgical Divisions.

Section IX.

REGULATIONS RESPECTING LEAVE OF ABSENCE.

Surgeons on Probation requiring Leave of Absence shall first obtain the signature of the Officer in charge of the Division to the application, which application must also state the name of the substitute who undertakes to perform the duties of the applicant.

The Professors, whose lectures and classes the applicant will miss, may then, if they see fit, recommend the application. After this the signature of the Secretary of the Army Medical School must be obtained, and the application must be forwarded to the Principal Medical Officer for his sanction.

It must, however, be distinctly understood that Leave of Absence other than from mid-day on Saturday until Sunday evening cannot be granted, save for urgent and sufficient reasons, such as for the transaction of some really important business requiring personal attendance, or the dangerous illness or death of a near relative. In either case the professor and officers who sign the application shall require reasonable proof of the necessity for the officer's absence from duty. Surgeons on Probation returning from Leave of Absence *exceeding* 24 hours will report personally their return to the Principal Medical Officer.

It must be distinctly understood that Surgeons on Probation are not to ask for leave save for urgent reasons.

Section X.

REGULATIONS RESPECTING SICK LEAVE.

Whenever an Officer or Surgeon on Probation is sick and unable to perform his duties he will report the same,

if possible, in writing immediately to the Officer in charge of the Division to which he is attached, so that arrangements may be made to meet his absence from ward duty, and that information of his illness may be sent to the Surgeon-General, as well as to the medical officer whose duty it is to attend on officers placed on the sick report.

When an Officer or Surgeon on Probation is placed on the sick list, his case will be duly recorded in the Officers' Case Book by the medical officer in attendance.

Section XI.

CHANNELS OF OFFICIAL COMMUNICATION.

Any communication that an Officer or Surgeon on Probation may have occasion to address to the Principal Medical Officer, shall be sent, under cover, to the Officer in charge of the Division in which he may be serving at the time.

All communications intended for transmission to the Secretary of State, or to the Senate of the Army Medical School, must be sent to the ~~Secretary of the Army Medical School~~, who will lay them before the Senate, and, if approved, the former will then be transmitted to the Secretary of State for War through the usual channel.

Section XII.

ON THE EXAMINATIONS AT THE END OF EACH SESSION.

The examinations at the end of the session are intended to test the proficiency of the Surgeons on Probation in the studies carried on at Netley, and to settle the order in which their names will afterwards appear for Commissions in the Gazette.

The marks obtained at the Netley examination are added to those gained in London, and the result determines the officers' places in the list of Lieutenants.

A written paper is required on such questions as may be given by the Professor on subjects which have been taught in the Army Medical School, and a practical examination is made in the Chemical and Pathological Laboratories, to judge as to each officer's progress.

Officer in charge of the Division for the Secretary of the Senate.

Section XIII.

RELIEF FROM DUTY.

Officers and Surgeons on Probation on being relieved from duty, will, previous to their departure, give over the professional care of their patients to the officers appointed to relieve them. They will return all books that they may have obtained from the libraries, and if either not forthcoming or damaged they must repay the cost of the same as assessed by the Library Committee. They will also hand over their Microscopes and all other instruments and appliances, supplied to them by the Army Medical School for use during the session, to the persons appointed to receive them, making good all losses or damages. They will settle their Mess, Wine, and Library accounts, and hand over their quarters to the A. S. Corps Officer, and finally send in to the Principal Medical Officer a certificate that they have done so, according to the following form :—

“I certify that I have given over the professional care of
 “ my patients to the officer appointed to relieve me;
 “ that I have returned all instruments and appliances,
 “ which, being public property, had been entrusted to
 “ me for use during the past session; that I have
 “ settled my Mess, Wine, and Library accounts; and
 “ have handed over my quarters to the A. S. Corps
 “ Officer.

(Signature)

“ Royal Victoria Hospital,
 “ Netley, 18
 “ To the Principal Medical Officer, Netley.”

CONCLUSION.

The Army Medical School is a place of probation as well as instruction.

At the close of each session the Professors of the School, and the Principal Medical Officer of the Station, furnish reports for the information of the Right Honorable the Secretary of State for War and the Right Honourable the Secretary of State for India on the character and conduct of the Surgeons on Probation during their period of probation at the Army Medical School.

Should the Professors during the course of or at the
 (1627)

conclusion of the session see sufficient grounds for believing from careful observation of the character or conduct of a Surgeon on probation that he is not likely to make a creditable medical officer nor be suitable for the duties of a commissioned officer, the Professors acting in conjunction with the P.M. Officer shall report the circumstances of the case through the Military authorities to the Director General of the A.M. Service, with such recommendations as they deem fit for the decision of and disposal by the Secretary of State for War.

assessed by the Library Committee. They will also hand over their Microscopes and all other instruments and appliances, supplied to them by the Army Medical School for use during the session, to the persons appointed to receive them, making good all losses or damages. They will settle their Mess, Wine, and Library accounts, and hand over their quarters to the A. S. Corps Officer, and finally send in to the Principal Medical Officer a certificate that they have done so, according to the following form:—

"I certify that I have given over the professional and personal property of the officers appointed to receive me; that I have returned all instruments and appliances, which, being public property, had been entrusted to me for use during the past session; that I have settled my Mess, Wine, and Library accounts; and have handed over my quarters to the A. S. Corps Officer."

(Signature)

Royal Victoria Hospital,

18

"To the Principal Medical Officer, Zetley."

Concussion.

The Army Medical School is a place of probation as well as instruction.

At the close of each session the Professors of the School and the Principal Medical Officer of the Station furnish reports for the information of the Right Honorable the Secretary of State for War and the Right Honorable the Secretary of State for India on the character and conduct of the Surgeons on Probation during their period of probation at the Army Medical School.

Should the Professors during the course of or at the

EXTRACT from the Regulations for Army Medical Services, 1897.

APPENDIX No. 1.

(See paragraph 8.)

Regulations for the Examination of Captains before Promotion to Major.

1. This Examination is intended to test the progress and proficiency of a captain in all those branches of knowledge which are essential to his continued efficiency as a medical officer, and may be taken at any time after his seventh year of service.

The examination in medicine and surgery will be held by two examiners appointed by the Secretary of State, that in hygiene by the Professor of Hygiene, Army Medical School, Netley, and that in regulations, duties, military law, &c., by an administrative medical officer, nominated for the purpose by the Director-General.

2. The examination will embrace the following subjects:—

- (a) Surgery and Surgical Anatomy.
- (b) Medicine and Pathology.
- (c) The theory and practice of Hygiene, especially in relation to military requirements; also the Regulations regarding the sanitation of garrisons, quarters, hospitals, &c., as well as of camps and hospitals in the field, and of transports, troop and hospital ships.
- (d) Duties of medical officers at home, abroad and at sea, as defined in regulations; also hospital organization and administration in peace and war, including the transport of sick and wounded by land and sea.
- (e) The administration, interior economy, command and discipline of the Royal Army Medical Corps, together with a knowledge of the principles of military law and their practical application (a certificate of proficiency in military law obtained at a garrison class, will exempt the holder from examination in the latter).

3. A certificate will be required from a recognized teacher of surgery in any medical school, at home or abroad, in which operative surgery is taught, showing that the officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator.

4. A report on any subject of a practical professional character, to be selected by the officer himself, and certified to be his own composition and in his own handwriting, will also be required. Considerable importance will be attached to the literary and scientific merits of this report, which must be furnished and accepted before the officer completes 12 years service.

5. The examinations will be conducted by printed questions, which will enter so far into the subject matter of each head selected for examination as to show that the officer's knowledge has been fully tested.

6. The questions and answers will be forwarded, under a sealed confidential cover, to the War Office, for transmission to the examiners, who will report to the Director-General as to the competence of the officer examined.

7. Any higher qualification, such as M.D., F.R.C.S., &c., or any diploma in hygiene and state medicine, taken after the 1st May, 1890, will not exempt captains from this examination.

ORGANIZATION

OF THE

PRACTICAL ARMY MEDICAL SCHOOL,

INCLUDING THE

Subjects to be Taught by the Professors.

PREFACE.

The following Plan of Organization of the Army Medical School is intended to give effect to the recommendations of the Royal Commission on the Sanitary State of the Army.

WAR OFFICE,

August, 1898.

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SECTION I.

ORGANIZATION OF THE PRACTICAL ARMY MEDICAL SCHOOL.

I.

After passing his preliminary examination, every Surgeon on Probation for a Commission in the British Army will be required to attend one entire course of practical instruction at the Army Medical School, and at the Military Hospital in connection with it, on the subjects hereinafter named, before being admitted to his examination for a Commission.

Officers
for com-
missions
to attend
course of
instruction.

Cadets and Officers of the Royal Engineers may also attend a course of instruction on Hygiene. Combatant Officers will have the same privilege extended to them should they desire it. Army Medical Officers will also have access to the School.

II.

The special practical instruction which the School is intended to afford will be given by the following four professors:—

Subjects of
course.

The Professor of Hygiene.

The Professor of Clinical and Military Medicine.

The Professor of Clinical and Military Surgery.

The Professor of Pathology.

III.

The School has a distinct and independent existence under the Secretary of State for War, and is governed by its own Senate, which will hold a meeting for the dispatch of business at least once every three months, or oftener if necessary.

Government
of the
school.

IV.

The Senate consists of the Director-General Army Medical Service, who will preside, when present, at the

The Senate.
Its
functions.

meetings of Senate; the Professors, and the Principal Medical Officer at Netley, *ex-officio*; but only those members of Senate who may be present shall vote on the questions discussed.

The Senate will regulate the routine of business of the School.

It will decide on the arrangement, number, hours, &c., of the Lectures, and instructions.

It will make and amend regulations for the conduct of the Students.

It will preserve discipline.

It will also have the regulation and direction of the Library, Museum, Model-room, and Laboratories; the selection of books, models, chemical and other apparatus necessary for the School, and will make up, and submit to the Secretary of State, all estimates of expenditure connected with the School.

All acts of the Senate will be communicated to the Secretary of State for War.

No act of the Senate shall be binding until it has received the approval of the Secretary of State.

V.

Museum.

The Museum will consist of four divisions:—

1. A collection of Pathological Anatomy, having special reference to the more prevalent diseases of the Army.

2. A collection of Specimens of Geology and Natural History.

3. A collection of Materia Medica and Alimentaria, containing specimens of the more important articles, both in their natural and prepared states; and of the principal seeds, grains, pulses, and other dry or prepared articles of food, from all parts of the world.

4. A collection of plans and models of whatever is used in the Army for the conveyance, support, or protection of wounded men; models of tents, hospitals, and the like.

Classified Catalogues of the contents of these several divisions are to be kept.

VI.

Library.

The Medical School Library contains standard works in every branch of Medicine, and the allied sciences. Attached to the Library there is a Reading Room furnished with maps, books of prints, &c., to be kept in the Library, but the students will have permission, under the regulations of the Senate, to take books to their own quarters.

VII.

The business of the session will be arranged by the Senate, in such manner that there shall be at least four months' residence at the School and Hospital, including course of instruction by lectures, &c.; so that there shall be two sets of Candidates ready for examination for Commissions every year.

Length of session.

VIII.

The Lectures and Practical Instructions to be delivered at the School will be directed exclusively to the specialities of Military Medical Service.

Nature of the instruction.

The Courses of Lectures will include the subjects in the following five programmes, arranged in such order and manner as the Senate may from time to time decide.

I.

HYGIENE.

The Course of Lectures and Practical Instruction in Hygiene will be directed to impress forcibly on the mind of the Officers the whole principles on which the prevention of disease is based, not only in their scientific but in their practical aspect, and from thence to follow out the special application of those principles to the preservation of the health of troops in Barracks, Garrisons, Stations, Camps, and on Marches, both by practical instruction in the problems of Army hygiene, and by reference to maps, diagrams, models, instruments, and other methods of illustration.

LECTURES AND INSTRUCTIONS ON HYGIENE.

PART I.—*Principles of Hygiene.*

1. Hygiene, its nature, importance, historical notices of; objects as regards civil population and armies; sketch of internal conditions influencing the geographical distribution of disease.

PART I. HYGIENE, PRINCIPLES.

2. General considerations, surface soils, sub-soils; air in soil, its composition, methods of measuring porosity, effects of soil air, diseases attributed to it; soil water, division into moisture and ground water, importance of the latter, its relation to disease; Pettenkofer's theories; measurement of ground water, precautions, variations in ground water; vertical movement, influence of level on health, lateral

movement solid constituents of soil, soils in order of healthiness; conformation; influence of vegetation, relative importance of grass, brush-wood, and trees; precautions against malaria; essential points in the choice of sites; micro-organisms in soil.

Water.

3. General considerations, characters of a first-class drinking water, constituents in detail, effects and inferences; classification of drinking waters; sources of water; impurities due to source, collection, storage and distribution; influence on lead and other metallic poisons; quantities of water required; diseases propagated through drinking water, enteric fever, cholera, malarious fever, &c.; purification of water by various means, softening and filtration on large and small scale, action of micro-organisms, various materials considered, mineral matters, sand, animal charcoal, spongy iron, mineralised carbon; methods of collecting water samples; law as to water and water supplies, &c.

Sewerage.

4. General question of the removal of excreta, quantity passed by individuals, separation of solid and liquid; methods of removal, cesspools, privies, dry methods; general question of water removal, requirements, drains, various kinds, material, fall, mode of laying, connections, testing; drains under buildings; inspection chambers; disconnecting traps; procedure to be observed when examining drainage of a house; disposal of sink, slop and waste water, ventilation of drains; arrangements for closet pipes, trapping and ventilation; sewers, gradients, sizes, construction, materials, ventilation, flushing; various kinds of closets, models shown and explained; disposal of sewer water, &c., filtration, irrigation, precipitation, biological methods, &c.

Air.

5. General considerations, composition of pure air, changes undergone in respiration and their effects on health; bases of calculation of quantity of air to be supplied, determination by sense of smell, amount of impurity given off by individuals, formula; question of cubic space, relation to ventilation, height and floor space, limits laid down; size, position, &c., of inlets and outlets, causes of loss, means of motion of air; Montgolfier's formula; various inlets discussed, models shown, measurement of cubic space; methods of heating and artificial lighting.

Habitations.

6. General rules for health, site and aspect; foundations; arrangements for dryness, walls, roofs; window space; fireplaces and flues, &c.; floors, inside walls and ceilings; ventilation, form and arrangement; cold water supplies; hot water supplies; air space about buildings; hospitals at home,

special details; barracks and hospitals in the tropics; huts, tents.

7. General principles of diet; definition of a food; proximate principles; quantities required for existence and for work of different degrees; calculation of diet from ultimate elements; amounts of nitrogen, carbon, &c., necessary; energy, mode of calculation; energy of food, potential; mode of estimating from ultimate elements and proximate principles; constituents of different articles of food, questions of vegetable or animal diet; difficulties of vegetable diet in providing fat; arrangement of diets; the diet of the soldier, prison diets; scurvy; preserved, dried and concentrated food, various kinds, value and uses; cautions, common errors to be avoided; neurines, tea, coffee, cocoa, &c., alcohol; unsound food; characteristics of good meat; diseases arising from altered quality of meat; parasites. Adulterations of food. Slaughter-houses; cowsheds; dairies; milk stores; milkshops.

Food.

8. Effects upon the respiratory and other systems; amount of carbonic acid eliminated, amount of nitrogen; relation between these and work done; methods of calculation; co-efficients of resistance; varying velocities; continuity of work, expenditure of energy calculated by CO_2 evolved coinciding with energy of food; marching, chief points concerning length, step and velocities, causes affecting length of marches, instances of remarkable marches; outbreaks of yellow fever and cholera, insolation, minor accidents of the march, sore feet, &c.; duties of officers as regards refreshments, meals, drinking-water supply, &c.; question of alcohol.

Exercise.

9. Materials of clothing, advantages and disadvantages, boots, valise equipment, magazine equipment.

Clothing and equipment.

10. Infectious diseases, zymotic, endemic, pandemic and epidemic diseases; modes of transmission; infection of air, water, soil, food, lower animals, clothing, rooms, &c., yellow fever, enteric, typhus and relapsing fever, Mediterranean fever, small-pox and eruptive diseases; non-specific diseases, dysentery and diarrhoea, liver disease, phthisis, ophthalmia, scurvy, venereal diseases; precautions against malaria; cholera.

Prevention of disease.

11. Principles of disinfection; antiseptics, deodorants, and disinfectants; methods; forms of apparatus; conditions of efficiency; dry heat; saturated and superheated steam; chemical solutions and powders; fumigation; disinfection as applicable to Military Service. Other preventive measures;

Disinfectants and deodorants.

notification, isolation, quarantine, vaccination, and re-vaccination.

Burial of
the dead.

12. Methods of interment on the battle-field; sanitary precautions; results and methods in Franco-German War; cremation.

Statistics.

13. Objects aimed at in collecting statistics; precautions; accuracy of units; methods of grouping; units to be grouped under common characters; averages, means of getting them; arithmetical means; method of successive means; calculation of errors; mean error and error of mean square; probable error; errors and values of series; analysis of results by Poisson's formula; Quetelet's rules; elements of vital statistics.

Military
service.

14. Service of the soldier; sickness; deaths and invaliding, comparison with former periods, and with civil life.

Climate.

15. General question; definition; detailed effects of temperature, humidity, &c.

Meteorolo-
gical instru-
ments.

16. Barometers, thermometers, hygrometers; method of keeping observations; dew point; Glaisher's tables; reading and correction of instruments; measurement of heights; rain gauge; cloud, ozone and sunshine, how recorded.

Foreign
service.

17. India, effects of service on health of European troops; particular points; diseases; changes in recent years; statistics relating to India, Malta, Gibraltar, Cyprus, Mauritius, Ceylon, China, West Indies, Bermuda, &c.

PART II.—*Practical Course in Hygiene.*

PART II.
PRACTICAL
HYGIENE.

I. *Examination of Drinking Water*, including examination of the physical characters; a qualitative chemical analysis, a quantitative chemical analysis, examination of the sediment by means of the microscope, and bacteriological examination.

The instruction in the qualitative analysis indicates how an opinion may be formed of the character of a water, and its fitness, or the reverse, for drinking purposes, when neither time nor means are available for a full examination.

The course of quantitative analysis is, for all practical purposes, a complete chemical analysis of the dissolved chemical constituents of water. It includes the determination of the total solids present, and their division into fixed, and volatile; of the amount of chlorine; and of the hardness of water, as indicated by the soap test, this being further divided into the permanent and the temporary. The organic matters present, and their products, are estimated by the determination of the free ammonia, of the albuminoid

ammonia, of the nitrous and nitric acids, and of the oxidisable organic matter by the permanganate of potassium process. A quantitative examination is also made for lead. A method of determining dissolved gases is also shown.

The microscopic examination is directed chiefly to distinguish between the matters, living and dead, which may be regarded as being present more or less naturally in water; and those which indicate contamination from human habitations, by dust, particles of excreta, &c. Deductions are also drawn as to the character of a water from various microscopic objects included in the former group.

I. Bacteriological examination; gelatine and agar plates, enumeration of colonies; identification of pathogenic organisms, methods of Parietti, Elsner, Holtz, and Koch demonstrated; common water organisms in cultivations and plates shown; difficulties of work in tropical climates specially considered.

II. *Examination of Air*.—This consists of a determination of the amount of carbonic acid, which is taken as a measure of the organic impurity; a demonstration of the method of taking samples of air for analysis; and of the biological examination according to various plans that have been proposed. Eudiometry, simple methods shown. The measurement of cubic space is explained, and the use of the air-meter.

III. *Analysis of Articles of Food*.—Milk, flour, bread, butter, coffee, and tea are examined, and such an analysis is executed as is sufficient to afford a knowledge of the quality and genuineness of the articles, especial attention being paid to those processes which are likely to be of use, practically, to the Army Medical Officer. Adulterations are described, and methods for their detection.

Beer, wine, lime-juice and vinegar are analysed as far as is necessary.

A microscopic examination is made of the various cereal grains, starches, and arrowroots, and of the structures of tea, coffee and cocoa.

II.

CLINICAL AND MILITARY MEDICINE.

This course will consist of two parts:—

PART I.—*Clinical Instruction in the Hospital.*

This includes instruction at the bedside, especially on the more prevalent diseases of soldiers, their diagnosis, and

practical management and treatment. The Surgeons on Probation, who are put in charge of the patients, have opportunities of continuing their practice in all modern methods and aids to diagnosis. They are required to keep accurate medical histories of the cases under their care; and are taught, practically, the management of the Hospital wards as to cleanliness, ventilation, and general sanitation, and the nursing and methods of dieting the patients during sickness and convalescence.

They are practised also in carrying out all the Hospital regulations in regard to keeping the case books, ward books, admission and discharge books, diet sheets, and other books and forms, the methods of making out sick and invaliding documents, and all the duties required of an officer in charge of the wards of a Military Hospital.

The Professor gives clinical lectures on the cases under treatment.

PART II.—*Systematic Lectures on Tropical Diseases and the Diseases of Soldiers.*

PART II.

This course will include:—

1. A general view of the diseases to which soldiers are the most liable, as modified by the character, habits and duties of the soldier, and the conditions of military service in different countries and climates.

2. A description of such diseases as are most prevalent in tropical climates, or in countries where British soldiers are likely to be stationed or employed, as in the Colonies, the Mediterranean, Egypt, Africa, the East and West Indies and other parts of the world.

3. A demonstration of the beneficial effects of change of air and climate on invalids, and the advantages resulting from invaliding men suffering from the deteriorating effects of residence in unhealthy climates, or of debilitating diseases; of the great importance of invaliding in maintaining the health and efficiency of troops serving in hot or unhealthy climates; and of the advantage of frequent inspection of soldiers in unhealthy seasons, or during times of great prevalence of sickness, in order to detect the first sign of disease.

SYNOPSIS OF SYSTEMATIC LECTURES.

LECT. I. *Introductory.*—Duties of Army Surgeons in relation to prevention and treatment of disease, restoring the temporarily incapacitated to efficiency, and eliminating the

permanently incapacitated. Military pathogeny the outcome of the interaction between the subject and his special environment. A. The recruit, with special reference to selection, age and physique. B. The soldier—age, pathological proclivities, and conditions of service. C. The environment—location, climate and season, medical geography, hygienic surroundings, drilling and training, diet, movements, camp life, and active service. D. The pathological outcome—statistics of sickness, mortality, and invaliding at home and abroad; comparison of the present with the past; the vital statistics of war.

LECT. II. *Sketch of the Physical Geography and Climates of India*.—Shape, dimensions, boundaries, and area. Mountain ranges, plateaux, and plains. Rivers and their valleys and deltas. Climates of India—Seasonal and topical variations. Population—density, races, occupations, distribution, vital statistics. Divisions, natural, administrative, and statistical.

LECT. III. *Malarial Diseases (Paludism)*. A. *Epidemiological and Hygienic Aspects*.—Geography, relation to latitude and altitude, incidence, endemic and epidemic phases. Physical circumstances associated with paludism in relation to local conditions, climate, and season. Conditions of generation and dissemination of malaria. Sexual, age, and racial liability. Effect of residence in malarious localities. Seasonal prevalence. Preventive precautions indicated by experience.

LECT. IV. B. *Clinical and Therapeutical Aspects*.—Varieties of malarial disease and relative proportion of types. The parasite of malaria, various forms associated with various types. Intermittent fever, varieties and symptoms. Remittent and continued fevers, varieties and symptoms. Chronic infection (malarial cachexy). Complications and sequelæ. Morbid anatomy. Diagnosis and prognosis. Treatment—medicinal, dietetic, regimenal, and climatic.

LECT. V. *Non-malarial Fevers met with in the Tropics*.—A. Simple continued fever. Etiology, incidence, and seasonal prevalence. Symptoms, diagnosis, prognosis, and treatment. B. Ardent (thermic) fever. Causation, phenomena, pathology, and treatment. C. Dengue, epidemiology, symptoms, diagnosis, prognosis, and treatment. D. Relapsing fever, prevalence in India, causation, phenomena, diagnosis, and treatment. E. Enteric fever. Historical sketch, epidemiology, question of identity of Indian and European enteric, difficulties of diagnosis.

LECT. VI. A. *Mediterranean (Malta) Fever*.—Area of prevalence. Epidemiology. Clinical phenomena. Diagnosis, prognosis, and treatment. B. *Yellow Fever*.—Area of prevalence. Epidemiology. Prevalence in the British Army. Symptoms. Morbid anatomy. Pathology. Diagnosis, prognosis. Treatment—prophylactic and curative.

LECT. VII. *Plague*.—Historical sketch. Habitat. Epidemiology. Symptoms. Morbid anatomy. Diagnosis, prognosis. Treatment—prophylactic and curative.

LECT. VIII. *Sunstroke*.—Varieties. Causation. Symptoms. Morbid anatomy. Pathology. Sequelæ. Treatment—prophylactic and curative.

LECT. IX. *Diarrhœa*.—Prevalence of bowel complaints in India. Prevalence in tropical campaigns. Forms met with in the Tropics. A. Infantile diarrhœa, varieties and treatment. B. Bilious diarrhœa, causation and treatment. C. Malarious diarrhœa, symptoms and treatment. D. Choleraic diarrhœa, peculiarities and treatment. E. Scorbutic and famine diarrhœa, pathology and treatment. F. Hill diarrhœa, causation and treatment. G. Sprue (psilosis), geography, symptoms, morbid anatomy, and treatment.

LECT. X. *Dysentery*. A. *Epidemiological Aspects*.—Endemic, endemo-epidemic, and epidemic phases. Physical and climatic conditions favouring prevalence. Relation to season, malaria, chill, impure water, and general sanitation. Communicability. Epidemics in temperate regions. Dysentery of war and famine. Prevalence and seasonal incidence in India. B. *Clinical and Pathological Aspects*.—Forms. Symptoms. Morbid anatomy. Diagnosis. Prognosis. Treatment—prophylactic, medicinal, dietetic, and climatic.

LECT. XI. *Asiatic Cholera*.—Synonyms. Historical sketch. A. *Epidemiological and hygienic aspects*.—Endemic haunts and epidemic routes. Relations to physical geography, soil, water, air, climate, season, sanitary defects, and race. Means and agencies of dissemination. Koch's comma bacillus. Principles of preventive action. Prevalence among troops, prisoners, and general population in India.

LECT. XII. B. *Clinical, Pathological, and Therapeutical Aspects of Asiatic Cholera*.—Forms. Symptoms. Sequelæ. Morbid anatomy. Pathology. Diagnosis. Prognosis. Treatment—prophylactic and curative. Importance of nursing and dieting.

LECT. XIII. *Tropical Diseases of the Liver*.—Remarks on the anatomy and physiology of the liver. A. Excessive production of bile, causes, symptoms, and treatment. B. Defective secretion (hepatic exhaustion), causes, symptoms and

treatment. C. Acute congestion (hepatitis), causes, geographical distribution, racial and sexual liability, prevalence, morbid anatomy, symptoms, and treatment. D. Chronic congestion, causes, results, symptoms, and treatment. E. Hepatic abscess, varieties, prevalence, morbid anatomy, relation to dysentery, symptoms, and treatment. F. Infantile biliary cirrhosis.

LECT. XIV. A. *Beriberi*.—Endemic area. Epidemiology. Principles of prevention. Symptoms. Morbid anatomy. Pathology. Diagnosis. Treatment. B. *Epidemic Dropsy*.—Area of prevalence. Epidemiology. Symptoms. Morbid anatomy. Diagnosis. Prognosis. Treatment.

LECT. XV. *The Infective Granulomata*.—Varieties. A. *Frambœsia* (yaws). Geography. Phenomena. Treatment. B. Oriental sore (Delhi boil). Geography. Phenomena. Treatment. C. *Mycetoma* (fungus foot). Description. Pathology and treatment.

LECT. XVI. *Parasites*.—Distomida. *Bilharzia hæmato-bia*. *Ankylostoma duodenale*. *Filaria medinensis* (Guinea worm). *Filaria sanguinis hominis*. Geography, natural history, habitat, pathological effects, and treatment of each variety.

Clinical lectures are delivered weekly on various subjects, according to the cases which happen to be available for illustration in the Hospital.

INSTRUCTION IN LUNACY.

Lectures and practical clinical instructions in mental disease are given in connection with the Lunatic Asylum.

Lecture I.—Introductory. Medical examination of the recruit, so far as concerns his mental condition. Points to be specially attended to. Disposal of undesirable recruits under three months' service. General remarks on the diagnosis and returning of cases of insanity in the Service. Inspection of the special arrangements of this Hospital.

Lecture II.—Classification of mental diseases. Idiocy. Mania. Mental stupor. Varieties. Diagnosis, symptoms, pathology, and treatment; with special reference to Service conditions. Clinical examination of cases.

Lecture III.—Melancholia. Dementia. General paralysis of the insane. Delusional insanity. Varieties. Diagnosis, symptoms, pathology, and treatment; with special reference to Service conditions. Clinical examination of cases.

Lecture IV.—Manner in which cases of insanity gener-

ally present themselves in the Service. Feigned insanity. General treatment of insanity under Service conditions. Clinical examination of cases.

Lecture V.—Regulations regarding the disposal of insane soldiers. Home Service. India. The Colonies. Forms used. Clinical examination of cases.

Lecture VI.—Legal relationships of insanity. Lunacy Act. Testamentary capacity. Criminal responsibility of the insane. Clinical examination of cases.

III. MILITARY SURGERY.

Systematic Course of Lectures on Wounds and Injuries met with in War, and their Treatment.

Lecture I.—Introductory remarks. Wounds by side-arms; their infrequency. Portable fire-arms. Rifles. Mechanics of projectiles.

Lecture II.—Mechanics of projectiles (*continued*). The various kinds of small-arm bullets used in armies; the injuries produced by them in soft parts and on bone. Experiments with bullets of small diameters made in England and on the Continent. The experiences gained in the Chilian and other wars.

Lecture III.—General considerations regarding bullet wounds. Classification of bullet wounds. Entrance and exit wounds in the skin. Supposed poisonous effects of bullets; effects of heat of bullets. So-called explosive effects; real causes of the latter.

Lecture IV.—Multiple bullet wounds. Wounds by large projectiles and their fragments.

Lecture V.—So-called "Wind Contusions." Primary symptoms accompanying gunshot wounds. General treatment of wounds; older methods; antiseptic and aseptic methods. Treatment of wounds produced by side-arms. First field dressings.

Lecture VI.—General treatment of bullet wounds. Bullet detectors and bullet extractors. Exploration of wounds, and the method of it. Gunshots of joints; general considerations concerning them.

Lecture VII.—Gunshot wounds of the shoulder, elbow, and hip.

Lecture VIII.—Gunshots of the hip (*continued*).

Lecture IX.—Gunshots of the knee.

Lecture X.—Gunshot fractures of long bones. The general question of operation for gunshot wounds of joints and long bones.

Lecture XI.—Gunshot wounds of the chest.

Lecture XII.—Wounds of the head and spine.

Lecture XIII.—Wounds of the abdomen; classification. Penetrating and non-penetrating wounds. The importance of early diagnosis of the former conditions, all treatment depending on it.

Lecture XIV.—First aid to wounded on the field.

Lecture XV.—The Bearer Company; its duties on the field.

Lecture XVI.—Hospitals at the front, on the lines of communication, and at the base. Medical store depôts.

The Assistant Professor of Surgery gives lectures and demonstrations for the purpose of teaching the Surgeons on Probation to estimate and correct defective vision due to errors of refraction, and to determine the visual fitness of recruits and of candidates for commissions in the Army.

The Surgeons on Probation are also practically instructed in the methods of examining recruits and of invaliding soldiers, and in the use of the Röntgen ray apparatus.

IV. PATHOLOGY.

Syllabus of Lectures.

Lecture I.—Classification and life conditions of micro-organisms.

Lecture II.—Parasitic micro-organisms and classification of diseases which are produced by parasitic bacteria into (a) *septicæmias*, (b) *local inflammatory processes*, and (c) *intoxications*.

Lecture III.—General question of immunity against bacterial diseases. Phagocytosis. Bactericidal effect of humours.

Lecture IV.—Septicæmic infections, anthrax in rodents, spirillum fever in man. Pasteur's vaccination against anthrax.

Lecture V.—Septicæmic processes (*continued*). Typhoid fever. Method of vaccinating against typhoid fever. Serum diagnosis of typhoid fever.

Lecture VI.—Syphilis and vaccinia. Preparation of vaccine lymph from calf.

Lecture VII.—Septicæmic processes (*continued*). Mediterranean fever. Sero-therapeutic of Mediterranean fever. Serum diagnosis of Mediterranean fever. Plague. Haffkine's method of vaccinating against plague.

Lecture VIII.—Local inflammatory processes. Croupous pneumonia in Man. Gonorrhœa. Erysipelas.

Lecture IX.—Tuberculosis. Diagnostic importance of tuberculin injection in animals. Leprosy. Glanders.

Lecture X.—Intoxication processes. Tetanus and malignant œdema. Sero-therapeutics of tetanus.

Lecture XI.—Diphtheria. Sero-therapeutics of diphtheria. Cholera. Haffkine's method of vaccinating against cholera.

Lecture XII.—Snake venoms. Sero-therapeutics of snake bite.

Lecture XIII.—Nature and theory of production of (a) antitoxic (*i.e.*, toxitropic), and (b) of antibacterial (*i.e.*, bacteriotropic) substances in the body. Methods of preparing antitoxic and "preventive" sera.

Lecture XIV.—Rabies. Pasteurian method of vaccinating against rabies.

Lecture XV.—Diseases due to infection by parasitic protozoa. Malaria in man. *Coccidium oviforme* in rabbits.

Lecture XVI.—Clinical examination of blood. Alterations of alkalinity of blood. Alterations of coagulability. Alterations in amount of lime. Results of these alterations. Methods of arresting bleeding.

Practical Pathology.

Practical work in the laboratory, illustrating subjects of systematic lectures. Post-mortem examinations. Microscopical examination of pathological material supplied by the hospital. Serum diagnosis, &c.

