ADLARD AND SON, LIMITED, 21, HART STREET, LONDON, W.C. I.

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 1.] OCTOBER 1ST, 1934. PRICE NINEPENCE.

CALENDAR.

Tues., Oct. 2.—Dr. Gow and Mr. Girling Ball on duty.
Wed., ,, 3.—Rugby Match *v.* London Hospital. Home.
Fri., ,, 5.—Dr. Graham and Mr. Roberts on duty.
Medicine: Clinical Lecture by Dr. Hinds Howell
Sat., ,, 6.—Rugby Match *v.* Gloucester. Away.
Association Match *v.* The Casuals. Home.
Mon., ,, 8.—Special Subjects: Clinical Lecture by Mr. Just.
Tues., ,, 9.—Prof. Fraser and Prof. Gask on duty.
Wed., ,, 10.—Surgery: Clinical Lecture by Mr. Roberts.
Hockey Match *v.* Guy's Hospital. Away.
Fri., ,, 12.—Lord Horder and Sir Charles Gordon-Watson on duty.
Medicine: Clinical Lecture by Dr. Graham.
Sat., ,, 13.—Rugby Match *v.* Old Haileyburians. Home.
Association Match *v.* Reading University. Away.
Hockey Match *v.* Beckenham II. Away.
Mon., ,, 15.—Special Subjects: Clinical Lecture by Mr. Bedford Russell.
Tues., ,, 16.—Dr. Hinds Howell and Mr. Harold Wilson on duty.
Wed., ,, 17.—Surgery: Clinical Lecture by Mr. Roberts.
Rugby Match *v.* St. Mary's Hospital. Home.
Fri., ,, 19.—Dr. Gow and Mr. Girling Ball on duty.
Medicine: Clinical Lecture by Dr. Gow.
Last day for receiving matter for the November issue of the Journal.
Sat., ,, 20.—Rugby Match *v.* Redruth.
Association Match *v.* Metropolitan Police College. Away.
Hockey Match *v.* R.N. and R.M. Chatham. Away.
Mon., ,, 22.—Special Subjects: Clinical Lecture by Mr. Elmslie.
Tues., ,, 23.—Dr. Graham and Mr. Roberts on duty.
Wed., ,, 24.—Surgery: Clinical Lecture by Mr. Wilson.
Rugby Match *v.* Cambridge University. Away.
Hockey Match *v.* Staff College. Away.
Fri., ,, 26.—Prof. Fraser and Prof. Gask on duty.
Medicine: Clinical Lecture by Dr. Graham.
Sat., ,, 27.—Rugby Match *v.* Bedford. Away.
Association Match *v.* Downing College, Cambridge. Away.
Hockey Match *v.* Hawks. Away.
Mon., ,, 29.—Special Subjects: Clinical Lecture by Mr. Bedford Russell.
Tues., ,, 30.—Lord Horder and Sir Charles Gordon-Watson on duty.
Wed., ,, 31.—Hockey Match *v.* London University. Home.

EDITORIAL.

THERE is no calling in which the years are so precious as in the practice of Medicine, nor is there a profession for which a more protracted training is required. Before the man is considered qualified for practice, one-third of a lifetime is spent in preparation for the work which is to occupy part of the remaining two-thirds; and then there is always present a sinister whisper of further extension. Yet the whole span could be devoted to the proper study of mankind without covering every field of possibility. The schooling is a long one and the evolution of the doctor slow. From the timid embryo, on the threshold of his "prep. school", his pride with small success trying to stem the flow of the rising tear, and the new boy, fearfully alone on his first night in the public school, there blossoms the Freshman, eager to show his emancipation from the schoolboy's desk and home's apron-strings, cloaking his apprehension with an air of nonchalance and *savoir faire*, betraying it in a blatant exhibition of the herd instinct.

To welcome him is unnecessary, for that will have been done already by his teachers, and we forbear to offer our congratulations on his choice, confident that these will be self-expressed within a very few days of his arrival. We cannot refrain, however, from a sincere echo of Abernethy's preface to an introductory address: "God help you all. What will become of you?" Will he become one of those ubiquitous "keen men" so well portrayed in *Round the Fountain?* The one who "striveth ever to be in the front row and taketh copious notes therein; the scratching of his pen is a burden to the lecturer. . . . At lunch time he eateth buns in a white garment, so that they who pass may say 'This man is no longer an inhabitant of the rooms.' He

talketh shop in strident tones to his brethren in the public places of the city. He runneth up to the moribund patient and bangeth him on the chest so that he spitteth blood at him. . . . And when he hath diplomated he goeth forth crying: 'Of a verity am I out of touch with the student lads.'" Or will he emulate the one who "keepeth his keenness to himself, and publisheth it not upon the roof-tops", but revealing it by his interest in the many activities of the Hospital and Medical School? Or will he be just that "average man" so scornfully alluded to by the subject of one of the articles in the following pages? With no other ambition than to be "a doctor and live by men's diseases", will he regard Hospital life merely as a "*curriculum*"; its history and its teaching just so much sawdust? Or will he fail to reach his goal, that far-distant diploma or degree, falling by the wayside, prey to the high-flying fowl of the air, the merciless Examiner?

Sir James Paget's revealing analysis provides some encouragement, old though it has become. He found that three-quarters of the students qualified, and, of these, two-thirds were fully satisfied with their position after qualification.

Whatever his destiny, the Freshman may be sure that here he will find the best equipment for everything that Medicine has to offer; what he may consider still to be lacking only awaits the ways and means for its supply. With the vision before him of the great advances made possible by new discoveries and changes in opinion, method and structure, the student of medicine to-day may well be on the threshold of a new era.

* * *

Mr. Douglas Harmer will give the annual address at the Central London Throat, Nose and Ear Hospital on October 12th, at 4 p.m. His subject is "The Treatment of Malignant Disease in the Upper Jaw".

* * *

Sir Humphry Rolleston delivered the annual address to the C.S.S.M.G. on September 28th, on "The Occupational Diseases of those in Attendance on the Sick".

* * *

Dr. H. Morley Fletcher has been appointed Consulting Physician to the Infants' Hospital, Vincent Square, Westminster.

* * *

Congratulations to all those concerned in the arrival of triplets in "Lizzie," the first since the new ward was built. In spite of their diminutive size the trio are doing excellently. By a coincidence the mother at the last similar event, six years ago, was admitted at the same time for a further addition.

We have received the following letter from the Dean. We publish it without comment, knowing that his appeal for further help in a difficult task will not be fruitless.

DEAR SIR,

The College is about to begin a new session, one which will, we hope, be of the greatest importance. During this session, it is the desire of the College to start rebuilding on the Charterhouse site the new departments for the teaching of the pre-clinical subjects, and to finish so that the new College may open on October 1st, 1935. We are at least starting well in that on November 5th the Lord Mayor is to hold a Banquet at the Mansion House in order to make an appeal to the City for funds. A letter signed by him has already been circulated very widely and has brought in money. We hope it will bring in a large sum. The world of commerce has been informed of our needs and reminded of the long connection between the City and this Hospital, dating back so far as the reign of Henry VIII.

Up to this moment money has been collected privately, and the acquisition of a sum amounting to £65,000 has cost us less than £500 to collect, so that the expenses are limited to a very small figure. Now is the time for Old Bart.'s men to make a great push to try and get generous donations to our funds. I should like to be able to announce at the Banquet that we have collected all the money we require, namely £135,000; but, if this cannot be done, as large a sum as possible. Once more let me make this appeal.

Again, I should like the students at present at the Hospital to make another effort. The last time they set out to collect money was two years ago, although they have contributed through their various clubs to such effect as to raise nearly £800. Can they make it £1,000 before November 5th? I can let them have collecting cards if they wish for them. There are, too, the new students who know nothing of our activities. They can have copies of the appeal by applying in the Registrar's Office, and perhaps help us by advertising our needs among their friends.

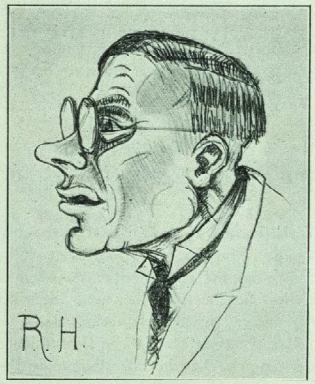
Bart.'s is a great school, but has got to be greater and can only become so if everybody will put his back into the effort. This can best be done by making the effort now.

Yours sincerely,
W. GIRLING BALL,
Dean of the Medical College.

* * *

We announced in a previous issue that the Hospital was shortly to lose the services of the Assistant Director of the Medical Unit. Time has passed too quickly, and Dr. R. Hilton has now commenced his new work at St. Thomas's Hospital as Physician with Charge of Out-Patients. "Good men are a public good," for monopoly is impossible, and hence there is not one of our sister hospitals that has not been seasoned with salt from Smithfield. We are sorry to lose Dr. Hilton, but console ourselves with the knowledge that he will always remain a "Bart.'s man".

He came to this Hospital from Cambridge and qualified in 1921, obtaining his "membership" two years later. He has been Assistant Director of the Medical Unit since 1929, and in that time has established himself as a



versatile scientific teacher. His rounds and lectures have been characteristic, as rational as they have been original and as instructive as they have been entertaining.

We wish him every success in his new sphere.

* * *

All Bart.'s men will be interested to know that the Hospital was represented on board the "Endeavour" by Dr. W. F. Richards. This adds another name to the long list of international contests in which old Bart.'s men have taken part.

* * *

The closer co-operation between the London hospitals is one of the most hopeful signs of the times. Arrangements are now being made for interchanging attendances at clinical lectures at this Hospital, Guy's and St. Thomas's. The subject will be dealt with more fully in our next issue.

Resignation.

No matter now! Let Mary take
All china cups or metal;
For other hands have been and pinched
Our one and only Kettle.

OBITUARIES.

MR. C. J. HEATH.

CHARLES JOSEPH HEATH was born at Totnes in the Isle of Wight on December 25th, 1856, and after being educated at King Edward VI Grammar School in that town, entered St. Bartholomew's Hospital as a medical student. He came to London in the first place to be trained as a veterinary student, but soon abandoned this for medicine, at which he gained distinction quite early by winning two prizes for anatomical dissection at the Hospital, and by his appointment as Prosector in Anatomy to the Royal College of Surgeons.

Qualifying in 1884, he went into general practice near the Crystal Palace, but two years later forsook this for surgery, and was elected F.R.C.S. He was House Surgeon for a time at the Preston Royal Infirmary, but after this appointment began to devote himself to the surgery of the ear, nose and throat, for which he was attached to the Throat, Nose and Ear Hospital and to the Throat Hospital in Golden Square. Of the latter he was Vice-President at the time of his death, in July of this year, at the age of 77, giving some indication of the active interest he took all his life in a branch of the profession, for which he did a great deal. In addition, however, to his brilliance as a surgeon he possessed a remarkable mechanical genius, which led him to devise a number of new instruments, not only for professional purposes, but also for wildfowl shooting, which he had practised as a hobby for most of his life.

He devised a mastoid operation, now known as Heath's operation, and wrote a number of valuable papers, particularly on the subject of deafness, from which he had suffered to some extent from his youth.

But an honour which he appreciated even more than many of his professional achievements was his election, on the death of Sir Ralph Payne Galway, to the position of President of the Wildfowlers' Association in 1929. In this, as in fishing, he continued to take an interest for the remainder of his life, and he was a first-rate shot and a very good fisherman. His loss will be mourned, therefore, by surgeons and sportsmen alike, who knew him and appreciated his enthusiasm and ability in these two widely differing spheres. To them and to his two daughters, then, our sympathy is extended in their bereavement.

C. W. HUTT.

The sudden death of Dr. C. W. Hutt, at the early age of 54, will be deeply regretted by his wide circle of friends, and by none of them more than those whose

knowledge of him extends over many years, going back to the time when Dr. Hutt was at St. Bartholomew's Hospital studying medicine. He qualified nearly thirty years ago, after being awarded the Matthews Duncan Prize and the Brackenbury Medical Scholarship. Almost from the beginning of his studentship he was attracted by the Public Health aspects of medical study. Methodical and exact, never sparing himself, he seems to have been inspired throughout his career by the ancient writers who pleaded, "Make me to know mine end and the measure of my days, what it is"; and again, "Teach me to number my days that I may apply my heart unto wisdom". Thus Dr. Hutt always knew the end at which he aimed, and while he was ever minded "to do to-day's work to-day", he was careful also to keep in touch, as far as possible, with whatever was going on in Public Health, and not only with that in his immediate surroundings, or even in this country, but with world progress in his beloved hygiene, letting his observation, with extensive view, survey mankind, it might almost be said without exaggeration, "from China to Peru".

His first fields of Public Health work were Warrington and Brighton, as an assistant; and then, after service in the war, he became Medical Officer of Health at Dudley, then at Richmond, and in 1921 at Holborn, on the death of Dr. W. A. Bond. In this last-named appointment he found the fullest scope for his energies, not only carrying out his prescribed duties, but doing pioneer work in connection with maternity and child-welfare, and with diphtheria in the Holborn schools. He found time also to devote to literary work, setting out the principles of hygiene in their relation to the work of health visitors, nurses and social workers, collaborating with the present writer in a manual of hygiene for medical students and others in 1925, and being at the time of his death engaged on a comprehensive work on preventive medicine, in conjunction with Dr. Hyslop Thomson.

Dr. Hutt was an untiring worker, and so cheerily optimistic that he was able to stimulate his fellow workers and try to keep them up to the mark. His loss to the Public Health Service of London will be deeply felt. W. H. H.

MISS HAY BORTHWICK.

It was with profound distress that we heard of the instantaneous death of Miss Hay Borthwick, so well known as Sister Lawrence, on September 9th, from a motor accident in Scotland. Miss Borthwick came to the Hospital in 1894, and in 1899 she was appointed Sister of Lawrence Ward, moving to Darker Ward as Sister when the Professorial Units took the four wards in the South Wing. She retired in February, 1924, after thirty years of service devoted in such a loyal manner to the Hospital she loved so dearly, and which remained ever in her thoughts and life to the day of her sudden death. H. T. B.

Throughout almost the whole of my active service on the Staff, Miss Borthwick was Sister of the female ward. Her consistently fine work and her powers of appreciating accurately and promptly the condition of the many patients she had under her supervision was of the greatest value to all who worked with her during that quarter of a century in which she held sway as a Sister. It is happy to think that she did not suffer any pain, but passed away as the result of her injuries without knowing what had happened. W. McA. E.

TO CLERKS AND DRESSERS.

IN the course of the medical curriculum it is a good thing to halt from time to time and consider the ground that has been traversed, the point that has been reached and what lies ahead. It is particularly valuable when clinical work is to be commenced and patients are to be the subject of study for the first time. When we enter the medical profession we are devoting our lives to the service of the people, to care for them, to maintain their bodies and their minds in health, in a state of efficiency that they may carry out the work and the duties which society has assigned to them. The curriculum is designed to train us for this great service, and it is in the light of this objective, this training, that progress must be viewed.

From physics and chemistry we learn of the laws that govern the actions and reactions of inanimate matter, and from botany and zoology we glean the simpler principles that underlie the behaviour of living organisms. We see something of their struggle for existence, and we grasp something of the elaborate co-ordination of parts and functions that is necessary if the whole structure is to live its life successfully and propagate its offspring. We learn of the functions of organs, and we see that these functions become more complicated as the environment becomes more varied and the organism has to adjust itself more rapidly and over a wider range in its endeavours to maintain life. As the scale of life is ascended the range of environment is extended, and the functions and adjustments become more complicated.

In anatomy and physiology we study the structure and the functions of the organs of man, the most

elaborate of living organisms, and of the manner in which these are adjusted and adapted to meet the ever changing conditions of his life and to maintain his efficiency in spite of all the dangers that surround him. In man it is peculiarly difficult to understand the reasons for his behaviour and the mechanisms of the functioning of his organs, and this is not merely because he is more complicated than other animals, but also because he has a greater power of voluntary control. His reflex actions are less simple, and in him more than in other animals they are affected by his mind and his volitions. Until we learn more of the physiology of the mind, the principles by which it affects the organs and their actions are difficult to ascertain, and it is difficult to convey to others what one individual may have learned by experience for himself. Although many generalizations have been reached by physiologists, the physiology of normal healthy men must be but incompletely taught in any curriculum, and we must endeavour to utilize every opportunity to study individuals for ourselves and gain our own experience, for the better we understand man in health, the better we are able to appreciate the causes of his ill-health.

Pathology teaches of disease processes, their natural histories, and how they affect the tissues and organs, but if we are to care for our patients it is necessary that we have also an understanding of the individual patient, an understanding of his behaviours and motives, his actions and reactions, and those of his organs and tissues. When we think of the ever-changing physical and emotional environment in which man lives, and of all the dangers that surround him, and to which he must be continually reacting and adjusting, it is not surprising that he should suffer ill-health. It is surprising that he can adjust so successfully that he maintains his efficiency and health. It must be expected, therefore, that illness is often due to some lack of successful adjustment to one or more minor disturbances, and that it is not always due to the effects of some clearly-defined disease process which we can study in a laboratory, about which generalizations can be formed, and which can be included in a course of instruction in pathology.

In the wards of a general hospital most of the patients are suffering from some definite disease process, and in them the important duty is to recognize this process and to interfere with it, sometimes to eradicate it, at others to halt the process and stay its destructive actions, but often only to mitigate its effects and allay suffering. Outside the hospital wards the majority of patients who will seek our advice are not suffering from any of the definite disease processes that we have studied in the courses in pathology, but are inefficient and ill from the faulty functioning of some organ or system due to misuse of their bodies, fatigue or worry. To recognize correctly what is wrong a thorough knowledge is required of the patient, his constitution and temperament, his habits, and his relations with his fellows and with his relatives. The examination of a patient must therefore include not only a search for all clues that may lead to the recognition of the disease, but also an investigation of the individual and an understanding of his make-up and his reactions. For this the examination by history taking is even more important than the physical examination, but it can only succeed if conducted intelligently. The family history should give an indication of what kind of material the patient is made of, and the kind of surroundings to which he has been exposed in early life. The previous history should unravel the conditions under which he has lived and how he has reacted to them, successfully and healthily, or with but poor success and much inefficiency. From birth, through schooldays, early employments, marriage, pregnancies, war, right up to the present time, all details are illuminating and worth noting if they cast light on the mentality, the emotions, and the capacities for adjustment. It is only after such a study that the physician can fully grasp the significance of the present incapacity and take measures to help his patient, advise him and send him away a healthier individual, a more useful citizen and a better man.

The illness for which a patient is admitted to hospital is but an incident in the story of his health. It is an important incident, for it has threatened his life or his efficiency, and it must be the centre of attention, but, to make the best use of his stay in hospital and to send him out as efficient as the circumstances permit, the whole of his life and health should be visualized, and the weak points strengthened and the faults corrected by means of gentle investigation and advice offered sympathetically. The doctor is more and more taking on the functions of the confessor and the parson. He cannot be a good doctor if he has not powers of logical thought and of criticism, and if he fails to make good use of the opportunities for a scientific training that the curriculum offers him. But he must have more than these, he must have the sympathy and the wisdom that come of understanding those whom he is trying to help.

It is easy to realize that these must be the duties of a physician towards his private patients, but it is too often forgotten that we owe the same sympathy, help and advice to hospital patients, and that it is the clinical clerks and dressers who can best perform the duties of the practitioner for them. If as clerks and dressers you undertake these duties seriously, you will find that you

will receive confidences that throw light on much that was otherwise obscure; the patients will gain greatly, and you will enjoy your work more, but above all you will learn how men and women live, how they think, and how they feel, and it will become easy for you to help them.

F. R. FRASER.

CUTTING WARDS AND OPERATION THEATRES.

WHERE were operation theatres first built, and where did surgeons operate in the days when there were no theatres?

This question was asked during the course of a study of the life of Percival Pott (1714–1788). As no one seemed able to answer this question, a search was made among the old Journals which contain the records of the actions of the Governors of St. Bartholomew's Hospital. The following extracts will show the sequence of events at this Hospital.

Though the minutes go back without a break to 1547, no reference to the subject has been found until July 8th, 1691, when the following record occurs:

"The building of a ward within the Long Walk for patients afflicted with the stone is by this Court referred to the management and discretion of the (12) Governors undermentioned or any three of them."

The Governors obviously did their work without too great delay, for on August 3rd, 1693, we find the following record:

"The thanks of this Court, nemine contradicente, was ordered to be given to the President for his great benevolence in building and furnishing the Cutting Ward, which cost about £1500."

This building evidently had two stories, and the Cutting Ward occupied the upper one, because there are records (February 20th, 1692; April 15th, 1693) that shops under the Cutting Ward were let to certain citizens of London. It must be remembered that at that date many laymen occupied dwelling houses and shops within the precincts of the Hospital.

At this time (June, 1693) the two surgeons appointed to cut for stone were Charles Bernard and Robert Stevens, and in the notice of their appointment occurs the first use so far discovered in these records of the word "operation".*

* Derivation of "Operation". (1597, A.M. tr. Guillemeau's FR. Chirurg. 1 b/2): "This worde operatione is an artificialle and normaticke (= according to rule) applicatione wrought by the handes on mans bodye, wherwith the decayed health is restored."—N. E. D.

No further reference to the subject is found until June 28th, 1714, when it was—

"Ordered that the stones taken out of patients bladders that are cutt within this hospital be brought into the Compting House and showed to the Treasurer and Governors at their next meeting after the said patients are cutt, and hung up in the said Compting House according to ancient custom."

One may wonder what was the significance of this Order. Was it the germ of a pathological museum, or was it, like a gamekeeper's larder, to prove to the Governors that the surgeons were active in their duties? Sir D'Arcy Power suggests it was to prevent the stones being used a second time in cases of wrong diagnosis, when no stones were present.

The next reference shows the very beginning of an operation theatre:

"*October* 6, 1722.

"Upon a Representation of Mr. Bamber one of the Surgeons for cutting of the Stone in y Bladder that the present allowance of four pence a day for the subsistence of Those Patients is too Small, and not sufficient to provide a proper Dyet; It is thereupon Ordered that sixpence a day for the future be allowed for the subsistence of every such Patient for one month after they shall be severally cutt, also that a New Skylight be made in the Cutting Ward for casting a better light to the place that Operacon is performed in, and a New Rail for keeping off the press of the Company upon the Surgeons when they are cutting."

Here is evidence that good lighting of the place of operation is called for, and also that the operations were watched by so many people that a space had to be kept clear about the surgeon by a rail.

There is nothing to show in any of these notices that the operations were done in any room off the main ward. One has to presume that one end of the ward was used for the purpose, perhaps screened off with movable screens. When we remember that there were no anæsthetics then, one wonders about the feelings of the other patients.

The following Order shows the earliest beginnings of the Museum, and John Freke was the first Curator:

June 23, 1726.

"Two convenient rooms were to be prepared under the Cutting Ward—one for the more decent laying of the dead patients before their burial, the other as a repository for anatomical or chirurgical preparations. Every preparation is to be numbered and to have the name of the person who gave it, and its history, entered in a book to be kept in the Counting House and that Mr. Freke do keep the keys of it."

The next Order shows that there was a Sister in Charge of the Cutting Ward. Many dressings would obviously be needed in this ward, and the Sister had to take her turn at the wash-tub.

"Ordered that the Sister of Cutting Ward be allowed after the rate of Twenty Shillings a Year for the time she hath been Sister there being One Yeare & a hafe at Christmas last for washing the Linnen of Patients Cutt for the Stone & twenty Shillings a Year for the future but she is from time to time to do her Part at the Buck."

It would appear that in the first instance the Cutting Ward contained six beds, but by 1753 twelve beds were found to be necessary.

"*December* 18, 1753.

"Ordered that six more Bedsteads and Bedding be provided for Cutting Ward, to complete the number of twelve Beds in the whole Ward."

The Hospital was now being rebuilt. Four large blocks or piles were being erected to form the Square as we now know it, and the jumble of old buildings was being cleared away.

By 1752 three piles had been completed, and the fourth pile, the East Block, was started in 1757 and completed in 1769.

On May 15th, 1766, occurs the following record:

"Ordered that the Wards in the New Wing or two of them at least be fitted up and furnished for the Reception of Patients for Operation as the Committee shall direct and that the patients in the Cutting Ward be removed as soon as conveniently may be into the wards of the said New Wing,"

and on May 15th, 1766, it was:

"Ordered that the Theatre in the New Wing for Operations and Room adjoining be finished forthwith,"

also it was—

"Ordered that the Rooms in the Cutting Ward be converted into Rooms for Tenants."

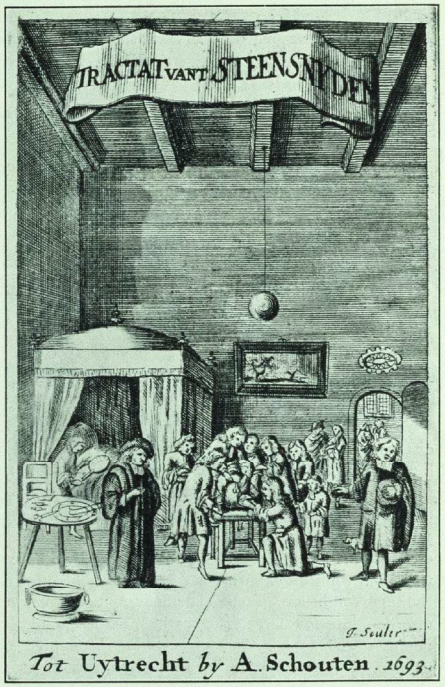
It will be seen from this that the old Cutting Ward was to be abandoned now after 75 years' use; but most important, here is the first reference to a theatre for operations within the new Block. Unfortunately there is no record of the position or size or equipment of this theatre, nor is it clear in which wing it was situated.

The next reference shows that this theatre was used for a lecture theatre, and it is the first mention of a need of a building for medical teaching.

"*February* 20, 1767.

"The Treasurer reported to the Committee that the Physicians and Surgeons of this Hospital desire that they may have leave to make use of the Theatre for operations and also of the room adjoining thereto in the pyle of buildings lately finished, to read Lectures in to their pupils and other purposes for the accommodation of the Physicians and Surgeons, the same to be ordered accordingly, and it is further ordered that one of the Beadles do make and keep fires in the said Rooms to make it fit for their reception."

It looks now as if all operations, for stone or otherwise, were to be done in this theatre. Though there is no proof we may presume also that, previous to its formation, such operations as were necessary were done in the Cutting Ward.



A CUTTING IN PROGRESS.

The title-page of a treatise on Lithotomy, by F. Tolet (Utrecht, 1693). Reproduced from a copy in the Library of the Royal College of Surgeons, by kind permission of the Librarian.

The next reference reveals much more precise information:

"*March* 10, 1769.

"The two Wards in the 4th. pyle of buildings be finished and prepared for the Reception of Patients according to the Order of the former Committee. It is thereby ordered that the said two New Wards be used for the Reception of Patients to undergo operations, one of them for men, and the other for women, and that all the patients in the Hospital to undergo operations be removed to the said two wards, and that in the future patients to undergo operations be admitted into one of

the said two wards, and it is also Ordered that the Matron do appoint Sisters, Nurses and Helpers for those two new wards, which wards are to be under the same Establishment, Allowances and Regulations as hath been made and ordered for the old Cutting Ward.

"It is also Ordered that the old Cutting Ward, after the removal of the patients, be shut up until further order therein."

That this arrangement was not sufficient for the growing needs of surgery is clear from the next reference:

"*June* 1, 1791.

"A proposal is made to build a Theatre for the Surgeons at the expense of £875."

This theatre (the old Theatre A) stands to this day, and, though much changed, is still in use.

G. E. GASK.

THE DIAGNOSIS AND TREATMENT OF NEURASTHENIA.*

IT will, I think, be helpful if we first settle what we are to understand by the term "neurasthenia", as we shall then be in a position to discuss its diagnosis and treatment. Unfortunately there are a number of terms in more or less common use which tend to bewilder the student, and also cause a certain amount of confusion in the minds of experienced practitioners. Neurasthenia, psychasthenia, nervous exhaustion, anxiety neurosis have been used by different writers in connection with what I believe to be one and the same condition. Freud classified functional nervous disorders into two large groups which he designated (1) neuroses and (2) psychoneuroses. He attempted an ætiological differentiation in this classification, as in this conception he assigned a physical cause operative at the time of the neuroses, whilst the psychoneuroses he said were due to psychical trauma operative in the past, and usually in the distant past. It is unnecessary to add that the cause, physical or psychical, was invariably connected with sex, spelt with a capital S, to embrace every aspect of that instinct. Under the heading of neuroses he included neurasthenia, and the anxiety neurosis, as two distinct entities, the former being caused either by masturbation or by the strain of giving it up, whilst the anxiety neurosis he regarded as being due to excessive sexual stimulation, with inadequate gratification, *coitus interruptus* being regarded as the commonest example of the latter condition.

* A post-graduate lecture given at the Hospital.

These explanations are singularly unconvincing, and certainly inadequate.

I think the view is now fairly generally accepted that all the functional nervous disorders are essentially psychogenic in origin, and I am sure that for practical purposes one can classify them in the following groups:

(1) Neurasthenia or anxiety states.
(2) Hysteria.
(3) Compulsion or obsessional neurosis.

It is the first member of this group that I propose to discuss.

First as to its diagnosis: The symptoms of which the patient may complain are innumerable, but when you come to analyse them you will find that you can divide them into those which frankly point to a disturbance of the nervous system, and a second group in which disturbance of some bodily function is present. With regard to the first group of symptoms, these may be subdivided in (*a*) a mental group, in which the following symptoms take a prominent position; difficulty in concentration, with poor memory as a natural corollary, irritability, fears of all kinds, and depression. Insomnia is a frequent companion of this group. (*b*) A somatic group, in which tremors, sweating, flushing and pains of various kinds occur. One of the most characteristic complaints is of "pain in the head". This pain is very characteristic; it may be occipital or suboccipital, but is more usually a feeling of pressure on top of the head, or a sense of constriction round it. There is another curious symptom which is sometimes complained of. The patient may tell you that they felt as though "something snapped inside their head", and from that moment their troubles began.

Apart from these purely nervous phenomena, there is often complaint of disturbance of some bodily function, amongst which the commonest are:

(*a*) A cardiovascular group, which includes palpitation, cardiac pain and cardiac irregularities.

(*b*) A gastro-intestinal group in which appear hyperchlorhydria, vomiting, diarrhœa or constipation and loss of weight, flatulence and hiccough.

(*c*) A genito-urinary group in which we find a complaint of impotentia usually present, less frequently polyuria.

These groups do not include all the symptoms of which the unfortunate patient may complain, but they do include the commoner symptoms.

Exhaustion, mental and physical, is another common symptom. It is interesting to note in this connection how selective this exhaustion is. The patient who cannot talk to anyone for ten minutes without exhaustion will spend an hour on end relating his or her symptoms to the doctor, without seeming to wilt under the strain.

You will find that in all cases there is an element of anxiety. This is often seen when the patient produces a sheet (or more) of paper on which they have written their symptoms, so anxious are they lest the omission of this or that may cause the doctor to take a wrong view of their case. Not infrequently I have received a letter the day following a consultation in which the patient explains how most unaccountably a very important symptom was omitted at the interview. Such "*petits papiers*", as Charcot termed them, are often diagnostic. These patients have what one may describe as a large element of floating anxiety, which is ready waiting to be attached to any suitable peg. This produces a general state of apprehension. Should any unusual sensation be experienced the whole of this anxiety is immediately attached to it, and a new symptom arises with which to concern themselves.

In many cases the anxiety finds expression in a very definite fear; to some of these fears or phobias long names have been attached, *e. g.* "claustrophobia", "agoraphobia", etc. Such nomenclature serves no useful purpose, as it is impossible to classify all the various forms which the fears of such people may assume. In not a few cases the patient may have an acute anxiety attack, in which they experience a sense of terror, with its usual physical accompaniments, as palpitation, tremor, sweating and the like. These patients are apt to suffer from dreams of a distressing or anxiety type.

In the diagnosis of neurasthenia one has to exclude (*a*) physical disease of an organic character; (*b*) psychotic disorders; (*c*) other psychoneurotic disorders.

From physical disease of an organic character the differentiation is often difficult, and sometimes for a time impossible. It is, of course, important to remember that physical and psychical disorders not uncommonly occur at the same time in any individual case.

I propose to refer briefly to some organic conditions which may cause difficulty in diagnosis for a time at any rate. Toxic goitre, of course, in its fully developed form, can cause no difficulty, but where goitre and ocular symptoms are not prominent, the diagnosis is more difficult. It produces many symptoms which are met with in a typical case of neurasthenia, such being palpitation, tremor, sweating and a general nervous or anxious type of personality. The two conditions are closely connected in any case as psychical factors may be responsible for the development of toxic goitre. Mistakes not infrequently occur in the early stages of the Parkinson syndrome, whether this occurs as a sequel to encephalitis lethargica (which may have been unnoticed or at any rate undiagnosed), or as an example of the "senile" type of paralysis agitans. Disseminated sclerosis in its early manifestations may suggest a psychoneurotic disorder; hysteria perhaps being suggested more usually than neurasthenia. Gastric and duodenal ulcer or gall-stones give rise to a form of dyspepsia of a hyperchlorhydric type which is closely related in its manifestations to nervous dyspepsia, and careful physical examination and inquiry into the history in its relation to the symptoms will be necessary in some cases to distinguish between the physical and psychical disorder.

Colitis, especially the mucous type, is frequently associated with neurasthenia, a fact which it is important to remember if not in the diagnosis, at any rate in the treatment of the condition.

The early stages of tuberculous infection, and pernicious anæmia often cause physical exhaution, and may produce "brain fag" as well. In some cases I have known the patient to be regraded as a neurasthenic, an unfortunate mistake which is as hurtful to the self-esteem of the patient, as it is to the reputation of the doctor.

The commonest error is to regard symptoms as physical in origin when they are, in fact, due to psychological causes, but the converse may occur. A very simple example in which the diagnosis of a physical disorder was wrongly made is the case of a woman at present under my care at the National Hospital. She complains of pain in the back as the result of which she has been unable to work for the last ten years. She has been an in-patient at two London hospitals (one of them St. Bartholomew's) where she has been treated for long periods with massage, radiant heat, diathermy, etc., treatment which confirmed her belief that she had something physically wrong with her back. The story is interesting. It begins with a shock the patient received when a great friend of her own was found to be suffering from carcinoma of the spine. She herself one day experienced a pain in her back which she at once regarded as the first evidence of the same fatal disease which had deprived her of her friend. She saw a doctor, who failed to discover the cause of her anxiety, talked rather vaguely of "spinal trouble", and sent her to a hospital, where she was X-rayed and then ordered radiant heat and massage. Nothing was said to her as to the condition of her back. By degrees she became very nervous, and her fears were accentuated by her doctor, who told her that if she did not pull herself together she would go mad! The fear of insanity was now added to the fear of cancer. She made no great effort to return to her work, as she was devoted to her mother, and also was drawing 7*s.* 6*d.* a week from her insurance. She developed another anxiety as she feared very much what would happen when her mother,

a woman about 70 years old, died. It was not difficult to discover these various anxieties and to show her how they had affected her health. Nobody it seems in the ten years of her ill-health had ever inquired into the genesis of her condition, and certainly nobody had ever assured her that she had not got cancer. When this had been done she improved rapidly, and left hospital saying she was quite well. This patient was only a woman of the hospital class, and exactly similar circumstances could hardly arise in private practice. But analogous cases certainly occur; and this woman's case—simple as it is—will serve as an illustration of the origin and perpetuation of symptoms as the result of emotional reaction and misunderstanding of the nature of her symptoms.

Gillespie has drawn attention to certain criteria which are very helpful in the differentiation between psychogenic and what he calls physiogenic symptoms. They are as follows:

(*a*) Are the complaints made by the patient relevant to the physical signs which can be discovered? If they are *not*, there is a presumption of psychological origin where the symptoms or physical signs are such as may be produced by emotional reaction or volitional effort.

(*b*) The history of the case and a consideration of the psychological background at the time the symptoms developed are of great importance.

(i) The *sudden onset* in a previously healthy person of symptoms and physical signs which may be neurotic will be found to be due to immediate psychic troubles.

(ii) Symptoms which appear more gradually may be the result of rumination. Examples of this kind are to be met with in abundance in "compensation" cases. The law has at last taken cognizance of this fact, and laid it down that disabilities that arise as the result of "brooding" are not liable to compensation.

(iii) Signs and symptoms of slow onset frequently arise from the continued operation of complex causes acting over a long period.

The repeated association of a trying situation with a symptom otherwise ambiguous would make the psychic origin of the trouble highly probable.

(*c*) The patient's mental attitude to his symptoms is very important. In the neurasthenic he is over-anxious about them; *i. e.* over-reacts, whilst in the hysteric the patient is not concerned enough, *i. e.* he exhibits the "*belle indifférence*" remarked on by French neurologists.

(*d*) A very important question to be investigated in all cases of suspected psychical origin is—What purpose, if any, does the patient's illness fulfil?

In the differentiation of neurasthenia from psychotic disorders chief difficulty will be found in three cases. These are (1) general paralysis, (2) the depressed phase of manic depressive insanity, (3) schizophrenia (dementia præcox). General paralysis can be excluded with ease, if the possibility of its presence is considered. Most cases, even in the early stages have suspicuous pupils, even if the complete Argyll-Robertson pupil is not present. One must, of course, be careful not to confuse the myotonic pupil with the Argyll-Robertson variety. In the former the pupil is frequently larger, and the reaction on conveyance is slowly performed in contradistinction to what one finds in the latter. Serological tests, and examination of the cerebro-spinal fluid establish the diagnosis, at any rate of syphilitic disease of the nervous system.

The differentiation between neurasthenia and the depressed phase of manic depressive insanity is easy when the extremes of each disorder are contrasted, but a number of cases exist in which it is frequently very difficult for a time to distinguish between the two conditions. The differentiation is important because the melancholic patient is a potential suicide, whilst this is rarely the case with the neurasthenic. Also whilst stimulating treatment is good for the neurasthenic, that is to say they may be urged to do more than they think themselves capable of undertaking, the opposite is true of the depressive to whom such stimulation is apt to be harmful. The most useful means of distinguishing between the two conditions is to study their emotional reactions. These are not lost in the neurasthenic, who has periods of normality. He will vary from day to day, or even during the day. The morning is his worst time, and he is usually better in the evening. But the depressive patient does not vary in this way and has no normal periods.

The schizophrenic patient does not, as a rule, present such a difficult problem. Close observation will usually reveal some peculiarity of behaviour which enables neurasthenia to be excluded with confidence.

The diagnosis of neurasthenia from other psychoneurotic disorders is not very difficult, nor is it a matter of great moment. It is easily distinguished from compulsion or obsessional neuroses by the symptoms of the latter, in which obsessions or compulsory behaviour form the keynote. The latter, however, are more difficult to treat successfully than is either neurasthenia or hysteria. Some of the manifestations of these two are very similar, and the same patient may react in a neurasthenic or hysterical manner at different times. Hysteria, as a rule, affects the limbs, and the special senses in a way that neurasthenia does not. Thus convulsions, paralysis, blindness, deafness, loss of sensation, affections of speech, etc., are more commonly hysterical than neurasthenic. The patient's attitude to his symptoms is very different in the two cases. The neurasthenic over-reacts and is very worried and perturbed, whilst the hysteric fails to react sufficiently, and appears calmly indifferent to his disabilities, though assertions that cure is eagerly desired are frequently made. Such assertions, however, certainly lack conviction. The treatment of neurasthenia and hysteria, as we shall see, should be conducted by the same methods.

C. M. HINDS HOWELL.

(To be continued.)

INDIAN "FAKIRS."*

STUDY of religious fanatics in any part of the world is sure to reveal the unpleasant as well as the unusual. The Fakirs of India are no exception; but as most of you present to-night are medical men I have been persuaded to talk about these strange people, and I ask forgiveness now for anything that may seem to you somewhat crude in the story that I have to tell.

When on holiday in India a few years ago, I saw with my father, and we were able to photograph, a demonstration given by perhaps the most extraordinary group of Fakirs in the world to-day—a performance full of interesting details from a medical point of view, and one that had seldom been witnessed by Europeans. It was interest in these men that stimulated me to investigate more fully the history and behaviour of religious fanatics in general; it is with the rites of those in India alone that we are now concerned.

All true Fakirs are Mohammedan, but the wandering Hindu ascetics in India are often miscalled "Fakirs" too. As these Hindus are almost the only "Fakirs" one hears about in England, I propose to describe them first, giving a short account of their appearance and performances, and attempt to put before you some suggestions as to how they are able to endure the pain of the self-tortures to which they subject themselves; later (in the next number of the JOURNAL) I shall discuss in detail, and show some photographs of, the true Mohammedan Fakirs with whom we have had more personal acquaintance.

All these fanatics may be included under the general title of "Religious Ascetics". It would take too long to describe here fully any of the theories or practices of ascetism proper, but one may mention that its chief characteristic is bodily abstinence and self-mortification, by means of which the devotee hopes to propitiate the Unseen Powers, enter into communication with them, and ensure his own salvation. Asceticism has played an important part at one time or another in every religion, Christianity included; and although social development has, in very great measure, stamped it out in civilized communities to-day, its influence is still powerful amongst primitive peoples, especially those in Oriental countries.

India above all other places is remarkable for the number of ascetics it contains. Many factors have been suggested to account for this, of which the following are perhaps the most important. Religion, of the gloomy type, is always found to flourish best where conditions of life are most unfavourable for the majority; and as the history of India is filled with accounts of national disasters—invasions, despotisms, plagues, and famines—it is not surprising that some of their religious ideas are morbid in the extreme. The climate, the vegetarian diet of the people, and the great popularity of the drugs, opium and Indian hemp, have helped to produce a patient, inaggressive, despondent habit of mind, combined with physical indolence and apathy. The most characteristic features of the psychology of the Indian people are imaginativeness, emotionalism, mysticism and religious fervour, and it is in the ascetics that these characteristics are most strongly developed.

The history of these ascetics goes back further than that of any one religion in India; each religion as it has sprung up has tried to stamp them out, but this has always been unsuccessful, and their practices have become incorporated in all. Mohamet disapproved strongly of self-mortification and other ascetic performances, but even to-day Mohammedanism is not free from them; similarly, although the first Hindu priests or Brahmans tried to crush asceticism, it is now the duty of every Brahman when he reaches a certain age to leave home, wife and children, to become a wandering beggar without possessions, living entirely on the mercy of others, spending his time in religious contemplation and in chastening himself with austerities.

Hindu ascetics are divided into two classes, which are not altogether distinct. The first and more important corresponds to the Benedictine monks of Christianity; they live under a leader in well-endowed monasteries; their work is to feed and educate the poor, and amongst this class are to be found some of the noblest characters in the whole of India. The second class, the one with which we are here concerned, is very different; they sometimes live in monasteries for short periods during the rainy season, but at other times they wander from

* Being a paper read before The Osler Club on May 11th, 1934.

place to place, doing no work, living entirely on alms and food given them in the villages. Claiming to be entirely disinterested in the things of this world, they spend their time in prayer, austerities and contemplation. Some few are still dangerous, as they think that the killing of an unbeliever is an infallible introduction to the glories of paradise. It is quite impossible

FIG. 1.—A SĀDHU AND HIS HERMITAGE.
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to enumerate all the austerities to which these people subject themselves; with many of them we shall be more concerned later on; they vary from slight physical discomforts such as abstention from certain foods and drinks (like those we ourselves give up during Lent), to burial alive for weeks at a time, unbelievable self-tortures and actual suicide. Between these two extremes lie those such as fasting, vows of silence observed throughout life or during pilgrimage, walking through fires, hanging upside down, self-infliction of pain by lying on beds of nails, scourging, branding, or mutilating themselves with knives and other instruments.

It is difficult to estimate exactly how much good or harm these wandering ascetics have done in India. They were certainly at one time an important means of communication; they do a great deal of good by showing people that there are other things more important than mere worldly possessions; there is always a sense of brotherhood amongst them as they recognize no "caste" amongst themselves, so that this in itself must set a good example to the ordinary people whose petty caste jealousies so often lead to trouble. They are completely idle as far as manual work is concerned, and as the last census in India showed that they number nearly 3,000,000, they must be a troublesome burden to the community, even though individually they want very little, and never stay in one place for more than a short time. A true ascetic is always reverenced by the people if he performs his austerities properly, and he is seldom refused food, although this is perhaps mainly due to the fearful dread the people have of his curses.

The typical Hindu wandering ascetics or Sādhus (Fig. 1) are seen on every highway in India; they carry a begging bowl, made of brass, of a hollow cocoanut, or even of a skull, a water-pot and a staff. They generally carry also a rosary made of beads, berries, seeds, snake-bones, or even human teeth, the object of which is to enable them to repeat the name of their god, or to recite their prayers a definite number of times each day without any chance of making a mistake. The great majority of them carry fire-tongs—the iron of which is supposed to protect them against evil spirits—and they nearly always possess a large pestle and mortar, with which to grind the leaves of the Indian hemp, which they smoke in their pipes or add to intoxicating drinks or sweetmeats—"Bhang", "Charas", "Ganja", etc. The "Hashish" of Turkey and Egypt is made from this same plant, Indian hemp or *Cannabis indica*, and contains the same active principles as the Indian preparations, but the Turkish word "Hashish" is not used in India. The robes of these Sādhus, if they wear them, are salmon-coloured, but they generally go about nearly or quite naked, with their bodies rubbed over with ashes to keep off insects. Their foreheads are marked with a "Tikala", a sign or symbol made with coloured earths; their hair is either long and matted, or formed into a rough coil at the top of their heads, or entirely shaved off. They sleep on the ground, and once or twice a day go round to collect food and alms; but they are only allowed to approach a house after the proper

mealtime of the family has passed. When they die, their bodies are buried, not burnt, as they believe that their death is only a prolonged trance in which they are in communion with the Divinity, and from which they can revive at pleasure to the consciousness of worldly things.

The chief ascetic practice of the Sādhus is known as "Tapas". This is entirely penitential, and includes a series of methods of self-torture which would be very hard to believe, were it not for the repeated stories of eye-witnesses and the photographs that have been taken of the proceedings. The principle underlying this practice of self-torture is that through it everything can be attained. As the Hindu religious book *Manu* (xi, 239) puts it:

> "Whatever is hard to be traversed, whatever is hard to be attained, whatever is hard to be reached, whatever is hard to be performed, all may be accomplished by austerities; for austerity possesses a power which it is difficult to surpass. . . . Whatever sin men commit by thoughts, word, or deed, that they speedily burn away by penance if they keep penance as their only riches."

Power gained by means of austerities is supposed to be so great that even some of the gods themselves have to suffer thousands of years of self-torture in order not to be outdone by mere mortals!

Only a few examples of the methods used by these Sādhus for mortifying the flesh can be mentioned. Some are comparatively simple, such as prolonged fasting, immersion up to the neck in water for days at a time, living in iron cages, hanging upside down or being weighted with huge chains (Fig. 2). Those who have handled iron chains will realize that this man is carrying a heavy weight. Campbell Oman, from whose book, *Mystics, Ascetics and Saints of India*, these illustrations are taken, says that the chains weighed 500 lb. The photograph was taken in Lahore, where the man was collecting money to pay the expenses of the final ceremony at which his burden was to be removed. He was so weak that only with the greatest difficulty could he be persuaded to stand up even for the few seconds needed for the photograph.

More repulsive are the performances in which heavy weights are hung from the body by iron hooks, and the somewhat similar practice of swinging a devotee round in the air, fixed to the end of a revolving beam by an iron hook embedded in the muscles of his back.

Long and toilsome journeys are often undertaken, involving great hardships from heat and cold, and danger from wild beasts; journeys such as that up to the source of the Ganges from which no one has yet returned alive.

Perhaps one of the most favourite and well known of these austerities is for a devotee to lie full length on a bed of iron spikes, from which he is supposed never to rise. A Brahman ascetic of Benares is said to have lain naked on one of these couches for over thirty-five years. This practice is an imitation of the sufferings of Bhīsma (described in a religious book), whose body, during a battle, was pierced by so many arrows that falling it did not touch the ground, and he lay thus supported for forty-eight days and forty eight nights before his death, during which time—as the book puts it—"he discoursed on high topics before the assembled armies".

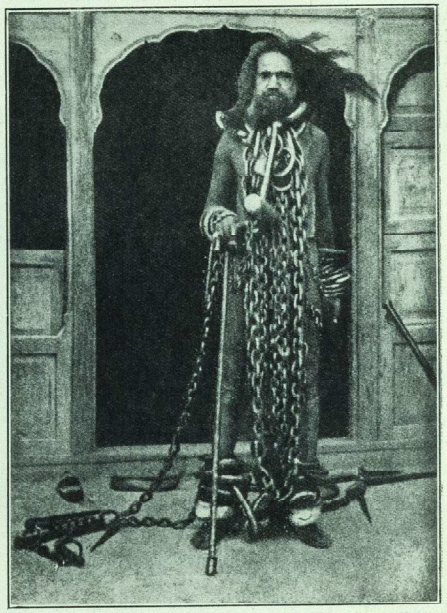

FIG. 2.—WEIGHTED WITH HEAVY CHAINS.
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These people sometimes adopt hideous and extraordinary postures (Fig. 3), their legs and arms being, in the end, fixed permanently in the most unnatural positions. Of these the most terrible is perhaps the one in which both arms are held erect by bamboo rods until they atrophy and shrink, after which they cannot be lowered again into their ordinary position. It is easy to realize that like this a man is quite helpless and depends for everything upon the kindness of others. A modification of this last-mentioned practice is for the fists to be clenched tight until the nails, which continue to grow, pass between the metacarpals, and eventually

appear through the skin on the back of the hand. In this same class may be placed those devotees who for many hours hang head downwards, suspended from a branch of a tree or a suitable framework (Fig. 4).

Many unnatural methods of progression are used by these people. There are those who perform pilgrimages of hundreds of miles by throwing themselves full length on the ground, crawling till their heels touch the spot where their foreheads last rested, then prostrating themselves again, and so on in this leech-like fashion till they reach their destination. One man with his hands tied behind his back is described as having travelled for thousands of miles by the slow and painful method of turning head-over-heels all the way!

and thick metal skewers through various parts of the body are quite common practices amongst certain Hindus; but as I propose later to show you photographs of these performances carried out by Mohammedan Fakirs, I need not discuss them further here.

Fire enters into quite a number of Sādhu austerities; in a favourite one, in the very hottest weather, when the air temperature may reach 120° F., the devotee sits throughout the day between four fires, each of which is near enough to scorch him. In another performance, a man puts a piece of red-hot charcoal into his mouth, chews this up, blowing out sparks while he does so, and finally swallows it. At first sight this seems perfectly impossible, but I believe it can be explained in one of

FIG. 3.—HINDU ASCETICS.
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It is not only in India that this sort of thing can happen. In America just before the Presidential Election six years ago, Mr. Bill Williams, of Harlington, Texas, swore that if Al Smith wasn't made President he would push a peanut along the ground as far as he could with his nose. Al Smith failed him, and the peanut was pushed for eleven miles; his nose became so sore that the last bit had to be done with a piece of wire attached!

Burial alive, although rarer than some of the other austerities I have mentioned, has been known to be a regular practice of some of these religious Hindu ascetics; the period of burial varies from a few days to five or six weeks, and although many fatal cases are on record, there have been quite a number in which the man has been found alive on exhumation.

Self-laceration with knives, and the passing of needles

the ways I shall mention later in connection with the performance known as "*Fire-walking*". This practice of "Fire walking" is not only carried out by many ascetics and other religious communities in India, but it still exists in many other places scattered throughout the world; amongst others it occurs in Bulgaria, New Zealand, Japan, Fiji, Tahiti, Trinidad, Mauritius and Honolulu, but in all these places the principle of the ceremony is the same—the people concerned walking barefoot over a bed of red-hot stones or charcoal, sometimes over thirty yards long, without apparently suffering any harm whatever. It is impossible here to give a detailed account of these ceremonies, but as I have been fortunate enough to have seen the preparations made for one of them, and my father has been present at two or three, I am particularly interested, and one or two facts may be mentioned before discussing all

the possible explanations. In the first place, there can be no doubt that these fires are generally pretty hot; bystanders are often forced by the intense heat to stand quite a considerable distance away; in one case a thermometer was suspended above the stones, over which a crowd of people walked barefoot a few minutes afterwards, but it had soon to be removed as the solder of the metal case in which it was mounted began to melt; and in some of these ceremonies meats and vegetables are cooked on the fire or stones after the walking ceremony is over. Not everyone who walks through these fires escapes being burnt, as there are many recorded cases of devotees suffering from severe burns; and as an example of an extreme case occurring in Japan a few years ago, a boy died from burns received when he slipped and fell while walking across.

In attempting to give a rational explanation of these fire-walking performances there are a great many factors that have to be taken into account, and although in many cases two or three of these have been shown definitely not to be involved, in no single case, as far as I can see, have they all been eliminated. There is always the possibility that a good deal may be accounted for by the thickness and toughness of the sole of the average native's foot; like the hands of a British navvy who lights his pipe with a piece of red-hot charcoal picked out of a brazier. That this is not the whole explanation is clear from the fact that many Europeans, and even children with very tender feet, have gone through these ceremonies unscathed. Another explanation, at any rate as far as the ceremony with wood fires is concerned, is that a layer of ashes rapidly forms, which insulates the really hot part from the bare feet of those passing over it.

In many cases of fire-walking the so-called "spheroidal condition" is suggested as an explanation. Details of this are found in text-books of physics; but the principle is that if a hand or foot is moistened with water and soaped it may be brought with impunity into contact with red-hot metal, or dipped into molten lead, the surface of the skin being protected by an insulating layer of vapour. Substances are known which, when applied locally, cause profuse sweating so that here also when a hot body is touched a layer of water vapour protects the skin underneath; and in one or two cases the sap of plants was known to have been rubbed on the feet before the fire-walking ceremony began. On the other hand, there are also cases in which it is known definitely that no chemical at all was applied; in one such case a doctor visiting the Fiji Islands assured himself that this was so, both immediately before and after a native went through the ceremony, by a very careful examination which even included tasting the man's feet! Last of all, hypnotism of the bystanders has been suggested as an explanation, but I am sure this plays no part, as numerous photographs of these performances have been taken at one time and another.

Except for this fire-walking I have as yet made no attempt to explain how the Hindu ascetics are able to endure their numerous mortifications, so I shall now run through some of the factors which seem to have a bearing on this subject. I am sure that most of their performances, if not all, are open to quite simple explanations. Many of the so-called ascetics are merely rogues, with no religious feelings whatever, and only

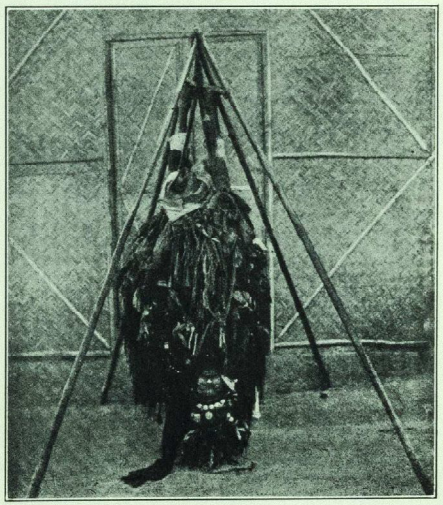

FIG. 4.—SUSPENDED UPSIDE-DOWN.
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out to attain money; so in many cases there is no doubt that simple conjuring and trickery supply the whole explanation. The famous "*Mango Trick*" is an example of this sleight of hand. In front of many people a mango-stone is planted in a flower-pot; in a few moments it is sprouting, and a little later is found to be growing by degrees into a small mango tree perhaps eighteen inches high. The conjurer is an expert at diverting the crowd's attention while swaying from side to side he substitutes twig for twig, pulling them out from underneath his *dhotie*.

In quite another category comes the still more famous "*Rope Trick*". The story is usually told of an impressive old man who throws a rope into the air above his

head, this rope stays fixed and vertical, and up it swarms a small boy. The details vary in each description; some are more fascinating than others; the degree of wonder depending on the imagination of the story-teller and the credulity of his hearers. The first reference to the trick in India comes from Delhi early in the seventeenth century. This time a chain was thrown, and up it climbed a dog, a panther and a tiger. On the English music hall stage in its more simple, but no less popular form, it is easy to explain as there is always a convenient beam in the roof on which someone sits to catch the rope; but to do it out of doors is a very different problem. Many people have personal friends who state that they have seen it done in the open many years ago, but no one can be found to produce any real evidence of having seen it with his own eyes. When King Edward VII visited India as Prince of Wales, great efforts were made without success to find someone to perform this "Rope Trick" for him to see. Lord Lonsdale once offered £10,000, and Mr. Maskelyne £5,000 a year, to anyone who could do it in London; and more recent rewards offered by the "Magic Circle" still remain unclaimed.

However, leaving out all these cases of trickery and fairy tales, there are certainly many men who really do what they claim to do: they really do lie naked on beds of nails, hang upside down, eat live coals, etc., etc., and it is very difficult to imagine in many cases how they can do it. Some of the things they do would kill an ordinary European; but it must be remembered that they have endured fearful hardships all their lives; many are born under the most dreadful conditions; all the weak ones—by far the majority—die before they reach maturity, with the result that those that survive must necessarily be less susceptible to hardships and pain than are the inhabitants of more civilized countries.

A characteristic of these people is their perseverance, which is illustrated well by the man who turns head-over-heels for thousands of miles. Many of them are entirely selfish, they have only one thing to think about, their own salvation—and they are willing to do anything to make sure of getting it. It is rivalry amongst themselves which makes them devise with diabolical cunning their various methods of self-torture.

From the physiological and pathological points of view it is well known that repeated injury of any kind gives rise to a reaction on the part of the body for its own protection; the skin of one's hands is always toughest where it gets the most irritation, and there can be little doubt that this, combined with the fact that scars are generally anæsthetic, greatly helps our friends who scourge themselves, lie on beds of nails, etc. The most difficult part of all these performances must be when they first begin, and the beginning one very seldom sees; for all we know, it may be a very slow tedious process, slight irritants first being applied, followed by stronger ones, until the man's back is covered with a layer of skin as thick and tough as crêpe rubber on a shoe. When a traveller sees a man like this lying on a bed of spikes, he has every reason to be amazed, but if he knew all the previous preparations he might find nothing surprising in it at all. The large number of points in the bed of nails would seem at first to make this trick all the more remarkable; this is not really so, as it must be more difficult and unpleasant to lie on ten spikes far apart than on ten thousand closely packed together.

Of the men who adopt unnatural postures an explanation is, perhaps, more difficult to find. Some of them are probably double-jointed, or were born extraordinary shapes, and have no real difficulty in adopting their strange attitudes; others, by constant practice starting when quite young, succeed in stretching their tendons and even in altering the shape of their bones; whilst others, although this last type is very rare, may in infancy have been purposely mutilated, so that their terrible appearance might excite horror and pity wherever they go to the financial advantage of those who exhibit them. The men who fix their arms above their heads until they wither may really feel little pain at all. If the blood supply is gradually cut off, the muscles atrophy and the joints become fixed, until in the end the whole limb shrivels up to look like the dead branch of a tree.

The group of Hindu ascetics known as Yogis adopt strange bodily attitudes, not for any penitential reasons, but to divert their attention from worldly things. For this purpose the postures are combined with many well known methods of self-hypnotism, such as counting the breaths, holding the breath for long periods, or concentrating the gaze for hours on a fixed point, such as the tip of the nose or the navel. In one important method, known as "Kechari", the tongue is extended artificially, and its tip curled round and rested at the back of the throat, while the eyes are turned upwards and inwards. This turning up of the eyes is, I believe, a well-known way of inducing hypnosis. By these means (known collectively as the "Yoga system") some Yogis, but only a very few, are able to send themselves off into a trance known as the "Yogi sleep", in which they appear as if dead; their breathing and pulse are so weak as to be imperceptible; it is almost or quite impossible to waken them, their basal metabolism falls very low, and their whole condition resembles closely that of hibernating animals. Those ascetics who are genuinely "buried alive" must send themselves off into a trance like this; and while in this condition it seems quite easy to believe that they may sometimes survive for long periods, perhaps six weeks, without suffering any material damage. J. H. HUNT.

(To be continued.)

A LETTER FROM CHINA.

WHEN I received your letter inviting me to write to the Journal some account of one's life and work in the East, I came to the conclusion that a general view of the situation in the domain of medicine at the present time, as it affects the Chinese Republic, would be interesting to your readers—the more so as the changes which have taken place are so far-reaching as to constitute a new era.

It will be remembered that the centenary of the introduction to China of modern medical science falls next year; and that what one is seeing at the present time is, so to speak, the fruit of prolonged sowing and cultivation.

First.—It should be understood that there is a national registration system well under way. Personally I possess both the Government registration certificate, and also the local registration certificate of the Municipality of Peiping. The question of regional certification is not finally settled, but it is now required of all foreign practitioners coming to China that they should register at Nanking; and for this registration the candidate's diploma, or a photograph thereof, with an accompanying certificate from a British (or other) Consul of the genuineness of the applicant, is required.

Second.—There is now a Chinese Medical Association, formed by the amalgamation of the National Medical Association of China and the China Medical Missionary Association, which includes the vast majority of the foreign medical practitioners in China and the pick of the Chinese medical profession. The Chinese members of course outnumber the foreign ones, and this disproportion is steadily growing. I had the pleasure of attending the last Conference at Nanking in April, 1934, and it was a well-attended, profitable and valuable meeting, the proceedings being conducted in Chinese and English.

Third.—The country has now got the skeleton of a widespread and valuable maternity scheme, and is beginning to clothe the bones with flesh. There are two fine National Midwifery Schools in being, and others are on the way. There are provincial schools, at present hampered by the lack of suitable teachers, and these are only the mere beginning of a very big undertaking which is bound to have a great influence on the nation's health, whatever political changes may occur.

Fourth.—In the public health sphere great strides are being made. There is the nucleus of a general public health service, and in many of the large cities administrators are beginning to realize that a properly supported public health system is not merely a desirable, but a necessary part of a city government. And in some of the larger cities, such as Nanking, Canton, Shanghai, and Peiping, far larger sums of Government money are being spent on health and sanitation than one would have thought possible even ten years ago.

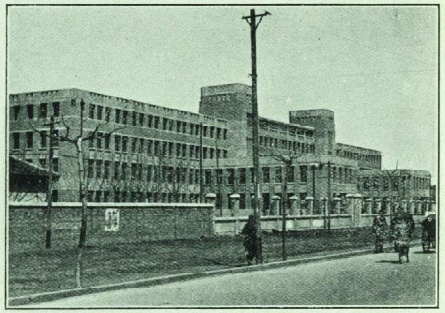


FIG. 1.—THE CENTRAL HOSPITAL, NANKING.

Fifth.—There are the beginnings of what, in due time, will be first-rate medical colleges, entirely independent of foreign management and control. For examples one may take the National Medical College of Shanghai, and the Central Hospital at Nanking. Hampered as these are by insufficient support, due to the drain of funds for military purposes, and the jealousy of rival military factions, they are doing good work; and connected with them are Chinese medical men who would stand out prominently for their scientific and teaching ability amongst any company of medical men all over the world.

Sixth.—There is now published a Chinese pharmacopœia, and in certain places such as Nanking and Peiping the manufacture of drugs, vaccines and sera is being carried on successfully. The Temple of Heaven Laboratories at Peiping manufacture excellent vaccines and sera, and at Nanking quite extensive work is being carried out on this problem.

Seventh.—The Chinese Government and the Chinese people are beginning to realize the need of infectious disease hospitals, and hospitals for mental disease. The Plague Prevention Bureau and the General Quarantine Service have done and are doing good work, and although it is true that they have as yet only touched the fringe of this problem, more is being done day by day.

Now these seven points which have been itemized are actual advances, with the growth of which I am intimately acquainted and represent work *in progress* at the present time.

But it must be remembered that one is dealing with a continent rather than a country; and means of communication are as yet poor, though roads and

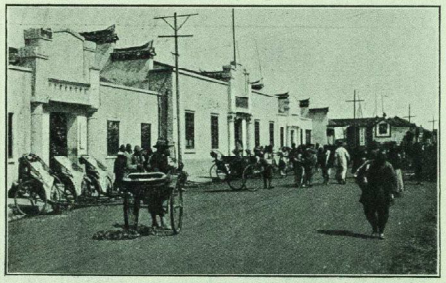


FIG. 2.—A MATERNITY AND CHILD WELFARE CENTRE, NANKING.

railways are both growing, the former at an extremely rapid rate.

One must also remember that one is dealing with a people amongst whom illiteracy, and the superstitions which accompany it, is still rife; although efforts are being made to counteract this, especially by the Mass Education Movement.

Let us now leave the Government side of the question, and look for a few minutes at the medical missionary and other medical work being carried on for the well-being of the Nation.

The Peiping Union Medical College, of which I have the honour of being one of the teachers, is, of course, an institution by itself. With superb modern buildings in Chinese style, and a fine outfit, with a highly trained foreign and Chinese medical personnel, it has been able to do very valuable work in the teaching of what is now a considerable body of medical graduates, in the setting of a high standard of medical education, in the provision of skilled teachers for Government institutions, and in giving intensive postgraduate training; besides serving as a centre where important research work has been and is being carried out. For example, the professors of obstetrics and gynæcology at the National Medical College of Shanghai and the Central Hospital, Nanking, and the woman doctor at the head of the National Maternity Scheme, have all been members of my staff at the College.

Then there are fine medical missionary schools, such as the Cheeloo University Medical School (Tsinan, Shantung) and the West China Union University (Chengtu, Szechuan), and a few private medical schools in which the teaching is done in French, German and Japanese.

Two of the medical missionary schools are for women only, *i. e.* the Hackett Memorial College in Canton, and the Women's Medical College at Shanghai; but speaking generally, the rest, including the Peiping Union Medical College, are co-educational, and some of the women coming forward for medicine are of outstanding ability.

And over and above the medical missionary schools there are a large number of medical mission hospitals scattered over the Republic. It is well to remember that the preponderating amount of major surgery done outside the port cities is done in these hospitals.

One of the most serious matters with which the Chinese Government has got to grapple is the complete lack of protection for Chinese medical men against deliberate attempts to use failures or accidents of medical practice as opportunities of blackmail on the part of the relatives or friends of the patient.

Let me give a couple of examples. A very fine Chinese medical man was called out to see the wife of a General who had dysentery; he gave serum, but failed to arrest the disease, and the patient died. The General thereupon seized and imprisoned the doctor, and in spite of a decision of the Law Courts in his favour, he was in prison for months, and had to pay a large sum in compensation before the matter was settled.

Or take a case in my own service. One of my staff, a lady doctor, went out with a nurse to a confinement case, which ought to have been hospitalized, but in spite of advice had not been thus treated, because of the patient's refusal to enter hospital. A fine living boy was born, but after labour the mother collapsed and died in spite of treatment. The mother-in-law, against the wish of the husband, seized my doctor and the nurse, and sent them to the police station. They were released the same evening, and the matter went no further, as the mother-in-law had no proper charge to bring against them, but it might have meant a long-drawn-out law case.

Naturally the result of this failure to give reasonable protection to Chinese medical practitioners has been

that they are unwilling to do major surgery outside a well-established hospital.

It also involves, even in the Peiping Union Medical College Hospital, the signing of very carefully drawn-up documents by the nearest relative of the patient before operations or treatments are undertaken.

The Chinese Government are perfectly aware of the difficulty, and it is only a matter of time before it will be tackled.

The past year has also seen a considerable advance in the Government regulations for the obtaining of permission for post-mortem examinations. This has always been a difficult matter; and in the case of married women it is more than usually difficult, as the permission not only of the husband's family, but that of the woman's family also has generally to be obtained.

Some of these difficulties may sound strange to you, but when one remembers the comparatively short time that modern medicine has had in which to grow in China, the advance seems little short of marvellous.

When you remember that as late as thirty-six years ago, when I went to China, it was practically impossible to get a post-mortem examination at all, that for the first six years of my work there it was extremely difficult to get a vaginal examination, and that I had the privilege of performing most of the severe abdominal operations for the first time in Fukien, it will be realized that I am not exaggerating.

What the next fifty years will show in the advance of medicine in China no one can foretell, but I think it is safe to prophesy not merely a great spread of the service as at present established, but the further entry of Chinese scientists and investigators into the field of international research.

I have said nothing about nursing: the advances in this direction have been quite as great as those in medicine, but this letter has already become too long.

J. P. M.

CROSSWORD SOLUTION.

ACROSS.—1, Cilia. 6, Aunts. 9, Choking. 10, Nitre. 11, Renal. 12, Titrate. 13, Saeva. 16. Eusol. 19, Refer. 22, Anuria. 23, Arales. 24, Indol. 25, Blacks. 26, Emmets. 27, Eases. 30, Press. 33, Pails. 36, Neuroma. 37, Drupe. 38, Tense. 39, Ameluke. 40, Cleek. 41, Ricks.

DOWN.—1, Canis. 2, Lethe. 3, Aceta. 4, Goitre. 5, Dilate. 6, Agree. 7, Nones. 8, Salol. 14, Annular. 15, Varices. 17, Uræmia. 18, Omental. 19, Raise. 20, Fades. 21, Rales. 28, Amused. 29, Exodus. 30, Pudic. 31, Exude. 32, Sneak. 33, Pater. 34, Ionic. 35, Stets.

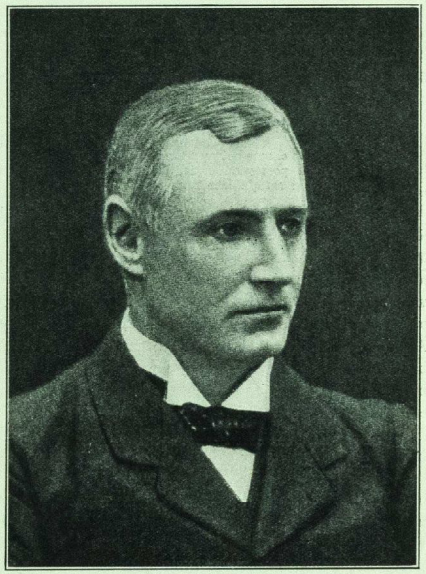
There were no correct solutions received. Through lack of space it is impossible to include a similar puzzle in this issue.

"THE LIFE AND WORKS OF CHARLES BARRETT LOCKWOOD, 1856–1914."*

I. INTRODUCTORY.

"Whatsoever thy hand findeth to do, do it with thy might."—*Ecclesiastes*, ix, 10.

THESE words have a perpetual association with St. Bartholomew's Hospital, but before they were carved into its stonework their message must have been deeply engraved in the mind of



C. B. LOCKWOOD, F.R.C.S.

Charles Barrett Lockwood, to whose whole life and work they might well be the key. Taking nothing for granted, he added to the knowledge of anatomy and surgery by the exercise of acute powers of observation, scrupulous care for small details, and a strenuous energy by which he eventually wore himself out. The time in which he lived was an interesting one, for not only did he see the reforms brought about by the introduction of antiseptic and aseptic methods in operative surgery, but he himself was the pioneer of aseptic principles in Bart.'s, his own Hospital. Courage is characteristic of a

* The Wix Prize Essay, 1934.

pioneer, and no opposition to any view of his, when he was convinced that he was right, ever succeeded in daunting his determination. "They say—what say they? Let them say!" might well have been his outlook.

His work on anatomical and surgical details, on hernia and appendicitis, outlives him, but of his logical mind, of his rugged—often fearsome—personality living memory begins to dwindle. Though his wit was as caustic as ready, it is given to few men to leave behind a richer inheritance of influence than he. Awe he inevitably inspired, but, in addition, such feelings as are expressed by one of his old students and house-surgeons: "No one was ever so rude as Lockwood. No one ever made a man feel so small, but he was a Man, and we just loved him."

II. EARLY YEARS; QUALIFICATION.

"If I had to choose between the search for truth and the unsought possession of it, I should choose the former."—*Clement of Alexandria.*

Charles Barrett Lockwood came of a large family living at Stockton-on-Tees. Born on September 23rd, 1856, he was the third son of a Mr. George Lockwood, and had four brothers and six sisters. George Lockwood was a clever, genial North-countryman, who started the original shipbuilding yard at Stockton. Always a prominent citizen, he became mayor of the borough for a year. Mrs. Lockwood was skilled as an amateur artist, and delighted in painting water-colours of seascapes. From both his parents Charles Barrett inherited a love for ships and the sea, and from his mother in particular he seemed to inherit a discriminating taste for art.

As a boy, Charles Lockwood was keen-eyed and quick-witted. He soon showed that his head was screwed on the right way, and, as one of his oldest friends says, "he never had a bad opinion of himself or of his talents". He was sent to Stockton Grammar School under a Mr. Sladden, and afterwards to Bramham School in Yorkshire. The choice of medicine as a career was made early, and when he was home from school he spent most of his holiday time assisting a well-known firm of surgeons in Stockton (Richardson & Tarleton), either at the Stockton Hospital or out visiting private patients. He struck up a great friendship with Mr. Tarleton, an old Bart.'s man, who was probably responsible for directing his footsteps towards Smithfield. Tarleton was surgeon to the Stockton Hospital, then only a small building with five beds, but here Charles Lockwood saw much operative surgery and was himself allowed to do minor operations and dispensing. He also attended midwifery at the Union Infirmary.

Thus, at the age of 17, when he came to London and entered St. Bartholomew's Hospital, he was no stranger to medical work, but entered into it with relish. Despite the shortness of his general education, his intellectual outlook was far from narrow, for, as time went on, he continued to develop enthusiasm for literature, history and logic. Bertrand Russell has said that "throughout education, from the first day to the last, there should be a sense of intellectual adventure" (1), and to C. B. Lockwood intellectual adventure ever remained the breath of life.

He quickly developed a mastery of anatomy and was noted for his neat dissections and his memory for detail. In his first year at the Hospital, 1874, he entered for the Treasurer's Prize for Practical Anatomy and came out second. The following year he was third among the senior competitors for the Foster Prize. The time of anatomy students in those days was arduous and not confined to pre-clinical work. The dissecting rooms were opened at 7 a.m. and the following instructions were issued:

"All students of the first year should be diligent in their attendance in the Dissecting Rooms, immediately after the morning lectures, where parts for dissection will be allotted to them after they have been instructed in the subject of the bones by the Demonstrators who will arrange them in classes for this purpose.

"The time from 12.30 to 1.30 should be occupied, when the Student is not engaged in dissection, in attendance on the Post-mortem Examinations and the Surgical Out-patients. At 1.30 he should attend in the Wards; and especially in this his first Winter Session, in the Surgical Wards" (2).

In addition to these duties the student was encouraged to attend operations in the Old Theatre, which sufficed for the whole of the surgical staff. Operating days were Wednesday and Saturday, the surgeons taking turn in order of seniority. Even so, it was seldom that more than two or three operations were done.

Mr. Luther Holden was Senior Surgeon to the Hospital when Lockwood entered in 1874. His surgical colleagues on the staff were Mr. (afterwards Sir William) Savory, Messrs. Callender and Thomas Smith, the Assistant Surgeons (who only had the opportunity to operate when their chiefs were on holiday) being Messrs. Willett, Langton, Morrant Baker and Howard Marsh. It was chiefly Morrant Baker with whom Lockwood first came into contact, for he held the position of Lecturer on General Anatomy and Physiology. But one great name heads the list of the staff of the Hospital at that time, namely, that of Sir James Paget, who was Consulting Surgeon. His fame as a surgeon and an orator was widespread and Lockwood quickly came to have a profound admiration for his manner and his methods. Writing many years later he said:

"Sir James Paget's clinical lectures were the most perfect and beautiful things I have ever heard. He had retired from the staff when I came to the Hospital, but still came occasionally to lecture to us. Once he lectured on gout, and on another occasion on branchial cysts and fistulæ. He came in quietly, a notable figure, stood at the table in the old anatomical theatre, and without pause or hesitation in a clear and penetrating voice lectured for one hour precisely. No notes, no gestures—everyone as still as mice. It was a very wonderful performance and I have never heard anything like it" (3).

Savory was another great lecturer, though his delivery was less natural than Paget's, and when Lockwood himself came to lecture he based his style upon what he had seen and heard of these two, but more particularly upon the style of Paget.

After completing his work in the Dissecting Rooms, Lockwood became Dresser to Mr. Luther Holden who always delighted in a dresser with anatomical knowledge. Himself author of *A Manual of Dissection of the Human Body* and of the classic *Human Osteology*, he recognized in his new pupil a young man with a more than ordinary grasp of his subject. The portrait of Holden by Sir J. E. Millais, which hangs in the Great Hall, represents well his pleasant personality, and Lockwood respected him for himself and for the clarity with which he expressed himself in speech and writing.

It is difficult for the student of to-day to have any conception of the outlook and surroundings of his predecessor in those days. Conservative thought in things both spiritual and material was predominant. The struggle between religion and science was hotly waging, and the antipathy of medical men in London to new-fangled views from Edinburgh was hardening from apathy to antagonism. At Bart.'s in Lockwood's first year, the subject of the essay set for the Wix Prize was: "The Healing Art, so far from tending to Materialism, confirms by its Induction of Accumulated Evidence of Design, Man's Instincts of Natural Religion; and thus, on St. Paul's showing, prepares his mind for the reception of Revealed Religion". In the circumstances it is perhaps not surprising to read the following year that it was not possible to make an award. At Bart.'s, too, Sir William Savory, with his conservative tendencies and unshakeable convictions, daily sniffed the "healthy laudable pus", and with an attitude expressed in the words of Sir George Jessel, "I may be wrong, but I have no doubts", he consistently maintained his opposition to the views of Lister, which were then beginning to be known. Such diseases as hospital gangrene, erysipelas, pyæmia, rarely or never seen to-day, were then commonplace, and in *The Life of Pasteur* by Vallery Radot we read:

"During the siege of Paris (1870, 1871) Nélaton in despair at the sight of death of almost every patient after operation declared that he who should conquer purulent infection would deserve a statue made of gold" (4).

At Bart.'s Lockwood did not see the widespread hospital gangrene which prevailed in the provincial hospitals at the time, mainly because the general hygiene of the place was fairly good, there was no overcrowding, and plenty of fresh air. Suppuration there was, it is true, in the vast majority of cases, and an occasional calamity in the way of pyæmia that never ought to have occurred. But nurses were comparatively skilled and the rapidity of operations helped to minimise the amount of infection, though, as Sir Frederick Andrewes has said, "the most potent factor of all was that the surgeons in those days knew their limitations—knew by experience what they could do and what they couldn't. You never saw Savory inside the peritoneum".

As a dresser, Lockwood had to buy a pocket dressing case containing knives, scissors, forceps and probes. He was never taught to sterilize these instruments, and, indeed, since the handles were of ivory and tortoiseshell, they could not be boiled. Even in the operating theatre many of the surgeons used their instruments straight out of the cupboard without any attempt at sterilization. As for operating costume, the last frock-coat to be discarded from the wardrobe would find its way into the theatre where the surgeon continued to use it for so long almost as it hung together. Students neither washed nor changed to witness operations, and one of Lockwood's contemporaries has recalled to me how he himself one day strolled into the theatre, with his hands in his pockets, among a group of friends. Thomas Smith was operating on a femoral hernia, and catching sight of Lockwood's friend, called: "Here, you have seen this case—come and put your hand inside and feel"; whereupon, as he relates, "I just took my hand out of my pocket and plunged it into the wound".

In 1876, Smith sent his house-surgeon to Edinburgh to learn what Lister had to teach, but the result was not impressive. Suppuration continued to be looked upon as an inevitable and natural accompaniment of wound healing, though Lister was often remarking that if he ever wrote a book—which he never did—the motto would be the words of the Psalm, "My wounds stink and are corrupt because of my foolishness".

The great surgeons of the day held a heated and most confused debate on the subject of antisepsis at the Clinical Society of London in 1875 (5), and *The Lancet* commented that there was less antiseptic surgery practised in the Metropolitan hospitals then than ever there was, and that after several years' experience its success was no greater than that of ordinary methods and was stated to be actually less. "Happily," the article concluded, "it is no part of the business of a clinical surgeon to bolster up theories or to make facts conform to them. The germ theory may be perfectly well founded, but nine surgeons out of ten do not care

much whether it is or not, so long as they cure their cases and reduce their mortality to the lowest possible degree".

In these words the mental attitude of the average London surgeon in 1875 was accurately described. But here and there among the crusted majority was a young man who was the one in ten who was not prepared to rest complacent with existing conditions and with second-hand versions of the new work. Lockwood was emphatically one of these. "The Average Man" was a phrase he ever abhorred, and in his early days he set himself to study the new work at which the average man but scoffed. In time he was to be leader at Bart.'s in a movement which revolutionized operative technique and the possibilities open to surgery.

In 1878 Lockwood qualified and took his M.R.C.S., soon after which he became house-surgeon to the Dean Street Lock Hospital, where he spent such spare time as he had in working for his F.R.C.S. examination and coaching in anatomy. One would have thought that this was more than sufficient to occupy his single year there, but in addition he published in the *St. Bartholomew's Hospital Reports* his first paper, on "Measurements of the Male Urethra". It was a subject to which much attention had been given at the time, and he gave statistical tables of the results which he had obtained, using a *bougie à boule* and an Otis's dilating urethrametre. He also kept reports of cases of syphilis which he saw at the Lock Hospital, and published them in the *St. Bartholomew's Hospital Reports* the following year. Apart from this single year at Dean Street, he was attached throughout the whole of his medical career to St. Bartholomew's Hospital, where the following year (1879) he was given his first appointment as Assistant Resident Anæsthetist.

After twelve months he was appointed House-Surgeon to Mr. Alfred Willett. Willett had been Assistant Surgeon to Holden and had succeeded him. He was a tall, well-built man, silent in his ways, but effective in action. He was one of those who eagerly read about Lister's work and tried, though in a very ineffectual way, to employ antiseptic methods. This pleased Lockwood enormously, and he developed an admiration for his first chief which, later in his career, never dwindled.

On the conclusion of his house-surgeonship, Lockwood was anxious to devote himself more fully to anatomy, because of its bearing on surgery and because of original work which he was anxious to do. He took his F.R.C.S. and was appointed Assistant Demonstrator of Anatomy in 1881, his two colleagues being W. Bruce Clarke and F. S. Edwards. Later that year he was appointed Demonstrator of Practical Anatomy and Operative Surgery, and worked in the Anatomy Department of the Hospital continuously for ten years.

REFERENCES.

(1) BERTRAND RUSSELL.—*On Education*, 1926.
(2) *St. Bartholomew's Hospital Calendar*, 1874–5.
(3) "In Memoriam: Sir Henry Butlin, Bart.," *St. Bartholomew's Hospital Reports*, xlviii, p. 1; and *St. Bartholomew's Hospital Journal*, March, 1912.
(4) See also Lord Moynihan's Romanes Lecture at Oxford, 1932, "The Advance of Medicine."
(5) *Lancet*, 1875 (ii), pp. 562, 628 and 737.

E. C. O. JEWESBURY.

(To be continued.)

REVIEW.

COMMON SKIN DISEASES. By A. C. ROXBURGH, M.A., M.D., B.Ch. (Cantab.), F.R.C.P.(Lond.). (London: H. K. Lewis & Co. Ltd., General Practice Series.) Pp. 369. Price 16*s*.

The first edition of this book appeared less than two years ago. The clarity and soundness of Dr. Roxburgh's teaching in dermatology have been rapidly recognized, as is shown by the call for a second edition within so short a period. Both author and publishers must be congratulated not only on the reception given to the first edition, but on the manner in which they have risen to the occasion presented by the necessity for a second.

Little revision of the previous work was required, as there has been no fundamental advance in dermatology since the original publication. Certain chapters, however, which were omitted from the original edition, for lack of space, are now happily incorporated. These deal with Congenital Affections of the Skin, Atrophy and Sclerosis, Vesicular and Bullous Eruptions, and the Erythrodermias. Although the title remains unaltered, the inclusion of this new matter converts the volume into a text-book from which only the rarest dermatoses are omitted.

Further illustrations have been added to an already lavish selection. These include the excellent diagrammatic plate of the structure of the skin and photo-micrographs of some of the common ring-worm fungi prepared in the Skin Department of this Hospital.

The three first chapters, devoted to the General Principles of Skin Pathology, Diagnosis and Treatment, are models of lucidity. The unique Index of Preliminary Diagnosis should minimise the temptation of the so-called "spot diagnosis" which, whatever its literal meaning, is no less dangerous in dermatology than in other branches of medicine.

To those who have already purchased the first edition it is only necessary to offer sympathy and to recommend a "part exchange". The second edition, which contains the additional chapters and illustrations described, is to be purchased at 16*s*. (which is 2*s*. less than the original edition). It offers the soundest possible introduction to modern dermatology.

Although the author must have drawn to some extent on his experience as Physician and Lecturer to St. John's Hospital, and as Editor of the *British Journal of Dermatology and Syphilis*, the book may be described as essentially a "Bart.'s" book. It is dedicated to "My Clinical Clerks", and throughout its pages many of these, both past and present, may recognize photographs of familiar, though disfigured, faces and other regions which have been demonstrated to them on the third floor by the author.

The publishers have been generous in such matters as type, paper and illustrations. They might, however, with advantage have omitted the catalogue of their other works, which fills over 30 pages at the end of the volume.

This section is of interest, but here out of place, and may induce slight mental pruritus when the reader wishes to turn up the very useful index.

In other spheres of literature it has recently become fashionable for reviewers to select "the book of the month". *Common Skin Diseases* may be sincerely recommended to Bart.'s men as "the book of the year".

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£	s.	d.	*		†
Staff	12,672	15	10	(71)		
Demonstrators	1,695	11	0	(68)		
Students	765	6	5	(287)		
Old Bart.'s men:						
‡Bedfordshire	23	3	6	(7)	.	(26)
Berkshire	123	3	0	(16)	.	(37)
‡Buckinghamshire	76	19	0	(14)	.	(29)
‡Cambridgeshire	183	6	0	(17)	.	(42)
‡Cheshire	4	14	6	(3)	.	(26)
‡Cornwall	31	11	0	(8)	.	(36)
Cumberland	3	0	0	(1)	.	(6)
Derbyshire	19	14	0	(4)	.	(17)
‡Devonshire	338	13	0	(32)	.	(117)
‡Dorset	52	1	0	(14)	.	(30)
‡Durham	17	7	0	(4)	.	(11)
Essex	253	2	6	(20)	.	(69)
‡Gloucestershire	228	18	6	(23)	.	(66)
Hampshire	440	13	0	(44)	.	(134)
‡Herefordshire	17	12	0	(4)	.	(10)
Hertfordshire	84	11	0	(16)	.	(73)
Huntingdonshire						(1)
Isle of Wight	181	13	0	(12)	.	(25)
‡Kent	573	13	0	(67)	.	(146)
‡Lancashire	91	4	6	(12)	.	(82)
Leicestershire	136	15	0	(7)	.	(28)
‡Lincolnshire	58	17	0	(17)	.	(27)
Middlesex	385	6	0	(21)	.	(68)
‡Norfolk	167	15	6	(21)	.	(60)
‡Northamptonshire	59	4	0	(5)	.	(17)
‡Northumberland	101	1	0	(2)	.	(11)
‡Nottinghamshire	19	19	0	(3)	.	(28)
‡Oxfordshire	185	3	0	(18)	.	(29)
Rutland						(2)
Shropshire	35	9	0	(8)	.	(22)
‡Somersetshire	1,021	13	0	(28)	.	(43)
Staffordshire	194	18	0	(6)	.	(37)
‡Suffolk	291	7	6	(22)	.	(46)
Surrey	466	17	6	(53)	.	(180)
Sussex	401	16	0	(57)	.	(170)
Warwickshire	178	1	6	(18)	.	(56)
Westmorland	2	10	0	(1)	.	(5)
‡Wiltshire	110	11	0	(12)	.	(26)
‡Worcestershire	158	19	6	(24)	.	(24)
‡Yorkshire	292	6	6	(23)	.	(101)
Wales	60	8	0	(15)	.	(150)
London	2,877	5	8	(191)	.	(971)
Channel Islands	20	0	0	(2)	.	(9)
Scotland	14	4	0	(4)		
Abroad	48	5	0	(7)		
South Africa	362	15	6	(19)		
Canada	114	3	6	(8)		
East Africa	87	12	0	(10)		
West Africa	146	10	0	(5)		
India	197	0	0	(10)		
Ceylon	4	0	0	(1)		
Syria	2	2	0	(1)		
U.S.A.	5	0	0	(1)		
Ireland	14	14	0	(3)		
North Africa	1	0	0	(1)		
North Borneo	5	5	0	(1)		
Australia	22	2	0	(5)		
Friendly Islands	1	1	0	(1)		
Egypt	5	3	0	(2)		
Malay States	6	0	0	(2)		
China	52	8	4	(9)		
Siam	10	0	0	(1)		
France	30	0	0	(1)		
Trinidad	22	2	0	(2)		
British West Indies	28	6	0	(3)		
Straits Settlements	1	1	0	(1)		
New Zealand	6	1	0	(3)		
Services	566	12	6	(42)		
Others	32,309	17	1	(324)		
	£59,412	3	4			

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County. ‡ Counties with Secretaries.

STUDENTS' UNION.

RUGGER PROSPECTS 1934–5.

There is every reason to expect that in comparison with 1933–4, the 1934–5 Rugger Season will be a successful one. Only one permanent member of last year's team has left—J. M. Jackson. An excellent forward, he will be missed, but the loss would have been greater had he been an outside of similar merit. Of the backs who played for the XV last season, only Kirkwood has gone. C. R. Morison, full back, J. G. Nel, J. G. Youngman and G. A. Fairlie-Clarke, three-quarters, and J. R. Kingdon and J. D. Wilson, respectively stand-off and scrum halves, are still in the Hospital. Some of these players have shown real genius in the field, and all have frequently played brilliantly. Last season these exhibitions of brilliance were only occasionally coincident, but time breeds uniformity, and provided another sound centre can be found, there is every reason why we should have a safe and effectively thrustful back division.

The forwards are fortunate in still having Capper to lead them. Darmady is fit again, and Mundy as formidable as ever. With this nucleus four other of last season's forwards, and K. C. Burrow, a winger from last season's victorious Oxford side, it should not be difficult to build up a useful pack.

J. D. Wilson is captain. His leadership will be valuable, and we wish him success and good fortune. He is fortunate in having J. R. Kingdon as his Vice-Captain. It is hoped that the whole Hospital will help him with their personal support. The indifferent success of last season may have been responsible for the small attendances at the matches, but this works both ways. It is quite easy to win with a crowd of enthusiastic supporters on the line. We hope that every member of the Hospital will take his share of success.

HOCKEY CLUB PROSPECTS, 1934–5

There are one or two gaps to be filled up in this year's team, and especially that of goal-keeper. It is hoped that there will be a larger membership than last year, so that this task may be quickly accomplished.

The services of K. W. Martin, A. Hinds Howell and J. H. Crosse will be greatly missed, but it is hoped that fresh talent will readily be found to replace them.

The fixture-list is the same as last season, and three teams are again being run. Last season we started badly, but improved later, and it is hoped that this season the side will settle down more quickly.

The forward line is the same as last season, with J. M. Lockett, at outside-left, as Captain. On the whole, then, the prospects of a successful season and the chances of winning the Cup are good.

ASSOCIATION FOOTBALL CLUB.

The Association Football Club are looking forward to the season with real optimism. The winning last season of both Senior and Junior Inter-Hospital Cups has set the standard and will undoubtedly prove an incentive.

All the members of last season's 1st XI will be available with the important exception of A. H. Hunt, who, owing to illness, will not be able to play. His leadership and excellent football will be badly missed.

The season's captain, D. R. S. Howell, will prove, we are certain, more than a mere spinner of coins and dispenser of post-football hospitality.

The 2nd XI, under C. J. Carey, have to face a stiffer fixture-list this season. It is to be hoped that it will prove more successful in ordinary games, apart from cup matches, than last season. We are glad to welcome G. H. Darke from the ranks of Old Boy football.

A. G. Cunningham, as Captain, will have the unenviable task of filling the 3rd XI on Saturday mornings. Will members please remember to cross off early in the week if they do not wish to play?

At the United Hospitals trial held at Winchmore Hill on September 19th Bart.'s were well represented, and five—Howell, Herbert, Knowles, Darke and Brownlees—played in the final trial on September 25th. It is to be hoped that at least one will find a place in the United Hospitals team.

The draw for the Senior Cup finds Bart.'s favourably placed in the easier half and little difficulty should be found in reaching the final.

Will Freshmen who wish to play please sign up on the list in the Abernethian Room?

Results to date.

Sept. 15: 2nd XI *v.* Old Ignatians. Won, 4—1
,, 22: 2nd XI *v.* Guy's II. Won, 7—1.

UNITED HOSPITALS HARE AND HOUNDS.

The opening run will be held on Wednesday, October 3rd, at 3 p.m., from the University of London's headquarters at Motspur Park (trains every 20 minutes from Waterloo, fare 1s. 2d. return), and thereafter runs will be held every Wednesday throughout the winter.

Freshmen and others who are interested in cross-country running should get in touch with O. Garrod, or go down to Motspur Park any Wednesday afternoon.

There is an attractive fixture-list, including fixtures against Oxford, Cambridge and Dublin Universities, the season ending with the Inter-Hospitals' Championship for the Kent-Hughes Cup, in March. Last year we just lost the Cup to London Hospital by 5 points, owing to the fact that we had to call too often on the same team, with the result that some of our men were stale. This year we must make a determined effort to regain the Cup, which can only be done if everybody turns out and trains regularly, thus learning how to run as a team.

CORRESPONDENCE.

CHRISTIAN UNION.

To the Editor, 'St. Bartholomew's Hospital Journal'.

DEAR SIR,—May I ask you to insert in the JOURNAL a list of our fixtures for the forthcoming term, and draw special attention to the meeting for Freshmen on Thursday, October 4th.

The meetings are held in the Library at 5.15 p.m., and close by 5.50 p.m.

Oct. 4th: Freshers' Squash. Tea 5 p.m. Speaker, Dr. T. B. L. Bryan; Chair, Dr. Hurtley.
Oct. 11th: Capt. McCormack.
,, 18th: H. M. Morris, Esq.
,, 25th: J. H. Williams, Esq.
Nov. 1st: Montague Goodman, Esq.
,, 8th: J. B. Tupman, Esq.
,, 15th: Norman Grubb, Esq.
,, 22nd: D. M. Miller, Esq.
,, 29th: The O'Shea of Kerry.
Dec. 6th: Admiral Sir James Startin.
,, 13th: Annual Business Meeting.

Yours truly,

J. M. LOCKETT,
President.

St. Bartholomew's Hospital,
London, E.C. 1.

CHANGES OF ADDRESS.

BARNES, F. G. L., Long-Grove House, Epsom. (Tel. Epsom 443.)
BRAIMBRIDGE, C. V., P.O. Box 126, Nairobi, Kenya.
HERINGTON, C. E. E., Council Offices, Dagenham, Essex.
JEPSON, W. B., The Croft, Edenbridge, Kent.
LANDOR, J. V., General Hospital, Singapore.
MATHESON, I. W., 23, Mecklenburgh Square, W.C. 1.
SMITH, A. W. H., Medical Superintendent, Lunatic Asylum, St. Ann's, Port of Spain, Trinidad, British West Indies (after November 1st).
WILSON, Col. N. M., I.M.S., Inspector General Civil Hospitals, Nagpur, Cape Province, India.

APPOINTMENTS.

BARNES, F. G. L., M.B., B.S.(Lond.), appointed Medical Superintendent, L.C.C. Mental Hospital, Long Grove, Epsom.
HERINGTON, C. E. E., M.B., B.S.(Lond.), D.P.H., appointed Medical Officer of Health, Dagenham.
LANDOR, J. V., M.D., M.R.C.P., appointed Temporary Professor of Medicine, Singapore College of Medicine, and Consulting Physician to the Singapore General Hospital.

BIRTHS.

BANNER.—On September 11th, 1934, at 31, Brunswick Road, Hove, to Dorothy (*née* Lefeaux), wife of Dr. J. V. Banner—a son.

BENNETT.—On September 1st, 1934, at Linden Bank, Elworth, Sandbach, to Joyce, wife of Anthony Bennett, M.R.C.S.—a daughter.

GARNHAM.—On August 27th, 1934, in Nairobi, to Esther (*née* Long-Price), wife of Dr. P. C. C. Garnham—a son.

GREEN.—On August 22nd, 1934, at 48, Bootham, York, to Margaret (*née* Walsh), wife of H. F. Green, M.B., B.Chir.—a daughter.

KING.—On September 21st, 1934, at Graffham, Petworth, to Kathleen (*née* Kettlewell), wife of Dr. F. H. King, W.A.M.S.—a son.

MALLEY.—On September 17th, 1934, at a nursing home, Southgate, to Marjorie Louise, wife of Capt. M. J. Malley, R.A.M.C., and daughter of Captain and Mrs. A. W. G. Jamrack, of Winchmore Hill, Middlesex—a son.

PETERS.—On September 15th, 1934, at Netley, the wife of E. A. Peters, M.D., F.R.C.S., of 41, Wimpole Street, W. 1—a son.

RICHARDS.—On August 29th, 1934, at a nursing home, Cambridge, to Mary Loveday, wife of Dr. F. Alan Richards—a son.

THEOBALD.—On September 3rd, 1934, at 8, Elmwood Road, Chiswick, to Florence, wife of Dr. G. W. Theobald, of 7, Devonshire Street, W. 1—a son.

URWICK.—On September 5th, 1934, at 84, Park Street, W. 1, to Violet Reynolds, wife of Dr. W. Desmond Urwick—a daughter.

WILKIN.—On September 23rd, 1934, to Margaret, wife of W. J. Wilkin, of 50, London Road, Gloucester—a son.

WOOD-SMITH.—On August 29th, 1934, at a nursing home, London, to Joan (*née* Loane), wife of Dr. F. G. Wood-Smith, 2, Ashley Place, S.W. 1—a son.

MARRIAGES.

ANDERSON—ANDERSON.—On September 8th, 1934, at St. Bartholomew-the-Great, Ronald George Anderson, younger son of Mr. and Mrs. Anderson, of The Laurels, Church Hill, Purley, to Evelyn Beryl Anderson, only daughter of Dr. and Mrs. J. S. Anderson, of 114, Turnpike Lane, Hornsey.

HARRIS—CLARKSON.—On September 6th, 1934, at All Souls' Church, Langham Place, Herbert Elwin Harris, jun., F.R.C.S., only son of H. Elwin Harris, F.R.C.S., of Lansdown Place, Clifton, Bristol, to Rowena Comerford, elder daughter of Mr. and Mrs. Alan Comerford Clarkson, of Ridgemount, The Ridgeway, Guildford.

OXLEY—BARNETT.—On September 6th, 1934, at Tunbridge Wells, William Malcolm, son of Dr. and Mrs. W. H. F. Oxley, of The Manor House, Poplar, and Heathview, Blackheath, to Dorothy, only daughter of Mr. and Mrs. Barnett, of Muswell Hill.

SCOTT—BROOK.—On August 29th, 1934, at Exeter Cathedral, quietly, Dr. John Marshall Scott, younger son of Dr. and Mrs. Robert Scott, 13, Southernhay West, Exeter, to Edna, younger daughter of Mr. and Mrs. John N. Brook, Sanford, Maine, U.S.A.

WILSON—BARRY.—On September 3rd, 1934, at St. Paul's, Knightsbridge, Dr. William Wilson, elder son of Dr. and Mrs. Wilson, Irvine, Ayrshire, to Marjory Hermione Barry, daughter of Capt. R. T. Barry, late Scots Guards, Seaford.

DEATHS.

APTHORPE-WEBB.—On August 17th, 1934, at Grafton House, Cambridge, after much suffering, Frederick Edward Apthorpe-Webb, O.B.E., M.A., M.R.C.S., L.R.C.P., D.P.H., L.S.A., aged 65. Fortified by the rites of the Church. R.I.P.

HEPPER.—On September 16th, 1934, at Beaumont, Guernsey, Colonel Evelyn Hepper, late Indian Medical Service.

MEADEN.—On August 31st, 1934, at Dymchurch, Kent, Lieut.-Col. Alban Anderson Meaden, R.A.M.C.(ret.), eldest son of the late Rev. R. A. Meaden.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C. 1. Telephone: National 4444.*

St. Bartholomew's Hospital JOURNAL.

"Æquam memento rebus in arduis
Servare mentem"
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 2.] NOVEMBER 1ST, 1934. PRICE NINEPENCE.

CALENDAR.

Fri., Nov. 2.—Lord Horder and Sir Charles Gordon-Watson on duty.
Medicine: Clinical Lecture by Lord Horder.
Sat., ,, 3.—Rugby Match *v.* Rugby. Away.
Association Match *v.* Balliol College, Oxford. Home.
Hockey Match *v.* University College. Away.
Mon., ,, 5.—Special Subjects: Lecture by Mr. Sydney Scott.
Tues., ,, 6.—Dr. Gow and Mr. Girling Ball on duty.
Wed., ,, 7.—Surgery: Clinical Lecture by Mr. Wilson.
Rugby Match *v.* Army Trial XV. Home.
Thurs., ,, 8.—Students' Union. Annual Dance. Grosvenor House.
Fri., ,, 9.—Dr. Graham and Mr. Roberts on duty.
Medicine: Clinical Lecture by Lord Horder.
Sat., ,, 10.—Rugby Match *v.* Pontypool. Home.
Hockey Match *v.* Worcester College, Oxford. Home.
Mon., ,, 12.—Special Subjects: Lecture by Mr. Higgs.
Tues., ,, 13.—Prof. Fraser and Prof. Gask on duty.
Wed., ,, 14.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.
Thurs., ,, 15.—**Abernethian Society: Inaugural Address by Dr. J. A. Ryle—"The Hippocratic Ideal."**
Fri., ,, 16.—Lord Horder and Sir Charles Gordon-Watson on duty.
Medicine: Clinical Lecture by Dr. Hinds Howell.
Sat., ,, 17.—Rugby Match *v.* Moseley. Home.
Association Match *v.* Lancing Old Boys. Home.
Hockey Match *v.* Tulse Hill II. Home.
Mon., ,, 19.—Special Subjects: Lecture by Mr. Sydney Scott.
Last day for receiving matter for the December issue of the Journal.
Tues., ,, 20.—Dr. Hinds Howell and Mr. Harold Wilson on duty.
Wed., ,, 21.—Surgery: Clinical Lecture by Mr. Girling Ball.
Rugby Match *v.* R.M.A. Home.
Fri., ,, 23.—Dr. Gow and Mr. Girling Ball on duty.
Medicine: Clinical Lecture by Dr. Gow.
Sat., ,, 24.—Rugby Match *v.* Devonport Services. Away.
Association Match *v.* London Welsh. Home.
Hockey Match *v.* Emmanuel College, Cambridge. Away.
Mon., ,, 26.—Special Subjects: Lecture by Dr. Cumberbatch.
Rugby Match *v.* R.N.E.C. Keyham. Away.
Tues., ,, 27.—Dr. Graham and Mr. Roberts on duty.
Wed., ,, 28.—Surgery: Clinical Lecture by Mr. Girling Ball.
Fri., ,, 30.—Prof. Fraser and Prof. Gask on duty.

EDITORIAL.

THE appeal for funds to equip the Charterhouse as a new Medical School has just entered on its second year. Few of those associated with the Hospital can still remain ignorant of the urgent need to provide new and better accommodation for the preclinical departments. The majority long since will have perceived the great advantages of the change, and will have seen for themselves the site and its abundant possibilities.

At this stage the Appeal is in that dangerous period when energy tends to tire on account of failing enthusiasm and in spite of the unflagging zeal of those who are its main inspiration. Such an attitude at this juncture would be fatal to the success of the project, for the Appeal has now passed from the privacy of the Hospital walls to the publicity of the great City. Those outside must be awakened to the urgent need of the Hospital, the City and the nation for a supply in the future of efficient, well-trained medical men. The most promising of raw materials is wasted in a poor workshop, and a leading medical school in a country with such high standards of education as this must not fall short of the best. On a recent visit to a continental medical school we were greatly impressed by the excellent modern equipment of the lecture theatres and laboratories, and comparisons were by no means favourable to the present state of those at this College.

Over half of the sum required to pay off the purchase price of the Merchant Taylors' School site has now been collected. A further sum is also required—£40,000—to equip the existing School and £30,000 to build and equip a residential block. It is hoped to obtain £20,000 for the buildings at present in use in Giltspur Street. The need is indeed great and, though the times are inimical to money appeals, the harvest is ready. The

potential reapers are many—about one thousand within the Hospital and more than five times that number scattered throughout this country and the Empire. The time is short, very short, for the change must have taken place by the autumn session of next year.

That the field of activity has been extended does not reduce but rather augments the personal responsibility of those belonging to St. Bartholomew's. Of past students, many, but by no means the majority, have given of their ability; for example, only a single county has contributed a full quota. The present student body has helped in a very real way, but again the subscription list requires many names before there is a concrete indication of a universal desire to benefit posterity. Lack of support in any individual case surely cannot be due to deliberate withholding, but rather to a mild but dangerous apathy or to the whisperings of old Thief Procrastination. As we ourselves have been inspired by the enthusiasm of the Dean and his co-workers, so may the public find in the friends of the Hospital an incentive to material action. A muddy spring gives a muddy stream, and apathy at the source of this great Appeal will certainly embarrass its success.

Nothing great was ever achieved without enthusiasm; we are therefore confident that all Bart.'s men and women will give of their best.

* * *

The Sub-Dean has kindly furnished the following information concerning the new "B.G.T." scheme.

Last month this Journal gave a short notice of a new arrangement in the Medical College which may have very far-reaching results. It had become possible, for the first time, for Bart.'s men to attend clinical lectures at Guy's and St. Thomas's Hospitals. During recent weeks the notices of these lectures have been appearing on our screens, and those whose clinical appointments have allowed them the time have been welcome at the other two schools. St. Thomas's and Guy's men have had similar facilities to attend clinical lectures here. This is the first manifestation of the new scheme for closer co-operation in teaching at the three schools. It needs very little imagination to realize how far the development of the scheme might take us. If the experiment is successful, the whole system of medical education in London may be altered for the better.

However good the underlying idea in these innovations may be, its application to the established and well tried system of education must be tentative and rather gradual. For this reason the number of medical schools involved is limited for the present to three. Difficulties in preliminary organization mount in geometrical progression with the number of independent bodies concerned. For the same reason it may be necessary to abandon some projects and substitute others. Any such modifications, if indeed they take place, are not to be taken as signs of failure of the scheme, but rather as valuable negative data to be used in building a durable structure.

The sharing of clinical lectures is not the only form of co-operation that has so far been agreed upon. Arrangements are well advanced for some exchange of ward teaching. To anyone familiar with the crowded ward rounds in this Hospital alone, it is clear that indiscriminate mutual hospitality in this respect would not serve any good purpose. It is therefore proposed that a limited number of men from St. Thomas's shall be invited to one medical and one surgical round each month, and that a limited number of Bart.'s men shall be invited similarly to St. Thomas's. This seems very little to shout about, unless it is realized that it is not going to be an easy matter to find a method of sharing the clinical teaching that does not upset the balance that exists at present. Opportunities of attending ward rounds at the other two hospitals will be materially increased when experience has shown how the small-scale model works.

The other activities in which the three schools are uniting their resources are the Primary Fellowship course and facilities for those who are working for the M.R.C.P. In neither case are the details complete. The advantages of a Primary course in which the teachers of all three schools take a part are as obvious as the difficulties in finding a time-table to suit everybody. The woes of the would-be candidate for the membership are very ancient history. Perhaps they may be alleviated if a course can be started which provides clinical work at all three hospitals during a period of twelve weeks.

The organization set up to look after the combined activities of the three schools is a joint sub-committee. Each school sends five members, one of whom is its Dean. Regular meetings are held. The sub-committee will do all in their power to give practical shape to this ideal of co-operation of the medical schools of London. Their work will be immensely simplified by the intelligent help of the student bodies of the three hospitals immediately concerned. Such help can be given by an observant trial of the new opportunities for interchange as they become available, and by comment on the apparent advantages or disadvantages of each. Most of all there is needed a sympathetic understanding of the problems involved. With this help the experiment now just starting must inevitably be a success.

* * *

The Banquet at the Mansion House arranged in connection with the College Appeal has been cancelled for the present.

* * *

The vacancies created by the resignation of Prof. Fraser and Prof. Kettle have been filled by Dr. L. J. Witts and Prof. Geoffrey Hadfield respectively.

Dr. Leslie John Witts has been Assistant Physician at Guy's Hospital. He qualified from Manchester University, obtaining M.B., B.Ch. with 1st Class Honours in 1923. He received the Doctorate in 1926, and was made a Fellow of the Royal College of Physicians in 1931.

In 1926 he was the John Lucas Walker Student in Pathology at the University of Cambridge. He was for a time Assistant to the Medical Unit at the London Hospital. His published work hitherto has been concerned mainly with diabetes and with the anæmias.

Prof. Geoffrey Hadfield has been Professor of Pathology in the University of Bristol since 1933. He was a student at St. Bartholomew's, graduating in 1911 and obtaining the M.D. (Gold Medal) in 1913. Since 1914 he has been teaching pathology in various capacities. During the war he was a Captain in the R.A.M.C., specializing in pathology for five years, and served for three years in Gallipoli and France. Before going to Bristol he lectured on the subject at the Royal Free Hospital. His interests are varied. He collaborates with Dr. L. P. Garrod in the excellent *Recent Advances in Pathology*, and he has written on the pathology of the nervous system, of tumours and of cardiac infections.

* * *

Many activities of the Hospital's organization are not apparent to the casual observer, but are none the less essential to the patient's well-being. Few, however, can have failed to notice an inobtrusive trolley-load of books being wheeled across the Square or from bed to bed in the wards. The following has been received from the Honorary Head Librarian and deserves the interest of all. Superfluous books, even of the good quality required here, are a feature of every household and will be welcomed at the Library, in the entrance of the New Surgical Block:

The British Red Cross Hospital Library was started at this Hospital two and a half years ago. Headquarters presented 250 books at the beginning, but it now possesses over 2000. These have been collected by the Librarian and patients. At present there are eight Hon. Librarians, and two ladies come weekly to repair the books. Twenty-three wards are visited each week, and every patient is offered a wide choice of books and may borrow as many as required. During the last ten months 18,853 books have been borrowed by the patients.

The Library is always in need of books of all descriptions, provided that they are in good condition, as the wear is very great. Besides fiction, there is a constant demand for books of travel, biography, sport and popular science and for foreign books.

Headquarters have made this branch a training and demonstration library, and since the summer the new head Librarians for St. Thomas's and the L.C.C. Hospital at Shoreditch have been trained here.

* * *

Attention of all Bart.'s men and their friends living in or near London is drawn to the Children's Fair to be held at the Langham Hotel on Saturday, November 24th. The Lady Patricia Ramsay has graciously consented to open the Fair at 3 o'clock. Many of the London Hospitals hold similar functions, but this is the first occasion that a Children's Fair has been arranged in connection with St. Bartholomew's. The Fair has been organized by the Women's Guild, and the proceeds are to be given to the funds of the Guild.

The attractions include an entertainment given by the pupils of Italia Conti, a Punch and Judy show, sideshows, and circus items contributed by Mr. S. Furber and some students. There are to be stalls at which can be bought Christmas presents, dolls, games, toys, Christmas crackers, sweets, nursery requisites, and cakes and produce.

The tickets are only 2*s.* 6*d.*, which includes tea. They can be bought from the Langham Hotel or from members of the Committee, headed by Mrs. Girling Ball, Mrs. Barris, Mrs. Gask and Mrs. Hinds Howell.

The decorations and posters* are being done by Miss Mary Shepard, the artist daughter of Mr. Ernest Shepard.

Contributions of toys or money towards expenses will be gratefully accepted. The wives of Bart.'s men are urged to come and to bring their families, and to tell their friends about it.

The Fair will be an ideal way of giving a children's party. Tables for tea can be booked for parties on application to Mrs. Barris.

* * *

The Bart.'s Cambridge Dinner is to be held at the Mayfair Hotel on the evening of Wednesday, November 21st. Prof. Fraser will be in the Chair. This will be an excellent opportunity for Cambridge men to show their appreciation of the splendid work that the Professor has done for Bart.'s. It is hoped that members will turn up in record numbers.

* One of these appears on p. v in this issue.

Students are again reminded that a course of lectures in Scientific German is being given by Mr. FitzAucher on Fridays at 5.30 p.m.

The opportunity is an excellent one, for the language is more than a luxury in the education of every medical man.

* * *

At the November meeting of the Paget Club Mr. McAdam Eccles introduced as an honorary member the Rt. Rev. Luke Paget, late Bishop of Chester, and the third son of Sir James Paget. A paper was read by Dr. R. G. Macfarlane on the treatment of hæmorrhage with dilute snake venom, with particular application to hæmophilia. Venom was withdrawn from a Russell's viper by Dr. Burgess Barnett, Curator of Reptiles at the London Zoo, with whose help the research had been undertaken. After having been dried for storage, gauze soaked in a greatly diluted solution had been found to arrest hæmorrhage in a very few seconds. It had been tested clinically in dental extraction, tonsillectomy and abdominal operations, on normal patients and on hæmophiliacs with gratifying success, arresting the most obstinate bleeding or capillary oozing. Remarks on the discovery were made by Sir Chalmers Mitchell, Sir Leonard Rogers and Professor Gask.

* * *

The following gentlemen have been nominated to House Appointments from November 1st, 1934:

Junior House Physicians—		
Lord Horder	Dármady, E. M.	
Prof. Fraser	Avery Jones, F.	
Dr. Hinds Howell	Martin Jones, J. D.	
Dr. Gow	Latter, K. A.	
Dr. Graham	Gale, H. E. D.	
Junior House Surgeons—		
Prof. G. E. Gask	Benison, R. L.	
Sir C. Gordon-Watson	Harris, E. E.	
Mr. Harold Wilson	Innes, A.	
Mr. Girling Ball	Blusger, I. N.	
Mr. J. E. H. Roberts	Kingdon, J. R.	
Intern Midwifery Assistant (Resident)	Pirie, A. H.	
Intern Midwifery Assistant (Non-Resident)	Stephens, K. F.	
Extern Midwifery Assistant	Livingstone, F. D. M. (*Nov.*).	
	Martin, K. W. (*Feb.*).	
H.S. to Throat and Ear Department	Cope, J. W.	
Junior H.S. to Throat and Ear Department	Gilbert, R. G. (*Nov.*).	
	Levick, R. E. K. (*Feb.*).	
H.S. to Ophthalmic Department	Houlton, A. C. L.	
H.S. to Skin and Venereal Departments (Non-resident)	Martin, K. W. (*Nov.*).	
	Livingstone, F. D. M. (*Feb.*).	
H.S. to Orthopædic Department	Dintcliffe, E. W.	
H.P. to Children's Department	Warren, C. B. M.	
H.S. to Dental Department	Gillies, A. R.	
Junior Resident Anæsthetists	West, J. H.	
	Wheeler, F. E.	
Non-Resident Anæsthetist	Danino, M. A.	
Casualty House Physicians	Young, A. R. C.	(*Nov.*).
	Purnell, R. H.	
	Hulbert, N. G.	
	MacCarthy, D.	(*Feb.*).
	Sheehan, D. J.	
	Reavell, D. C.	
Casualty House Surgeons	Levick, R. E. K. (*Nov.*).	
	Daniel, T. M. (*Feb.*).	

THE COLLEGE APPEAL.

THE appeal is now well started on the second stage of its career. Until a few weeks ago, when the Lord Mayor sent out his letter to the business men and organizations of the City, the appeal was more or less a family affair. It was directed at those who are in some way or another connected with the Medical College. Since the Lord Mayor's letter went out the appeal has entered a wider field. With its increased scope a new set of circumstances have to be faced, so that it may be pushed forward in the most effective manner. So many people have been drawn into its orbit that its progress must be a matter of general interest to all those connected with the Hospital.

Consideration of current activities can start with a retrospect. The success of the appeal during the "family" phases augurs well for the future. Up to the time of the Lord Mayor's letter, a sum of no less than £65,000 had become available for the Medical College, and this was contributed or collected by Bart.'s men and women, working as a private organization. The confidence which this effort gives, now that a public appeal is made, can hardly be exaggerated. Hundreds of people have helped in this achievement and share in its glory. Nor do they deny the very special part played by one man, the Dean, in bringing about this happy result. Without him to urge and to plead and to co-ordinate, very little could have been accomplished. He has been the principal source of information about the appeal, consequently very little is known about his own personal struggles. It is clear that he must have written some hundreds of individual letters. He must have spent much time and energy in convincing first his personal colleagues, and then a wider circle, that it is not only desirable, but feasible, to seize this opportunity to rebuild the College. He has demonstrated his thesis that it is possible for a Bart.'s man to raise money for the appeal by talking to his non-medical friends, to the tune of something over £8000. He has kept the cost of raising the £65,000 in the private appeal to the incredibly low figure of less than £500. All this he has done as a kind of side-line to his normal activities of being Dean to the Medical College (strange to relate this does involve some work), being Surgeon to the Hospital, and earning his living in private practice. He has been something of an inspiration as well as being a midwife and a wet nurse to the appeal, and quite a lot of its success must be laid at his door. Anyway he is now as much up to his neck in the public appeal as he was in the private, and just as much in need of the corporate support of those connected with the College.

The problems have altered a little. It is no longer just a question of putting up money, but of getting lay people to understand why it is important for them, too, to put up money for a medical college. The Prince of Wales helped us tremendously last autumn when he showed by his visit that he understood what we are aiming at. The Lord Mayor has done all in his power to make the objects of the appeal known throughout the City. Others are working hard to bring the project to the notice of those who can help. We have a rather special part to play in this phase of the appeal in that we can explain technically what it is all about. Medical education in fact has very little emotional drawing power. If the present Medical College were to be swallowed in an earthquake or overwhelmed by a tidal wave it would in many ways be easier. It is not immediately apparent that it matters that the country should have the best possible doctors in twenty or in fifty, or a hundred years' time. It is not generally known that with each year the making of a good doctor becomes more and more complicated, and that more and more equipment is needed. Buildings, laboratories, animal houses and the rest are all part of this equipment. Money for them must be found. The parents of one generation of students cannot be expected to meet the capital costs that are going to benefit many generations of students; in any case, it is not their responsibility alone to see that the population thirty years hence has good doctors. The State does a great deal to this end with grants towards running costs, but it is still the affair of the public-spirited to see that the country has the best possible training grounds for its future doctors. We have this opportunity to bring our particular training ground to a state in which it will serve for many years to come, and it is very much the business of the man in the street to see that we make the most of our chance.

One must apologize for reiterating this argument, so obvious to anyone connected with medicine. To the layman it often has to be put as a new point of view. Somehow we must make it generally known that this appeal, though it is not aimed at saving anyone from immediate starvation, has a very real application to the country as a whole. This is where the organization that saw the appeal so successfully through its private phase can play a determining part in the public appeal. We have a good cause in getting the new College built; we are a compact body of people who understand what it is all about; we must now get the meaning of the appeal generally known and understood.

CHARLES F. HARRIS.

TREATMENT OF NEURASTHENIA.

(Continued.)

RATIONAL treatment of any morbid condition must aim at removing its cause, and the treatment of neurasthenia should therefore be based on this principle. The treatment to be adopted will therefore be determined by the view that you may take as to the cause of this condition. As a number of different theories have been held as to the cause of neurasthenia, even within comparatively recent times, it is worth our while to consider them briefly.

(*a*) A view that was widely held, and which, indeed, contains a partial truth, was that neurasthenia was the result of exhaustion of nervous energy; according to this view, nervous energy was comparable to an accumulator, and when exhausted, recharging was required. No rational explanation was given as to why the patient's nervous energy was exhausted. In some cases it was attributed to overwork—a theory which was most gratifying to the patient's self-esteem; but overwork by itself will not produce neurasthenia, and the condition to which it gives rise is easily remedied by a holiday. Treatment of patients with neurasthenia was effected, by those who held this view, by prolonged rest in bed with overfeeding. Weir Mitchell was the protagonist of this method of treatment, and rest cures had a magnificent vogue for a time. Weir Mitchell was very successful with these, and so were a number of other doctors. Ross, in his admirable book, *The Common Neuroses*, a book which I recommend you all to study very carefully, points out that the success of this method varied with the enthusiasm and personality of the doctor who carried it out. But the patients were found to relapse, and as the doctor's enthusiasm and belief in his method waned, the cases did less and less well. This method of treatment in its original form is now practically abandoned.

(*b*) Reflex theories: That neurasthenia was due to such things as errors of refraction, usually quite small, to nasal spurs, to displacement of abdominal viscera, such as unduly mobile kidneys, dropped colon, and uterine displacements, the last alleged cause taking one back to the Hippocratic era when the womb was supposed to cause symptoms of hysteria, by wandering from the pelvis. The treatment consisted in those days of frightening it back to its anchorage by the evil smell of valerian. (Do not some of us still use valerian for females with hysterical disorders?) In later days the osteopath and cheiropractor have had a fruitful harvest in replacing "displacements" of the vertebræ.

(*c*) A rival theory about the same time was the theory of toxæmia, usually intestinal and generally impossible of demonstration by pathologists of repute. Still, the enthusiastic cultivator of the flora of the intestine and the equally ardent vaccine merchant were able to record their successes.

(*d*) During the present century Freud's writings have, I suppose, done more than those of any other author to focus attention on the mind as the prime factor in the production of psycho-neurotic disorders. It is true that so far as neurasthenia is concerned, Freud most surprisingly regards physical causes (sexual) as being entirely operative in its production. But I think that the majority of those who have studied this subject do not accept Freud's theory of the ætiology of neurasthenia, but regard it as being the result of mental processes, and therefore endeavour to treat those suffering from it by some form of psycho-therapy.

Curiously, perhaps, the laymen's views have usually favoured the theory that the patient's mental attitude was at fault. This is commonly expressed by saying: "If only he, or she, would pull themselves together, they would be quite all right." They regard their friends as suffering from a form of perverseness. This same point of view was largely that adopted by Du Bois of Berne. He tried to inculcate lofty ideals in his neurasthenic patients, urging them to adopt a system of philosophy such as that expounded by Plato. As he was a man of striking personality, he had great success, but few of us are blessed with a similar personality, and we shall do better to search out the causes which have led to the patient becoming neurasthenic, and if these can be dealt with successfully the results will be found to be extremely gratifying.

This brings us to the question: Why does an individual become neurasthenic? In the first place, there can be no doubt that certain individuals are more likely to develop neurasthenia than others. There is an inborn weakness in the nervous constitution of some individuals, which renders them less able to deal with difficult situations than their fellows. The type of personality is important. So far as this is concerned you can divide mankind roughly into introverts and extroverts. The former are shy, retiring, contemplative and analytic, whilst the latter are the opposite. The extroverts make friends easily and are "good mixers". If overtaken by psycho-neurotic disorders, the former are likely to become neurasthenic, whilst the latter tend to suffer from hysterical manifestations. Neurasthenia is commoner in those who have responsibilities, and who have by their training been educated to the idea of a sense of responsibility both for themselves and for others, whilst hysteria is more often met with in those who have not the same outlook. In the war it was the officers who mainly developed neurasthenia,

§

whilst the men manifested hysterical symptoms more commonly. People who develop psycho-neurotic troubles are usually of an emotional make-up. They feel things intensely, and it is in their reaction to affective circumstances that the seeds of a psycho-neurosis are sown.

Dejerine has laid a great deal of stress on the important *rôle* that the emotions play in the production of psycho-neurotic manifestations, and Ross has further developed and expounded the mechanism by means of which the patient develops a psycho-neurosis. Ross points out, and you will see clearly on reflection, that the symptoms of emotional reaction are identical in many respects with those which you will find exhibited by your neurasthenic patients—exhaustion, palpitation, tremor, fainting, vomiting, dyspepsia, anorexia, diarrhœa, frequency of micturition, etc.

We are familiar with all of these, not only as symptoms of the neurasthenic, but also as a sequel to emotional reaction. The conditioned reflex is also used by Ross to explain the recurrence of symptoms aroused by circumstances independent of, but related to the circumstances which produced the original emotional reaction. As we all have a tendency to rationalization, the symptoms experienced, which are quite genuine, are apt to be wrongly interpreted. The patient is quite aware of the distressing or difficult circumstances which induced the emotional reaction in the first place, but he does not connect them with his symptoms. It is easy to see how a number of secondary symptoms may arise in such a patient. In addition the doctor is often responsible for aggravating the patient's troubles by some careless expression of opinion, or an opinion given too hurriedly. Possibly two or three doctors have been consulted, and the probability that they have expressed different opinions only adds to the anxieties of the unfortunate patient. In mitigation of the unfortunate *rôle* which the doctor may play, it is only fair to say that his hand is often forced by the relatives of the sick person or the patient himself demanding a diagnosis. As a result, almost any febrile illness of unknown origin is called influenza, at first at any rate, and the doctor is often compelled to produce vague diagnoses, such as "poisoned heart", "anæmia of the brain", "weak lungs", etc., which have no real meaning, but which often induce an added anxiety in the patient's mind.

If we accept the *rôle* of emotion as prepotent in the production of neurasthenia, how are we to deal with the patient? We can only do this adequately by a very careful analysis of his story, and after getting his confidence, getting him to relate his troubles and difficulties in addition to his symptoms. Careful notes must be made and his symptoms and the chronological order of their appearance recorded. The dates at which symptoms appeared must be compared with the history of such troubles and difficult situations as have been experienced. The relation between the two will be obvious to the doctor.

This will no doubt take a considerable time, but in the end it will save time. At this stage the doctor should on no account express any opinion on the case, but the treatment of the patient will have commenced. The next and most important step is to make a thorough physical examination of the patient. The more thorough this examination is, the greater will be the confidence of the patient that he has found a doctor who understands his case and who will help him. At the end of this examination the doctor will be in a position to express an authoritative opinion as to his patient's condition, and can assure him that he has no organic physical disease.

It is absolutely useless with such patients to give them a prescription, usually containing bromide, after listening for a short time to their symptoms, and perhaps making a perfunctory examination. The suggestion produced by the bottle of medicine is that they require physical treatment, and although for a time they may profess themselves as being "a little better", it is soon clear that they are making no material progress. The medicine may be changed, but after some weeks, if the patient is sufficiently faithful, it will be clear to both doctor and patient that no real progress has been made.

When the doctor is sure that the patient's symptoms are not physical in origin, and it is clear that treatment on psycho-therapeutic lines must be instituted, the question will arise as to how this should be carried out. In a number of cases it can be carried out quite well by the patient coming to his doctor, and his treatment need not interfere with his ordinary occupations, but in the more severe cases work has become impossible, the patient is often exhausted mentally and physically, is suffering from insomnia, and must for a time have bed treatment. Should this be carried out at home or away from it? There is no doubt that it should be done away from home if this is at all practicable. But even when it is not, treatment can be carried out successfully at home. The reason for keeping the patient in bed where this is necessary must be carefully explained, or the suggestion of physical illness will be conveyed, with most unfortunate results, as it is precisely this idea that the patient is likely to have of his condition.

At this stage in the treatment it is well to assure the patient that he is not in any danger of becoming insane. This is a very common fear with neurasthenic patients, but they are unlikely to express their fears to the doctor. They keep them bottled up and add immensely to their troubles by doing so.

The next step in the treatment of the patient consists in explaining to him the nature of emotional reactions, and how these may produce physical results. It is obvious that the more intelligent the patient, the easier will he grasp this idea and be able to apply it to his own case. The ideal to be attained is that the patient should believe this by conviction and not by faith, but I have no doubt that this is not always possible. At any rate the doctor will be able to assist his patient to realize that his difficulties are the cause of his symptoms, though he may not understand precisely the theory by which the relationship is explained. Talking over his troubles will help the patient to adapt himself to them. Of course there are a certain number of neurasthenics who are poor creatures, physically and intellectually, with no character to speak of, and these may prove to be not worth the trouble and time that this method of treatment entails. The doctor must use his judgment in deciding whether any particular patient is worth this effort. (I do *not* mean in terms of £ *s. d.*)

This line of investigation of the patient with neurasthenia and his treatment is what I believe to be the most helpful, because in my opinion it deals with the cause of the condition. It follows the lines which Dejerine described in his book, written in conjunction with Gauckler, *The Psychoneuroses and their Treatment by Psychotherapy*, of which a translation has been made by Jelliffe, and also further emphasized by Ross in *The Common Neuroses*. It is only possible in a lecture like this to give an outline of the theory and method. Those of you who are interested in the subject should certainly read both these books. That you will find them most interesting and helpful I am quite sure.

I suppose that it must strike anyone who examines the story of neurasthenia and the various methods which have been used in its treatment, that the patient has frequently benefited by a number of widely different methods of treatment. I think the only conclusion which can be drawn from this undoubted fact is that neurasthenia is due to psychological factors, and that the patient's mental attitude towards his illness is the all-important factor in its prolongation, and by implication in its production. The neurasthenic has lost confidence in himself. When he meets a doctor who will be interested in his story and will then assert with conviction that he can cure him, a long step has already been taken towards his recovery. The reason why so many patients treated by rest cures, replacement of kidneys, vaccines and so forth subsequently relapse is because, in my opinion, the method of treatment is really inadequate, in that it fails to give the patient any adequate explanation as to why he became ill. I believe that the theory of the emotional reaction on which Dejerine and Ross have laid such emphasis is well founded, and its success is due to the fact that it affords a rational explanation, which any intelligent patient can understand, of the cause of his symptoms.

I have already shown that the human mind is always seeking for explanations—a process known as rationalization. The explanations which a neurasthenic finds for his symptoms are almost always of a depressing nature: that he is becoming insane, that he has "heart disease", cancer of the stomach, a tumour on the brain, and so on. Unlike the hypochondriac, he is more than ready to be convinced that such is not the case, but no method of treatment is likely to be quite successful which does not afford an adequate explanation of the symptoms which have caused so much anxiety; such an explanation should be one which the patient can grasp, and the truth of which he can see for himself. It is not good enough that the doctor should merely assert that such and such is the cause of the illness. He may be able to do this with sufficient authority to succeed for a time, but unless the patient can believe what he is told through conviction and not by faith alone, he is unlikely to reap any permanent benefit.

The method of investigation and treatment which I have outlined can be employed in the treatment of hysteria as usefully as in that of neurasthenia. It is of course true that in some cases psychological analysis of a more extensive kind will be required to unravel the causes of the emotional reactions which underlie the symptoms of which the patient complains.

C. M. HINDS HOWELL.

INDIAN "FAKIRS".*

(Continued.)

LEAVING the Hindu ascetics we come now to the true fakirs of India, who are Mohammedans. In Persia the word "fakir" means a poor man, and is synonymous with "dervish". There are many dervish orders in Persia, North Africa and Arabia, but the one with which we are here concerned was founded in the twelfth century, and its members are known as Rifáyites, *Rufaees* or "howling dervishes". The rites of these men are weird: with the aid of music, dancing and other stimulants they can work themselves up into such a state of wild religious ecstasy that they cut themselves about, eat live coals or broken glass, handle red-hot iron and mutilate themselves with instruments, not only without feeling pain, but seemingly with real enjoyment.

* A paper read before the Osler Club on May 11th, 1934.

FIG. 1.—THE ANNUAL CEREMONY AT NIGHT.
Note the leader on the left with his Arab head-dress. The instruments and incense vessel on the mat in front of him. The crowd, partly obscured by smoke. The standing fakir with one instrument through his tongue and another in his right orbit.
(*Copyright.*)

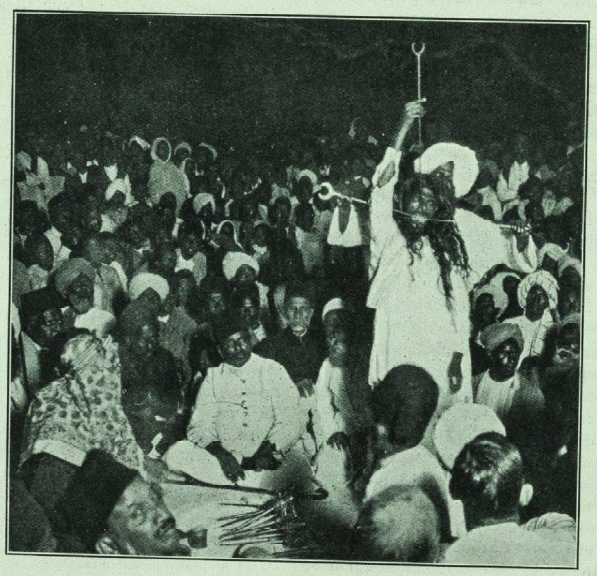


FIG. 2.—THE ANNUAL CEREMONY AT NIGHT.
(*Copyright.*) A fakir with an instrument through his tongue, and two more through his cheeks, supported by a friend.

One often hears about these "howling dervishes" but few men have seen them, and a good description of what they do is hard to find. Lord Curzon, in his book, 'Tales of Travel' (Doran & Co.), gives perhaps the best account under the title of "The Drums of Kairwan"; and so closely are these men related to the *Rafaee* fakirs of India about whom I shall speak in a

(*Copyright.*) FIG. 3.—READY TO START, THEIR INSTRUMENTS SPREAD OUT IN FRONT OF THEM.

few minutes—even the names are really the same—that I am tempted to read you some passages from Curzon's description of one of their orgies, a performance he witnessed one night in a dimly-lit mosque in Kairwan in North Africa, a hundred miles south of Tunis. Amongst rows of marble columns around the dome about a hundred persons were squatting, and in the centre sat twelve musicians with their earthen drums and tambours. The lighting was dim, as the lamps hung from the roof were merely lighted wicks floating in oil in cups of coloured glass. The music was melancholy—a plaintive quavering wail of Arab voices, now falling to a moan, now ending in a shriek—and in the background all the time the ceaseless droning of the drums. The dance began slowly, about forty human figures rocking backwards and forwards in grim and ungraceful unison. The head priest looked on quietly, but the dancers became wilder and wilder, working themselves up into such a state of ecstasy that they eventually lost control of themselves entirely, behaving like beasts rather than human beings.

"The rapidity and vehemence of their gesticulations were now appalling; their heads swung backwards and forwards till their foreheads almost touched their breasts, and their scalps smote against their backs. Sweat poured from their faces; they panted for breath; and the exclamations burst from their mouths in a thick and stertorous murmur. . . .

"The worshippers seemed to be gifted with an almost superhuman strength and energy. As they flung themselves to and fro, at one moment their upturned faces gleamed with a sickly polish under the flickering lamps, at the next their turbaned heads all but brushed the floor. Their eyes started from the sockets; the muscles on their necks and the veins on their foreheads stood out like knotted cords. One old man fell out of the ranks breathless,

spent, and foaming. His place was taken by another, and the tumultuous orgy went on.

"Presently, as the ecstasy approached its height and the fully initiated became *melboos*, or possessed, they broke from the stereotyped litany into demoniacal grinning and ferocious and bestial cries. These writhing and contorted objects were no longer rational human beings, but savage animals, caged brutes howling madly in the delirium of hunger or of pain. They growled like bears, they barked like jackals, they roared like lions, they laughed like hyænas; and ever and anon from the seething rank rose a diabolical shriek, like the scream of a dying horse, or the yell of a tortured fiend. And steadily the while in the background resounded the implacable reverberation of the drums.

"The climax was now reached; the requisite pitch of cataleptic inebriation had been obtained, and the rites of Aissa were about to begin. From the crowd at the door a wild figure broke forth, tore off his upper clothing till he was naked to the waist, and, throwing away his fez, bared a head close-shaven save for one long and

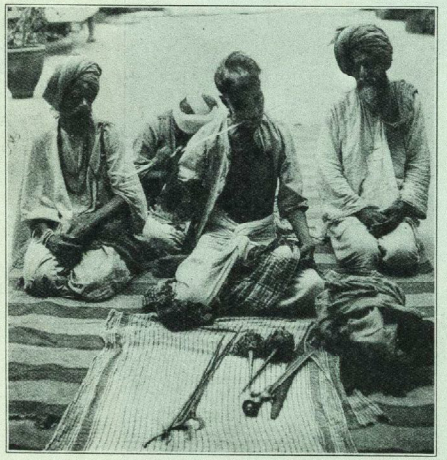


FIG. 4.—"DISINFECTING" ONE OF HIS INSTRUMENTS BY LICKING IT.

The boy behind is bending forward praying. The two old men are also muttering prayers; the expressions on their faces have been thought by some to suggest that hypnotism plays a part.

(*Copyright.*)

dishevelled lock that, springing from the scalp, fell over his forehead like some grisly and funereal plume. A long knife, somewhat resembling a cutlass, was handed to him by the sheikh, who had risen to his feet and who directed the phenomena that ensued. Waving it wildly above his head and protruding the forepart of his figure, the fanatic brought it down blow after blow against his bared stomach, and drew it savagely to and fro against the unprotected skin. There showed the marks of a long and livid weal, but no blood spurted from the gash. In the intervals between the strokes he ran swiftly from one side to the other of the open space, taking long stealthy strides like a panther about to spring, and seemingly so powerless over his own movements that he knocked blindly up against those who stood in his way, nearly upsetting them with the violence of the collision.

"The prowess or the piety of this ardent devotee proved extraordinarily contagious. First one and then another of his brethren caught the afflatus and followed his example. In a few moments every part of the mosque was the scene of some novel and horrible rite of self-mutilation, performed by a fresh aspirant to the favour of Allah. . . .

"Several long iron spits or prongs were produced and distributed; these formidable implements were about two and a half feet in length, and sharply pointed, as they terminated at the handle in a circular wooden knob about the size of a large orange. There was great competition for these instruments of torture, which were used as follows. Poising one in the air, an Aissaioui would suddenly force the point into the flesh of his own shoulder in front just below the shoulder blade. Thus transfixed, and holding the weapon aloft, he strode swiftly up and down. Suddenly, at a signal, he fell on his knees, still forcing the point into his body, and keeping the wooden head uppermost. Then there started up another disciple armed with a big wooden mallet, and he, after a few preliminary taps, rising high on tiptoe with uplifted weapon would, with an ear-splitting yell, bring it down with all his force upon the wooden knob, driving the point home through the shoulder of his comrade. Blow succeeded blow, the victim wincing beneath the stroke, but uttering no sound, and fixing his eyes with a look of ineffable delight upon his torturer, till the point was driven right through the shoulder and projected at the back. Then the patient marched backwards and forwards with the air and the gait of a conquering hero. At one moment there were four of these semi-naked maniacs within a yard of my feet, transfixed and trembling, but beatified and triumphant. And amid the cries and the swelter, there never ceased for one second the sullen and menacing vociferation of the drums.

"Another man seized an iron skewer, and, placing the point within his open jaws, forced it steadily through his cheek until it protruded a couple of inches on the outside. He barked savagely like a dog, and foamed at the lips.

"Others, afflicted with exquisite spasms of hunger, knelt down before the chief, whimpering like children for food, and turning upon him imploring glances from their glazed and bloodshot eyes. . . .

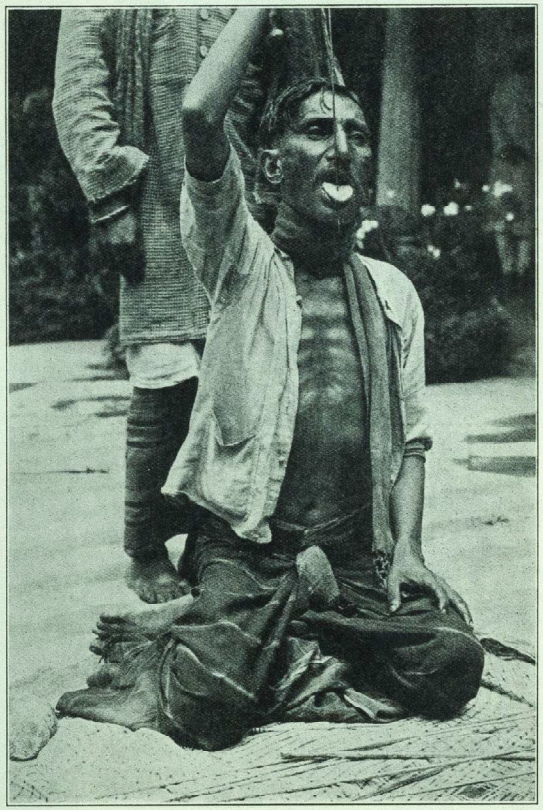
"For those whose ravenous appetites he was content to humour the most singular repast was prepared. A plate was brought in, covered with huge jagged pieces of broken glass, as thick as a shattered soda-water bottle. With greedy chuckles and gurglings of delight one of the hungry ones dashed at it, crammed a handful into his mouth, and crunched it up as though it were some exquisite dainty, a fellow-disciple calmly stroking the exterior of his throat, with intent, I suppose, to lubricate the descent of the unwonted morsels. . . .

"Several acolytes came in, carrying a big stem of the prickly pear, whose leaves are as thick as a one-inch plank, and are armed with huge projecting thorns. This was ambrosia to the starving saints; they rushed at it with passionate emulation, tearing at the solid slabs with their teeth, and gnawing and munching the coarse fibres, regardless of the thorns which pierced their tongues and cheeks as they swallowed them down.

"The most singular feature of all, and the one that almost defies belief, though it is none the less true, was this—that in no case did one drop of blood emerge from scar, or gash, or wound. This fact I observed most carefully, the *mokaddem* standing at my side, and each patient in turn coming to him when his self-imposed torture had been accomplished and the cataleptic frenzy had spent its force. It was the chief who cunningly withdrew the blade from cheek or shoulder or body, rubbing over the spot what appeared to me to be the saliva of his own mouth; then he whispered an absolution in the ear of the disciple and kissed him on the forehead, whereupon the patient, but a moment before writhing in maniacal transports, retired tranquilly and took his seat upon the floor. He seemed none the worse for his recent paroxysm, and the wound was marked only by a livid blotch or a hectic flush."

Many factors may account for the demoniacal possession of the performers in an orgy like this. Drugs such as Indian hemp and pathological conditions such as hysteria and epilepsy may play perhaps some part; but even without them it is not really so very hard to understand how these men may, for awhile, lose control of their senses, overcome by the emotional and neuromuscular influences of the dancing, the weird music, and the terrible antics of the other performers. However, as we know nothing of the habits or previous preparation of these men that Lord Curzon saw, it would be unprofitable even to attempt an explanation of their performance. With the Mohammedan fakirs in India whom I shall now describe to you the case is very different. Their habits have been studied closely, we have been able to take many photographs of them, and they have even given us the instruments they use.

These people, a small community in Hyderabad City in the Deccan, call themselves Rafaee fakirs, and they claim to be direct descendants of the Rufaees or howling dervishes of Arabia. Their founder, Syed Ahmed Kabeer Rafaee Kazmi, was born in Mecca over 800 years ago; he lived to be a saint of great renown, and died in Arabia in the year 1160. His religious rites centred round the practice of "Zurbath", or "self infliction of wounds", a practice which was at first carried out solely by members of his family, the secrets being handed down from generation to generation. In later years, however, disciples too were allowed the privilege of joining in the ceremonies. His fourteenth direct male descendant, Syed Shah Abdul Kareem Rafaee, migrated from Arabia to Southern India nearly 300 years ago. It was he who established this sect of Rafaee fakirs in Hyderabad, and after living to be over a hundred years old he was buried in what is now the Begum Bazaar, and around his tomb an important ceremony takes place at night once a year. In his time Golconda, eight miles away, was still the flourishing capital of this part of India, and where Hyderabad city now stands was open jungle. The priests even now tell us that around their graveyard, in its early days, "tigers roamed and bears stole our fruit"; while to-day this same graveyard, with its innumerable tombs, lies in the midst of one of the most densely populated districts in all India.



(*Copyright.*) FIG. 5.—THROUGH TONGUE.

This community of Rafaee fakirs in Hyderabad is composed of about three hundred men, women and children. Their leader, Haji Shums-ud-din Rafaee, direct descendant of their founder, has in his possession their sacred books—scrolls of Arab paper, jealously guarded, which explain in detail how the "Zurbath" or "self infliction of wounds" should be done, along with genealogical trees of characters common both to the Koran and to the Old Testament.

Their ceremonies of "self mutilation" are to-day of three distinct types: a solemn religious celebration in memory of their founder, held once a year at night in the graveyard; smaller rituals at other times throughout the year in the palaces of Mohammedans of high rank; and thirdly, individual demonstrations in the bazaars for the base purpose of collecting money. Their annual nocturnal ceremony ("Urus") around the tombstones and the smaller rituals by day in the palaces have been witnessed by very few Europeans, and it is these that will be described in this paper. In other parts of the world travellers have seen at times, in fairs and bazaars, the more simple of these practices; but individual, unsanctified performances are always irregular and incomplete, the more serious members of

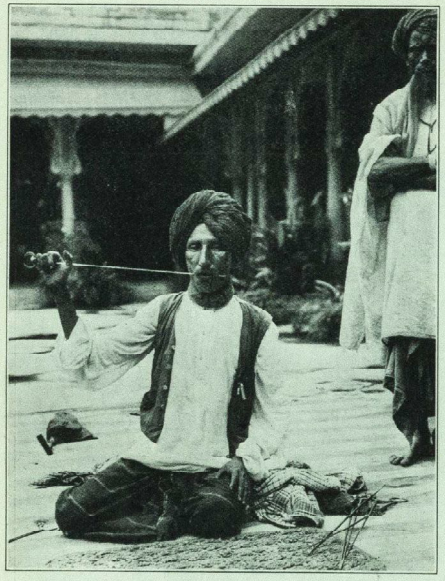


FIG. 6.—THROUGH BOTH CHEEKS. NO BLEEDING.
(*Copyright.*)

their community frowning on this prostitution of their ancient rites.

I can find no reference to this group in Hyderabad in any of the literature. This is not altogether surprising when it is realized how difficult a city Hyderabad is to know. Being in a Native State and not directly under British control, no European was allowed, until recently, to pass through its gates without a special permit, stating the exact nature of his business and the length of time he wished to remain inside. My father, for long one of the few European doctors within reach of this city, possessed a free pass, but even he did not hear of the existence of these Rafaee fakirs until he had been there for many years. In this human backwater the tide of modern civilization is hardly felt; changes flow by, while in the stagnant depths of the city itself original practices continue undisturbed, and manners and customs that have long since died out in other parts of the world may still be studied.

One morning in September, 1925, when I was on holiday in India, my father and I took photographs of the Rafaee fakirs for the first time, and some of these I was able to repeat one afternoon a few weeks later, when I saw them again alone. Seven of the eleven pictures in this number of the Journal were taken on these two occasions, and they have not before been published. Since then my father has watched these fakirs many times by day and four times by night at their annual ceremony; with my brother Alan he has added many most excellent photographs to the series, and he has also taken a complete cinematograph record of their performance.

THE ANNUAL CEREMONY.

Every year, to celebrate the anniversary of the death of their founder, these Rafaee fakirs pass three solemn days in fasting and in prayer; the fasting is strict and the prayers are long, as the whole Koran has to be read through. After dark on the last night a weird ceremony takes place, a ceremony which resembles closely in its sensational atmosphere and grisly detail that seen by Lord Curzon at Kairwan in North Africa. It is held amongst the tombs in the private graveyard of the sect in Begum Bazaar, in the North of Hyderabad City. It is reverenced by all as a most solemn religious occasion.

Many of the tombstones are brilliantly lit, and many are decorated with flowers and cloth; all around are incense vessels pouring forth their pungent fumes. The honoured grave is larger, brighter, and more ornate than the rest; and around it, leaving a small space in the centre, crowd the audience of perhaps three thousand men. Between the tombs is holy ground, so that all

(*Copyright.*) FIG. 7.—SKILLED ASSISTANCE.

who enter must first take off their shoes. Near the centre are the musicians with their drums or tom-toms, from whose incessant deafening noise there is no escape. Behind these queer musicians sit some of the priests, mumbling and muttering quotations from the Koran.

A general buzz of excitement announces the arrival of the Leader, Haji Shums-ud-din Rafaee; a remarkable-looking man, Arab in appearance and quite unlike the local Deccanis in the closely packed audience around him. In the two photographs (Figs. 1 and 2)—the only pictures, as far as we know, of this nocturnal ceremony, and here published for the first time—he is seen sitting on the left in his Arab head-dress, the green of which is a sign to all that he has but recently returned from a pilgrimage to Mecca, and is now entitled to be addressed as *Haji*. On the mat before him is laid out the singular collection of instruments soon to be put to such gruesome use.

The drums cease for a moment, and in absolute quietness—strange for such an assembly in the East—he opens the ceremony with a prayer for the peace of the departed soul of their founder in Arabia, a prayer devoutly followed by all Mohammedans present. His next duty is to light the incense vessel seen in the foreground of Fig. 1. The incense it contains he brought from Arabia, and from it arise clouds of smoke.

The monotonous drumming of the tom-toms begins again as the first fakir steps forward to the mat and bends down to pick up one of the long pointed instruments lying there. Holding it up with arms outstretched, he presents it to the priest, who passes it through the incense smoke and blesses it, thus imparting success to the undertaking and safety to his person.

The tom-toms stop once more, the murmur of the crowd dies down, and for a moment everything is quiet, as this strange man takes the instrument in his right hand and with uncanny deliberation drives it through the middle of his tongue. Not yet content, with hardly a pause, he snatches two others from a friend and runs both these through his cheeks; and pierced like this, urged on by the renewed beating of the tom-toms, and cries of approval from his friends, he struts about, this way and that, turning round and round for all to see, justly proud of his terrible appearance, showing no evidence whatever of pain, and bleeding not at all. In Fig. 2 we see him holding the instrument through his tongue, with two others through his cheeks supported by a man behind him. After a

(*Copyright.*) FIG. 8.—"SKEWERS" THROUGH EACH CHEEK FROM INSIDE THE MOUTH.

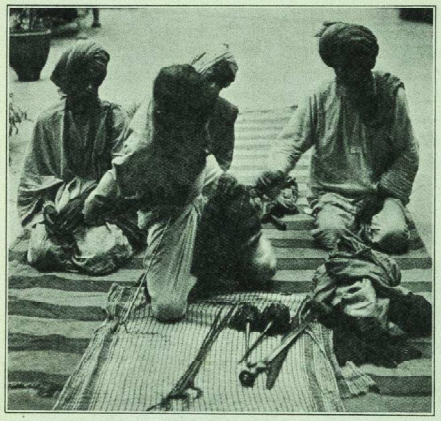


FIG. 9.—PRESSING INSTRUMENT THROUGH SKIN OF ABDOMEN.
(Copyright.)

time, with the help of his friends, the instruments are removed, and once again he is blessed by the priest, while the smoke from the incense plays on his wounds.

His place on the mat is taken immediately by one of his brethren. They follow one another in quick succession, each doing something to show his immunity from bodily pain: young men, like the one just described, pierced several times at once; boys, from want of practice, doing one or two tricks imperfectly; or the pathetic figures of feeble old men trying hard to do the things that they must have found easy in their younger days. As well as piercing their tongues and cheeks, some transfix their abdominal muscles; others drive instruments firmly into the tops of their skulls; while still others prefer to transfix their necks, either from side to side or from front to back, not just under the skin but right through the deeper structures, each performance more alarming than the last.

The most dramatic of all their demonstrations has yet to be described. A fakir, perhaps already pierced in many places, gouges out his eyeball with a pointed instrument inserted into the corner of the orbit, levering the eye so far forward that it remains dislocated in front of the lids after the instrument has been withdrawn. With his eye protruded in this hideous manner (it can just be seen in Fig. 1) he dances about in front of the audience for several minutes, before pressing it back into place with the palm of his hand.

The ceremony is concluded with another prayer for the peace of the soul of their founder, the whole audience joining in the solemn *Ameen*. When the crowd has dispersed the performers break their fast with an enormous meal.

There are two points about this annual ceremony of the Rafaee fakirs that impress onlookers most forcibly: the intense religious fervour shown by everyone present, and the hypnotic influence of the monotonous drumming of the tom-toms. The first of these points was strikingly illustrated by a missionary with forty years' experience of religious rites in India, who, at the end of this ceremony, insisted that never before had he seen such evidence of genuine and pious zeal in so large a crowd. The second point, the profound influence of the drums, was brought out well by a hard-bitten and far-travelled British cavalry officer, who, towards the end of the performance, with the incessant throbbing of the tom-toms in his ears and the tense atmosphere all around him, remarked that with but little further instigation he would leap into the arena and transfix himself—surely a clear example of the uncanny influence that oriental music and an emotional atmosphere like this may have on the minds of onlookers, even the least impressionable, an influence stressed so very well by Curzon in his inimitable style in that description of the resounding and reverberating drums of Kairwan.

THE RITUAL IN THE PALACES.

On the September morning in 1925 when I was first introduced to these strange men of Hyderabad, it was by the invitation of Nawab Salar Jung, in whose palace,

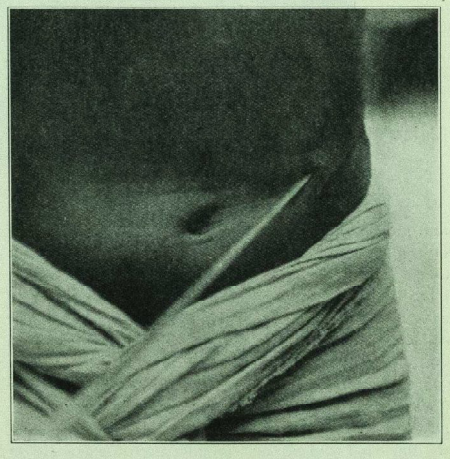


FIG. 10.—THROUGH THE ABDOMINAL WALL.
Scars of old attempts are clearly seen. Not a drop of blood.
(Copyright.)

in one of its forty-eight courtyards, the demonstrations took place.

In bright sunlight four Rafaee fakirs sat on a coloured rug among the palms, with their instruments laid out on the ground in front of them (Fig. 3). These weapons, the same as those used at the nocturnal ceremony, were long metal skewers about a quarter of an inch in thickness, and varying from one and a half to nearly three feet in length. One end tapered to a point, the other was adorned with the crescent of Islam, while the surface, though polished, was slightly rough.

With his fellows muttering prayers behind him, one of the fakirs, Zil Fakhr Shah, knelt forward, picked up

FIG. 11.—THROUGH THE SKIN OF THE ABDOMINAL WALL.
(Copyright.)

a skewer, licked it—by way of sterilization!—(Fig. 4), wiped it dry on his shirt, and, just as at the annual ceremony, ran it slowly and deliberately through the middle of his protruded tongue (Fig. 5). The expressions on the faces of the old men on either side in Fig. 4 are worth noting.

After a moment or two of demonstration this weapon was withdrawn and he passed another through his cheeks (Fig. 6). I shall not describe in detail here how these things were done, as the photographs show this clearly—well enough, we hope, to convince most people that conjuring and trickery play no part. On some occasions separate skewers were passed through each cheek, a colleague perhaps lending a helping hand (Figs. 7 and 8).

After withdrawing these instruments in turn, the same fakir, with his body bent forward and the crescentic end of another long skewer pressed against the ground, pushed the point obliquely through a fold of the skin of his abdomen (Fig. 9). The site chosen was puckered with many scars (Fig. 10), and the point protruded about six inches away (Fig. 11). There is no reason to suppose that the peritoneum was pierced.

At the end of this first half of the performance, the absence of bleeding and the apparent freedom from pain were the most intriguing problems left in our minds.

J. H. HUNT.

(To be concluded.)

"ENDEAVOUR."

JOTTINGS FROM THE MEDICAL LOG.

IN writing about the medical side of *Endeavour's* trip, one feels that the least interesting aspect of this very interesting experience is being recounted. But at least it will be less controversial and less open to wholesale contradiction than an account written on almost any other aspect of the trip.

The writer had signed on as an ordinary deck hand and not in any medical capacity. Sailing on board Mr. Sopwith's 700-ton Diesel-engined yacht, was our official and very efficient M.O., Mr. Roscoe Clark, a colleague from Guy's.

On the trip over as far as the Azores incident was conspicuous by its absence on board. The crew ate and slept heartily—too heartily for the amount of exercise taken. The movement of the ship made most forms of activity difficult, and boredom and constipation were the chief complaints. The ship's medicine chest was well stocked with Epsom salts and cascara pills, so that one of the above could be adequately dealt with. According to those of our pros. who had been on board her, *Shamrock's* crew in 1930 had suffered severely from an enteritis, possibly in most part due to over-eating and lack of exercise.

At the Azores those of the amateurs who had been on board *Endeavour* moved on to *Vita*, being relieved by the other half of the amateur crew.

Once on board *Vita* it was possible to work out a routine of training, which started at 6.15 a.m. with scrubbing decks, and culminated in a "work-out" at physical jerks at 6 p.m. At the latter the unofficial Assistant M.O. was elected trainer, and from 6.15 p.m. onwards was probably the most unpopular man on board.

Six days after leaving the Azores a wireless message was received from *Endeavour*. She wanted to put one of the amateur crew on board for "slight medical attention". In a freshening breeze and a sea that had got up just sufficiently to make the manœuvre exciting, a boat was got off from *Vita* with an amateur as relief crew and the patient was collected. The whole operation took forty-five minutes, and was carried out in a very seamanlike manner.

With the arrival of the patient, both M.O's. went into consultation and agreed on the diagnosis of a perfectly good carbuncle on the back of his neck. This was treated by the application of a suction cup followed by mag. sulph. paste dressings three times a day. Halibut-liver oil was also administered internally. The patient made an uneventful recovery, and the carbuncle was completely healed in a fortnight.

Our next case, a badly sprained ankle, turned up within two hours of getting *Endeavour* alongside the quay at Herreschoff's Yard at Bristol, R.I. The ankle was duly strapped, and its owner returned to duty next day suffering hardly any inconvenience.

The same day Clark left us and we only saw him at long intervals after this. It was thought that the presence of two M.O's. was unnecessary.

Soon after this it became necessary to establish two regular surgery hours, the first after breakfast, and the other took place at varied times between 6.30 and 10 p.m. after the day's work was finished. The attendance averaged about five at each for a couple of weeks.

The second mate developed an obstinate crop of six boils on the back of his neck, alongside a large sebaceous cyst he had had for years. The boils yielded slowly to mag. sulph. paste dressing and brewer's yeast *per os*. The professional mastheadman had had a knock on his elbow from the sheave of the main halyard while on his lofty perch. After a latent period of four days he developed a very painful elbow. A sub-periosteal hæmotoma on the tip of his olecranon was diagnosed, but in twenty-four hours a hot, brawny induration had spread down the ulnar border of his forearm. Infection was suspected, a septic stump of a tooth being a possible primary focus. But the man's temperature and pulse were normal and general condition excellent. Our official M.O., who had paid us one of his flying visits, was called in to a consultation, and it was decided to watch and wait. The condition cleared up spontaneously after a couple of days' rest.

During the refitting process *Endeavour* was hauled up high and dry on a slip. Her centre-plate, a galvanized steel affair, was lifted by winches into a position where it could be polished. Two of the amateur crew did the polishing, each armed with a contraption which consisted of an electric motor driving a revolving steel disc on which were placed circular pieces of sand-paper. As can be imagined, a lot of dust evolved. Both of them, after finishing the job, complained of anorexia and nausea, and that all food tasted of zinc. By next morning they were feeling distinctly under the weather. Both had developed a tracheitis with a troublesome cough and retrosternal pain. One had had a couple of "shivering fits" in the early hours of the morning. Examination failed to show any rise in temperature or pulse, or physical signs in the lungs. An expectorant linctus was prescribed and a half pint of milk *t.d.s.* The nausea and lack of appetite lasted thirty-six hours.

On the day we sailed down to Newport from Bristol under full racing rig, a second sprained ankle was added to my bag.

A few days later, while out on a trial spin, one of the professional crew was hit on the back of the head and neck by the boom. He was unconscious for a few seconds, and was neatly dropped into the bosun's locker out of the way and a first examination was made. Not suspecting any great damage, he was supported as far as his bunk in the fo'c'sle. During the next two hours, whenever my duties as deck hand allowed me, I paid him flying visits. A steadily dropping pulse-rate with increasing nausea and the appearance of paræsthesia at the finger tips of both hands suggested the probability of interesting complications setting in. He was turned over to lie on his face, which position he was glad enough to keep as his shoulders were very painful. That night he became very querulous, and a handful to manage. Next morning he was removed on his cot to Newport Hospital for X-rays of his skull and upper spine and for observation. The X-rays proved negative as to any bony lesion, and he rejoined the ship after five days.

Mention here might be made as to the condition of the crew's hands. The amateur part of the crew had expected to have a lot of trouble in this direction, and on the way over a lot of rope-hauling had been indulged in, in order to harden them. But with the exception of one member of the crew, trouble with hands was of a trivial nature. Broken finger-nails acquired in handling the sails and cuts from the sharp ends of stranded wire rope were the chief minor annoyances. Surgical plaster was in great demand, mostly for the last.

The one exception was an amateur who, by reason of the excessive horniness of his hands, had on the trip over been the envy of us all. These hands, whose palmar surfaces resembled more the back of an armadillo in their scaliness than human extremities, gave their owner and the Assistant M.O. a lot of trouble. The tough skin cracked and got infected, and on four occasions whitlows developed which had to be incised.

Dressings were done not always under ideal conditions. For instance, on one occasion the doctor and his patient retired to what had been *Endeavour's* bathroom. The bath had long since been removed, as so much useless weight. We only used it to keep our beer in, anyway. The patient walked straight into a couple of fly-papers which were hanging from the ceiling. He was eventually unstuck. Then the doctor in his turn became involved with another fly-paper that had performed its intended function only too well, at the precise moment that he was endeavouring to ram a sterile gauze drain into a wound. After further delay for unsticking, this delicate operation was successfully completed, in spite of the fact that the M.O. set his hair on fire at the crucial moment over the chimney of one of the two oil lamps that were supplying the illumination. Then, one day, one of the after-guard called us in. We could not help feeling that our stock had risen considerably, just as the country G.P. must feel when the neighbouring duchess calls him in for the first time. An enteritis was diagnosed after a full routine examination, kaolin in ʒij doses of the powder prescribed *t.d.s.* and the patient made a rapid and most satisfactory recovery.

For a few days before the races started things became very slack in the medical line, and regular surgery hours were abandoned. The whole crew were very fit and strong. However, just before the start of the second race an incident occurred which might quite easily have terminated fatally for the man concerned. We had towed out to within half a mile of the starting-line. There was quite a fair sea on, and both parts of the main halyard had swung aft on each side of the mast and fouled two lugs about four-fifths of the way up. The professional masthead man was hauled up in a sling to clear the mess. Halfway up he lost hold of the halyard he was guiding himself up by. The roll of the ship swung him out through a thirty-foot arc. Twice he was crashed against the mast. Down on deck it was a very frightening sight, and everyone expected him to fall out of his sling. He was lowered away and lost consciousness just before reaching the deck. The job was finished by an amateur. The injured man was carried into the state-room aft, where he regained consciousness almost at once. Remarkably enough no bones were broken, but he was severely shocked. He was lashed on to a couch to prevent his being thrown off by the ship's movement. His left thigh and left side of his thorax were severely bruised, but he insisted on coming on deck for the last hour of the race. His thigh was sufficiently tender to keep out of the bosun's chair. But he carried on with modified duties the next day. Every evening the M.O. practised his skill as a masseur on that thigh, and in five days most of the stiffness and pain had disappeared.

The professional skipper became the next candidate for massage. He fell down the bosun's locker during the course of a race, badly bruising his left leg just below the upper end of the fibula. The leg became very swollen, and œdema extended to below the ankle on the lateral surface.

He was too important a member of the crew to spare, and so had little chance to rest his leg. And in spite of massage and intensive hydrotherapy, his leg remained swollen and œdematous till the end of the series.

The crew on the whole thoroughly appreciated having an M.O. living on board. They seemed to take a delight in hauling him off a job of work, just to give them a dose of salts, or for something else equally trivial. And it was interesting to note that a dose of salts given with a few words of advice from the "Doc." was apparently much more effective than one taken on the patient's own initiative. Such is the power of suggestion.

The work on the ship was for the most part heavy manual labour. During the tuning up period it was perhaps at its hardest. One rose at 6.15 a.m. to the sound of "Rise and shine my hearties" or "What are you going to tell 'em to-day?" or some such happy phrase from the ship's cook. During the races the day started earlier. Deck scrubbing and the general "shammy down" to follow commenced at 5.30—six hours before the starting-gun of the day's race.

All the races were tensely exciting. On the way out to the start, which was twelve miles away, the sea was so crowded with craft that it looked like Epsom Downs on Derby Day. The reception we received on getting back after each race, whether we had won or lost, was terrific in its heartiness and cordiality. Sirens, hooters, and even the horns of the cars along the edge of the harbour were let off in one huge babel of sound.

At the end, when we left Newport, we all carried away what will be a lasting impression of the sporting and kind way we were received and treated by everyone.

W. F. R.

The Housing Problem.

Two Deans in two contiguous ages born
The Hospital of Rahere did adorn.
Most mild of mien, of tongue a trifle tarter,
The first acquired for us a Royal Charter.
Shall gold be grudged, or given with a grouse,
When t'other would provide a Charter House?

"THE LIFE AND WORKS OF CHARLES BARRETT LOCKWOOD, 1856–1914."*

(*Continued.*)

III. ANATOMY; THE GREAT NORTHERN HOSPITAL; BACTERIOLOGY.

"By the eye you will learn much."—*Richard Bright.*

When Lockwood began demonstrating anatomy in 1881 the number of students attending the rooms was higher than ever before, and a large new room had to be furnished and arranged. Lockwood and Bruce Clarke worked hard together in establishing what came to be the best dissecting room in London. The work was re-organized and weekly written examinations were held, the papers being corrected with the students. Lockwood instituted dissected specimens, to be kept to help men to read up their parts; he also introduced a course of demonstrations on advanced anatomy, and had specimens and dissections carefully prepared to illustrate every point. His own dissections showed that his skill in that line was unrivalled, while, as a demonstrator, his great object was to encourage men to see things for themselves. If a student asked him a question he would say: "Come and see," and then go round the rooms till he found the answer on a part. Mere book knowledge counted for little in his sight unless accompanied by determination on the part of a man to take nothing on trust until he had seen it, to learn each piece thoroughly, and to draw what he saw. This attitude, coupled with his well-known dislike of mediocrity, led at the time to the invention of some doggerel lines

"Who tries to learn his work by Gray,
A helpless, hopeless lump of clay?
The *average* man."

"He was an excellent teacher, clear and precise," says one who heard him. As a lecturer on anatomy he liked to strike an original note. His first lecture of one series was solely on Anatomy Books, which he said were all bad, though Quain was less bad than most. Some sought to explain this qualification by the fact that Quain alone, at the time, referred to four different pieces of anatomical research carried out by Lockwood himself. His patronage, however, was short-lived, for he proceeded to discuss the book critically, beginning with the Preface, next going on to the Index, and so surveying with caustic wit the whole book.

Anatomy to Lockwood was no series of dry facts, but a living subject. He knew it to be the very foundation of surgery, "the bed-rock upon which surgery is built", as he described it, ". . . not the work of two or three winter sessions but of a lifetime". Moreover, he aimed above all at the interpretation of anatomy. "The human body was a soulless thing, a mere Undine," he said, "until morphology and embryology came to tell us the meaning of so many things hitherto mysterious . . . Comparative embryology is the very soul and essence of scientific anatomy. Nor does this comprehend all. Histology and microscopic anatomy ought to be mentioned, also the art of dissection and of anatomical preparation".

Lockwood therefore studied embryology closely, teaching most of it to himself and thereby gaining a deeper insight into his anatomical and surgical work. He spent much of his time in original research and published a number of papers on the development of the great omentum, arteries of the abdomen, the testicles, the pericardium, diaphragm, great veins, and upon other embryological subjects. Another rhyme invented about Lockwood at that time runs—

"Who knows his pericardium well,
At embryology is an awful swell?
Why, only, only C.B.L."

Two papers written by Lockwood at this period deserve special mention here. The one was concerned with the "Anatomy of the Muscles, Ligaments and Fasciæ of the Orbit" (6), and the other, published afterwards, dealt with "The Fossæ round the Cæcum" (7). In the first of these papers he described two structures which came to be known as the tendon of Lockwood and the suspensory ligament of Lockwood, while in the second paper he gave what has become the classical description of the various peritoneal folds and pouches about the cæcum and appendix. These fossæ are of special importance from the occurrence in them of retroperitoneal hernia.

The practical aspect of anatomy was always before Lockwood, and an example of this is afforded by a contribution from him to the *British Medical Journal* in 1883, headed "Ligature of the Occipital Artery—A Dissecting Room Operation". The process he described was certainly directed towards acquiring surgical dexterity and learning anatomy in a highly practical manner.

His attention to the minutest details and his determination to take no authority from the text-books is well shown in a memorandum which he sent to the *British Medical Journal* in 1885 about "The Use of the Fossa at the Lower End of the Fibula". This fossa the books described as giving attachment to the posterior fasciculus of the external lateral ligament of the ankle-joint. But Lockwood examined numerous specimens and found that this was only partially true and that its most important use had been overlooked. He pointed out that the ligament is attached to the lower part of the fossa, the upper part serving for the reception of the ligament during extension of the foot.

With Bruce Clarke he brought out *The Dissector's Manual*. It was characteristic of him to include in it a glossary with derivations, but he was unable to put on paper what he could demonstrate so well on the corpse. It contained a good deal of perhaps unnecessary detail about the organization of dissection and preparation of the subject. The reviewers were hard, and remarked: "We cannot say that a perusal of this new work has persuaded us that it supplies any real want of the medical student", and, what was worse, "Many of the diagrams have but little artistic merit or anatomical accuracy" (8). This attitude was possibly somewhat biassed owing to Lockwood's rather unorthodox and dogmatic views on what could and what could not be seen on dissection. None the less, it was as a practical demonstrator of anatomy that he excelled, and at the British Medical Association Meeting in Glasgow in 1888 he delivered an address "On the Teaching of Anatomy" which showed something of his methods of work. Always strict about the correct use of words, it was typical of him to open the address by defining what was meant by Anatomy. He spoke discouragingly of "cramming", and in an original way showed how simple some of the more complicated pieces of anatomy might become if approached on a synthetic rather than an analytical basis. "The hardest part of our task as teachers is done," he said, "when we have taught our pupils to observe and think for themselves—a task, I confess, hard to achieve, but full of interest to ourselves and highly conducive to their success".

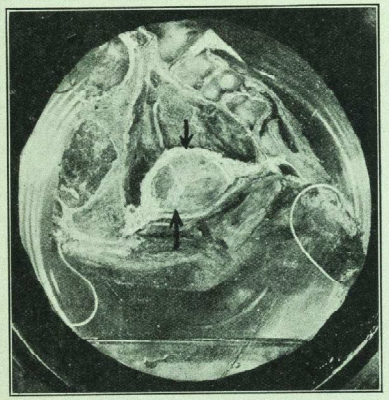


FIG. 1.—SPECIMEN PREPARED BY LOCKWOOD TO ILLUSTRATE HIS PAPER ON "THE ANATOMY OF THE ORBIT" (1885), AND PRESENTED BY HIM TO THE HOSPITAL ANATOMICAL MUSEUM. THE SUSPENSORY LIGAMENT OF THE EYE ("LIGAMENT OF LOCKWOOD") IS SEEN FROM ABOVE. THE EYE HAS BEEN REMOVED.

(*Reproduced by kind permission of Professor H. H. Woollard.*)

The vigour with which Lockwood carried out his researches and the strenuous time which he spent in gaining a foothold on the ladder of achievement made their mark upon him. "His long period of service in the dissecting-rooms," wrote Marmaduke Shield, "permanently damaged his health to an extent probably known only to myself. Lockwood often referred to this in conversation, and asserted that he never recovered full health and vigour".

It is certainly difficult to grasp how he managed to find time to get so much done, for, in addition to his work in the dissecting rooms, he had been appointed to the surgical staff of the Great Northern Hospital shortly after he became demonstrator in anatomy. He was also Clinical Assistant to Mr. Warren Tay for a time at the Royal London Ophthalmic Hospital, and had his private work to attend to as well. Yet throughout this time he was making his name as a teacher of anatomy and of operative surgery, and was doing original work of a high order. In considering his powers of concentration, his penetration, and his accuracy, one cannot help recalling the great name of John Hunter, whom in many ways he resembled. Both of them were men of a determined and somewhat brusque personality, treating fools with scorn. Both were possessed of an insatiable curiosity, concerned with function no less than with form. Above all, both of them were sceptical of hearsay evidence and made it their business to see, to observe, and to "try the experiment".

The value of medical societies for the discussion of new work was always appreciated by Lockwood, and he was instrumental in the founding of at least two. One of these was the Anatomical Society of Great Britain. For some years before its institution, Sir George Humphry had contemplated the formation of an Association of British Anatomists, but it did not take definite shape until Lockwood was associated with him in its organization. Humphry, Lockwood and Macalister discussed the matter during several week-end visits to Cambridge, and Lockwood willingly undertook the heavy task of enlisting the interest of the teachers of anatomy in the London schools. His labours bore fruit, and the first preliminary meeting of the Society took place early in 1887 in his own house in Upper Berkeley Street. It was followed shortly afterwards by a public meeting at St. Bartholomew's Hospital,

* The Wix Prize Essay, 1934.

with Humphry as President and Lockwood as Secretary. He read a number of important papers to the Society, and later, in 1902, was unanimously chosen as its President.

The origin of the other Society, with which Lockwood was associated, was concerned with the removal in 1888 of the Great (now the Royal) Northern Hospital from the Caledonian Road to its present site in Holloway. Lockwood had been appointed Assistant Surgeon to the Hospital in 1882, and he remained attached to it for seventeen years. When the move was made from the old quarters, fierce opposition was encountered from the local practitioners of Holloway, who feared that, with the coming of a large out-patient department, the bread would be taken out of their own mouths. But it was Lockwood who brought good temper and reason to bear upon a difficult situation. Not only was opposition stilled, but the local doctors were brought into friendly relationship with the hospital by the establishment of the North London Medical and Chirurgical Society, a body which still continues as a very active memorial to its founder.

At the Great Northern Hospital Lockwood gained his early experience in operating. He tried there to get the sisters and nurses to become inculcated with "aseptic" methods, but the difficulties were immense. There was only one operating theatre, and it was no uncommon thing for from three to ten foully septic cases to require operation within twenty-four hours. One of his colleagues of that time says: "As an operator he always seemed to me to be in a state of high nervous tension, which sometimes found a vent in finding fault over trifles." The conditions irritated him and he often had a sharp word for the way in which his instructions were carried out by the nursing staff, whose work he would often compare disparagingly with that of the nursing staff at Bart.'s. But little ill-feeling was engendered, for it soon came to be known that at Bart.'s the nurses were being told that if they wanted to see how things ought to be done they should go and take a look at the nursing staff of the Great Northern Hospital.

Lockwood's surgical skill soon became evident and he was always tending to strike out on new lines and put original ideas into practice. His wards had to be kept scrupulously clean, and his colleagues quickly recognized in him a man with power to his elbow. At the meetings of the Medical Council of the Hospital he would cut short speeches that seemed unnecessarily loquacious in a manner peculiarly his own. Problems required dealing with in a practical manner, and he had little time to spare.

The small hospital museum was fitted up for him as a laboratory, and here for many years he studied and experimented, deeply interested in the new science of bacteriology. One day from the hip-joint of a boy supposed to be suffering from acute rheumatism he obtained fluid from which he grew and identified *Staphylococcus aureus*. He injected a solution of the growth intravenously into a rabbit and subsequently obtained *Staphylococcus aureus* form an abscess round its spinal cord. The subject fascinated him, for "Koch's Postulates" proved to be no mere theorizing, but a matter which could be investigated and seen with his own eyes. His work in this little laboratory led him on to investigate the question of surgical cleanliness of the skin, and his researches were eventually published in his book, *Aseptic Surgery*.

Much of Lockwood's early bacteriological work was done under the guidance of Klein, an Austro-Hungarian, who came to London from Vienna in 1871. The absence of any training in bacteriology at the London hospitals was a matter that had for some time been causing Lockwood much serious thought, and consequently, in 1889, he decided that with the help of Dr. Vincent Harris he would, during the following summer session, hold at Bart.'s the first class to be given there in Elementary Practical Bacteriology. Considerable opposition to the scheme had to be overcome, but the class was only open to qualified men, and it was attended by a few of them, of whom Sir Holburt Waring tells me he was one. The course, as a matter of fact, proved to have such possibilities that in the same year (1890) a special laboratory for bacteriology was constructed, and plans for a more extensive course the following year were made. It is of interest here to recount the items in the first syllabus of bacteriological teaching at the Hospital. The subjects were treated in the following order:

"Microscopes and high powers—oil immersions. Bacteria, structure and composition; their distribution, classification, and morphology; their life-history, growth, and reproduction. Spores.
"Sterilization. Instruments. Incubators. Potato Cultures. Bacteria of Water.
"How to distinguish different species of Bacteria. Staining reactions. Cultivations in different nutrient media. Examination and Cultivation of the Bacillus subtilis in different media.
"Inoculation. Bacteria of wounds and abscesses. Cultures from wounds and blood. Septic and Infective Organisms. Fractional Cultures.
"Pathogenic Organisms. Anthrax. Tubercle. Leprosy, etc.
"Pathogenic Organisms. The question of attentuation of Virus."

These classes he gave for three years in succession until, in 1893, the work was taken over by Dr. Kanthack. The shortcomings of his own knowledge of the subject Lockwood would have been the first to admit, for at that time his learning was but rudimentary. Nevertheless he put the whole of it at the disposal of those with whom he worked, in the confident hope that it would prove, as indeed it did, of first-class importance for practical use in ward and theatre. Much knowledge and experience yet remained to come, but he would gladly join himself with the sentiment of Hippocrates: "The power to explore is to my mind a great part of the art."

E. C. O. JEWESBURY.

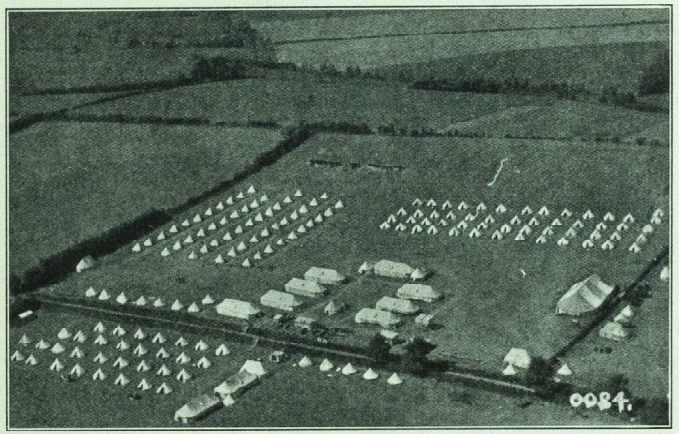
(To be continued.)

STUDENTS' UNION.

UNIVERSITY OF LONDON OFFICERS' TRAINING CORPS.

Again the U.L.O.T.C. enjoyed a glorious fortnight's camp, this year at Sandown, Isle of Wight, from July 15th to 29th. 200 members of the medical unit were present, including 46 from Bart.'s, the largest turnout.

The camp was well situated on a southern slope to the east of Sandown, and looked across the bay to Sandown and Shanklin. To the east of the camp were the high cliffs of Yaverland Point,



from which a foolish amateur mountaineer from the contingent had to be rescued, considerably wiser, by the coastguards. Very good bathing was available on a sandy beach 200 yards from the camp, where, shortly after the days' work was done, many officers and men were to be found.

Our uniforms, now very comfortable since plus fours replaced breeches, were made more resplendent by the appearance of Officer Cadet Reserve Badges. Except on ceremonial occasions, shorts replaced the plus fours, and no jackets were worn on account of the very warm weather.

The first week was purely instructional, while the second was devoted to the practical side. During the first week the medical unit marched to Yaverland Fort and inspected the guns, which were being fixed up in readiness for a Territorial Competition. This took place the following week, and was watched by many interested members of the U.L.O.T.C. A soccer competition was started in which we did not fare well. Rugger was precluded by the hardness of the ground. There were two polo matches against the local teams, which were held in the sea at the end of the pier, and a third in the Pleasure Pool at the other end of the town. Of these we won two and drew one. Cricket matches were also played against nearby villages. Bart.'s men took part in all these activities, and several members won valuable prizes in the Sandown open swimming competitions.

An innovation at this camp was the Visitors' Day on Sunday, July 22nd, when the camp was thrown open to some 300 relatives and friends of members of the corps.

The second week at camp was a very busy one, working for the inspections, Herringham Cup stretcher drill competition, and Certificates A and B. Bart.'s were runners up in the Herringham Cup competition, being only 6 points behind U.C.H., who won with 85 points. Our results in the Certificates A and B were very satisfactory.

We had some very distinguished visitors with us, including our Honorary Colonel, the Earl of Athlone, Chancellor of the University, and Col. Filon, the Vice-Chancellor, who explained to us our military position and what was expected of us by the War Office, also Col. Macmillan, who gave us an interesting and amusing lecture on the work of the Field Ambulance in the last war.

Major-General O. Levers, D.S.O., M.B., D.D.M.S., of the Southern Command, with the assistance of Major W. L. E. Reynolds, of the War Office, conducted the annual inspection, and also judged the Herringham Cup competition. The standard and efficiency displayed by the medical unit were very highly praised.

We were pleased to welcome an old Bart.'s man, Lieut. H. B. Lee, of the 47th London Field Ambulance, late sergeant of the O.T.C., who paid us a short visit.

On the 26th we had a successful and well-attended O.T.C. dance at the Pleasure Pool, and the troops enjoyed a cooling dip in the midst of their energetic evening.

On the 27th, the Medical Unit marched to Seaview and there embarked for Portsmouth, spending the morning inspecting the H.M.S. "Victory", and attending the ceremony of the launching of the new cruiser H.M.S. "Amphion". From Portsmouth we went to the Haslar R.N. Hospital at Gosport, where we spent a very instructive afternoon.

In the Gray Cup awarded for efficiency, Bart.'s tied for 1st place with U.C.H., a highly creditable performance, as we comprised the largest number present in camp. One pleasing thing to note here was the sporting action of the other members of No. 1 Coy., from the London and Kings, who voluntarily gave us their assistance on many occasions.

Everyone in the unit agrees that we could not have had a better time, and we hope that more Bart.'s men will join us next year.

At the end of the 1933 Academic Session, No. 1 Coy. was subdivided, St. Thomas's being transferred to No. 2 Coy. owing to the large number then in No. 1. The numbers have so increased that No. 1 is now the biggest Coy., not only in the Medical Unit, but in the whole contingent, numbering 140. Bart.'s has more than doubled its number in the corps in the past year from 36 to 76, and it is hoped that our number will reach 100 this year with the advent of many new recruits, and so make up a company of our own.

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* OLD BLUES.

Played on Saturday, September 29th, at Winchmore Hill, and won by 1 goal, 1 dropped goal (9 pts.), to 1 try (3 pts.).

This was the first match of the season for both sides, and consequently the play was somewhat ragged. The first half was even, and the Old Blues were somewhat fortunate in establishing a lead of 3 pts. when Jones, their left wing, scored in the corner as a result of a blind-side movement. The try was not converted.

After half-time Bart.'s definitely held the upper hand and soon took the lead, when Capper galloped along the touch-line and found Mundy in attendance at the right moment to finish off the movement and score in the corner. Morison converted with a very fine kick. Soon after this Kingdon, who was playing very well, but whose attempts at a drop goal had been unsuccessful, was at last rewarded by a goal from a difficult angle.

We might easily have scored more if our backs had not been quite so hurried and mechanical in their passing.

On the whole it was a very promising start to the season, Morison being in exceptionally good form, his clean fielding and touch-finding being as long and accurate as his best of previous seasons. Prothero, playing instead of Wilson, was good, and did a great deal of defensive work. The forwards seem likely to develop into a very good pack.

Team.—C. R. Morison (*back*); J. G. Youngman, I. N. Blusger, G. A. Fairlie Clarke, J. S. Cookson (*three-quarters*); J. R. Kingdon, D. A. Prothero (*halves*); P. D. Swinstead, K. D. Moynagh, E. M. Darmady, G. Gray, W. M. Capper, R. Mundy, E. E. Harris, J. C. Newbold (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* LONDON HOSPITAL.

Played at Winchmore Hill on Wednesday, October 3rd, and lost by 2 tries (6 pts.) to 1 goal (5 pts.).

The value of these mid-week matches with other hospitals when we field such unrepresentative sides is very doubtful and they should either be cancelled or taken seriously.

It was a very scrappy game, the only bright feature of the first half being the clever run through of Kingdon, who scored between the posts. Morison converted. In the second half our pack seemed very tired, and the London forwards had it all their own way. Two tries were scored from forward rushes by Law and Stewart, neither being converted. During the closing minutes of the game the pack began to get more of the ball, but there was not enough penetrating power in the middle to score again.

Team.—C. R. Morison (*back*); J. G. Youngman, A. W. Little, I. N. Blusger, J. G. Nel (*three-quarters*); J. R. Kingdon, J. D. Wilson (*halves*); R. S. Hunt, K. D. Moynagh, E. E. Harris, A. Grant, G. Gray, J. A. V. Nicoll, N. B. Mundy, J. C. Newbold (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* GLOUCESTER.

Played at Gloucester on Saturday, October 6th, and lost by 2 goals 4 tries (22 pts.), to 1 goal (5 pts.).

At one time it looked as though we were going to break our sequence of defeats at Gloucester, when a quarter of an hour from the end we led by 5 pts. to 3. Then came the deluge, and during the closing stages we were overrun. Up to this time we had more than held our own, not only in the set scrums, but also in the line-outs, where our pack had been superior, Capper and Mundy being particularly prominent with their fine rushes.

Gloucester scored first from a three-quarter movement, the kick at goal being charged down. Immediately afterwards our three-quarters got going, and K. C. Burrow went clean through and punted over the full-back's head. There was a race for the touch-down and Kingdon got there first. Morison converted. We were getting plenty of the ball from the scrum, but the marking of the Gloucester wing forwards, and the slowness with which the ball came back, prevented any successful attempt at scoring. Nel was very unlucky in not scoring after a very fine run. In the last quarter Gloucester succeeded in getting their share of the ball, and their halves and backs, who showed a perfect understanding of each other's play, were much too good for us. Tries were scored for them by Watkins, Edwards, Hordern, Tanner and Williams, Boughton converting two. It is a great pity we cracked so badly. We deserved a much better result after the magnificent play of our forwards. If this had been our fifth match, as it was for Gloucester, instead of being, for most of our side, the second, I think the final score would have been far more flattering.

Team.—C. R. Morison (*back*); J. G. Youngman, K. C. Burrow, A. W. Little, J. G. Nel (*three-quarters*); J. R. Kingdon, J. D. Wilson (*halves*); P. D. Swinstead, K. D. Moynagh, E. M. Darmady, G. Gray, A. H. Grant, R. Mundy, W. M. Capper, J. C. Newbold (*forwards*).

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£	s.	d.	*		†
Staff	12,677	15	10	(72)		
Demonstrators	1,716	11	0	(69)		
Students	765	6	5	(287)		
Old Bart.'s men:						
‡Bedfordshire	25	3	6	(7)	.	(26)
Berkshire	123	3	0	(16)	.	(37)
‡Buckinghamshire	76	19	0	(14)	.	(29)
‡Cambridgeshire	183	6	0	(17)	.	(42)
‡Cheshire	6	16	6	(3)	.	(26)
‡Cornwall	31	11	0	(8)	.	(36)
Cumberland	5	0	0	(1)	.	(6)
Derbyshire	19	14	0	(4)	.	(17)
‡Devonshire	558	15	0	(52)	.	(117)
‡Dorset	52	1	0	(14)	.	(30)
‡Durham	17	7	0	(4)	.	(11)
Essex	253	2	6	(20)	.	(69)
‡Gloucestershire	228	18	6	(23)	.	(66)
Hampshire	446	14	0	(40)	.	(134)
‡Herefordshire	17	12	0	(4)	.	(10)
Hertfordshire	84	11	0	(16)	.	(73)
Huntingdonshire						(1)
Isle of Wight	181	13	0	(12)	.	(25)
‡Kent	573	15	0	(69)	.	(146)
‡Lancashire	91	4	6	(12)	.	(82)
Leicestershire	136	15	0	(7)	.	(28)
‡Lincolnshire	58	17	0	(17)	.	(27)
Middlesex	385	6	0	(21)	.	(68)
‡Norfolk	167	15	6	(21)	.	(60)
‡Northamptonshire	50	4	0	(5)	.	(17)
†Northumberland	101	1	0	(2)	.	(11)
‡Nottinghamshire	19	19	0	(3)	.	(28)
‡Oxfordshire	185	3	0	(18)	.	(29)
Rutland						(2)
Shropshire	35	9	0	(8)	.	(22)
‡Somersetshire	1,148	13	0	(28)	.	(43)
Staffordshire	193	17	0	(5)	.	(37)
‡Suffolk	292	8	6	(20)	.	(46)
Surrey	467	18	6	(54)	.	(180)
Sussex	410	1	6	(59)	.	(174)
Warwickshire	179	2	6	(19)	.	(56)
Westmorland	2	10	0	(1)	.	(5)
‡Wiltshire	110	11	0	(12)	.	(26)
‡**Worcestershire**	158	19	6	(24)	.	(24)
‡Yorkshire	302	6	6	(24)	.	(101)
Wales	60	8	0	(15)	.	(150)
London	2,885	13	8	(193)	.	(971)
Channel Islands	20	0	0	(2)	.	(9)
Scotland	15	5	0	(5)		
Abroad	61	11	0	(12)		
South Africa	362	15	6	(19)		
Canada	114	3	6	(8)		
East Africa	87	12	0	(10)		
West Africa	146	10	0	(5)		
India	201	0	0	(11)		
Ireland	19	14	0	(4)		
North Africa	1	0	0	(1)		
North Borneo	5	5	0	(1)		
Australia	122	2	0	(6)		
China	52	8	4	(9)		
Siam	10	0	0	(1)		
France	50	0	0	(1)		
British West Indies	50	8	0	(5)		
Straits Settlements	7	1	0	(3)		
New Zealand	6	1	0	(3)		
Services	571	17	6	(43)		
Others	32,342	7	5	(328)		
Lord Mayor's Appeal	11,052	2	0			
Funds of College	8,000	0	0			
Value of Building	20,000	0	0			
	£98,800	2	2			

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County. ‡ Counties with Secretaries.

REVIEWS.

RECENT ADVANCES IN PATHOLOGY. By GEOFFREY HADFIELD and L. P. GARROD. 2nd edition. (London: J. & A. Churchill, Ltd., 1934.) Pp. xii + 457. 69 illustrations. Price 15s.

To attempt to give an account of only the more important advances in such a subject as pathology is a formidable task. To be concise, and at the same time to cover the large field that recent research has explored would seem impossible. The authors of this invaluable work have achieved this and have succeeded in imparting attention to the subject.

Of course, it is not to be expected that every subject dealt with in a text-book should receive attention in such a work as this, but a large variety of the problems clarified or solved during the past few years are surveyed in detail. Each section is a comprehensive essay on the present accepted views on each condition rather than a mere catalogue of workers and their results.

Each subject is so well treated that it is difficult to name any single chapter for special notice or commendation. Though it makes dull reading a list of the conditions examined will give a very fair idea of the scope of the work. The reticulo-endothelial system and its functions; experimental research in such matters as tissue growth and tumour transplantation in their relation to the problem of cancer, with a chapter on therapeutics; the deficiency diseases; endocarditis and the arterial diseases; pneumonia, primary lung cancer, the pneumoconioses; peptic ulcer, the relation of gastric function and anæmia, liver disease, diabetes; Bright's disease; the gliomata, encephalitis; the endocrine diseases (thyroid parathyroid, adrenal and pituitary).

It will be seen that each condition is one that has received much attention recently, and each is so adequately explained that one marvels that so much can be condensed into the space of less than 500 pages of comfortable type.

The changes in the second edition comprise re-writing, re-arrangement and the addition of much new material in the chapters on the liver, the vitamins, Bright's disease, cancer and tumour growth, lung diseases (silicosis and lung cancer), and the endocrines (Addison's disease and pituitary diseases). In the chapter on gastric function there is included a most clear and interesting account of the anæmias.

In appearance and size the book is the same.

That it is already most popular is evidenced by the book's almost constant appearance under the final-year student's arm. It is stimulating and instructive alike to student, practitioner and research worker, and we congratulate the authors and the publishers on the excellence of the whole production.

GREEN'S MANUAL OF PATHOLOGY. Fifteenth edition. Revised by H. W. C. VINES, M.A., M.D., Pathologist to Charing Cross Hospital. (London: Baillière, Tindall & Cox, 1934.) Pp. xii + 928. 8 coloured plates. Figs. 425. Price 25s.

The re-writing of this well-known book has certainly been ably done by Dr. Vines and the addition of over one hundred and fifty new illustrations has added to its value. It still remains essentially a text-book for the student and is not intended for advanced workers. But as a manual of pathology it will no doubt continue to find even more friends than in the past. The text is good and the replacement of many of the old illustrations by photographs is an improvement. It is to be hoped, however, that the book will be shortened rather than lengthened in the future, because it tends towards the bulky side.

The additional chapters in this edition concern avitaminosis, diseases of the ductless glands, generative tract and breast, and in the last of these the subject of carcinoma is clearly discussed. As in the remainder of the book, the author deals largely with pathological features, but at times, in other parts, there would seem a lack of co-ordination between clinical and pathological phenomena, which, after all, are interdependent.

The section of the book on parasitology is extremely good and the earlier part of the work on general pathology gives an excellent introduction to the general principles of the subject. In the sections on diseases of special tissues and organs, however, it seems a pity in diseases of the kidney that the author adopts Russell's classification of chronic nephritis, which, though intelligible to a pathologist, is beset with difficulties for the beginner. For the rest, the book maintains its old form, and is a readable and up-to-date representation of the subject, which it has taught to countless medical students in the course of the sixty years since it first appeared.

EARLY FOREBUNNERS OF MAN. By W. B. LE GROS CLARK, D.Sc., F.R.C.S. (London: Baillière, Tindall & Cox, 1934.) Pp. xvi + 295. 89 figures. Price 15s.

The author of this distinguished contribution to anatomical science occupied the Chair of Anatomy in this College for some years. His former students will be pleased that those labours carried on during his sojourn at Bart.'s have culminated in this splendid book.

Man, zoologically, is a primate. The Primates comprise a basal stock of lemurs, the New World platyrrhine monkeys, the Old World catarrhine monkeys, the great apes and Man. The great apes present so many resemblances to man that it is customary to assume that they are both descended from the same common ancestor.

This broad outline covers a great number of problems. Since the lemurs are the most primitive group they necessarily relate the members of the order to the common mammalian stock, and so we find among them some which resemble rodents and others tree-shrews. Thus it might be surmised that controversy would occur as to the right of admission or exclusion from the Primates at this level. The author sets out the anatomical reasons why the Tupaiadæ (tree shrews) should be given Primate status, and there is no doubt that he is right in this. Some anatomists would cast out the lemur, but again Le Gros Clark would retain them. The most interesting creature amongst the lemurs is the rare Tarsius. This inhabitant of Borneo presents so many anthropoid characters that some anatomists have elevated this animal, about the size of a kitten, to full membership of the Anthropoidea. On the other hand, if he is to be retained as a member of the lemurs, then all the other so-called lemurs must be given a reduced status.

Such problems as these can only be argued and settled by an appeal to the details of anatomy. Le Gros Clark's own researches on the cerebral cortex and the thalamus, the visual system, especially the lateral geniculate body, and his first-hand observations in the Far East of the habits of Tarsius, Tupaia, and other forms, establish his authority for the judgments he passes.

In contrast to those who stress so emphatically the close relationship between the chimpanzee-gorilla stock and man as to make the latter almost a direct descendant of the former, there are others who insist on the differences between them, and even go so far as to deny any close genetic relationship between them. Such anatomists dwell on the cerebral disparity between Man and these great apes, the differences in hair growth and direction, the differences in limb proportions, mode of progression, and the shape, usage and arrangement of the digits, etc. The most extreme statement of these differences has ended in a denial of Man's relationship with the apes, and would explain by parallelism and convergence what similarities do exist. Since an ancestor for Man has to be found recourse is had to Tarsius—the tiny lemuroid form that has so many anthropoid characters. Man, as well as the Anthropoidea, then, is assumed to have come from some large extinct Tarsioid.

Naturally *Early Forerunners* has to answer this view, and the evidence presented soon persuades one that there are not sufficient reasons for departing from the orthodox view that Man and the existing great apes are descended from a common ancestor which, by all the usual criteria, would be esteemed an anthropoid ape.

The reader of this fascinating book soon realizes that he is being conducted through a difficult and complex anatomical territory by one who is master of the subject, and it is this very mastery of the subject which makes the book always lucid and interesting.

The mastery of the anatomy of the human body which the medical student acquires enables him to appreciate the full force of the arguments advanced, and to enjoy this book in a way no other student of biology can, for these do not acquire the necessary anatomical knowledge.

Everyone who felt an interest in the origin and form of the human body would thoroughly enjoy this book.

ABSCESS OF THE BRAIN. By E. MILES ATKINSON, M.B., F.R.C.S. (Medical Publications, Ltd.) Pp. x + 289. Illustrated. Price 21s.

The strides which have been made in the surgery of intracranial tumours during recent years have been recorded in a large number of books and papers, but comprehensive accounts of the pathology, diagnosis and treatment of brain abscess are few and unsatisfying. It is therefore a pleasure to meet with a book which gives in clear and simple language a straightforward description of intracranial suppuration, and makes an honest attempt to give the reader helpful guidance in the many problems presented thereby.

Mr. Atkinson writes with the conviction of one who has studied his clinical material thoroughly, and has given much thought to the correlation of clinical phenomena with the underlying pathological

processes. His detailed description of the anatomical relationships of the ear to the neighbouring parts of the cerebrum and cerebellum leads naturally to the consideration of the exact mode of spread of infection through the bone, through the membranes and into the brain substance, and he stresses particularly the localization of adjacent brain abscess to the avascular subcortical zone.

The chapters dealing with signs and symptoms give a careful analysis of the clinical picture in the acute, subacute and chronic types of abscess, and are particularly valuable because they focus attention upon indications for operation and guides to prognosis. The indefinite nature of the signs and symptoms at the time when operation is most urgently required is emphasized, and a strong plea is made for repeated lumbar puncture and ventricular puncture, because of the confirmatory evidence obtainable from examination of the cerebro-spinal fluid.

Mr. Atkinson brings forward strong arguments in favour of approaching temporal and cerebellar abscesses through the infected ear, and he rightly regards the treatment of such abscesses as primarily an otological and then a neurological problem. His description of the delicacy of technique required in dealing with cerebral tissue and his views on the material to be employed for drainage leave nothing to be desired, and his advice with regard to personal attention to after-treatment, avoidance of meddlesome manipulation of drainage-tubes and prolonged drainage is admirable. We feel, however, that he might proceed profitably even further along the same lines and never remove a tube which has to be replaced, and that he might well abandon even the gentlest irrigation of an abscess cavity.

Though a book which will repay perusal even by the most expert, it is so clearly written and illustrated that it is suitable for the use of M.B. students as well as for the aspirants to higher distinctions in surgery.

CORRESPONDENCE.

CUTTING WARDS AND OPERATION THEATRES.

To the Editor, 'St. Bartholomew's Hospital Journal'.

DEAR SIR,—I was very interested in the paper on "Cutting Wards and Operation Theatres" by Prof. Gask, which appeared in your last issue.

I would like to suggest that the custom of exhibiting the stones "taken out of patients' bladders that are cutt within this hospital" in the counting-house was followed as a means of keeping the work and activities of the institution, not only before the Governors, but before all those who were supporters of the charity. Presumably at that time most of the subscribers lived in the City, and not very far from the Hospital, and as cheques were not in use, in all probability they would make a practice of calling at the counting-house to pay over their subscriptions in person. I can imagine that the energetic office staff would take a delight in doing a little propaganda work by pointing out the ever-increasing collection of stones as a record of the continued activity of the institution.

Prof. Gask also mentions that it was necessary to have the operation area railed off to prevent the press of spectators from crowding too closely about the surgeon. I believe that it was not unusual for operations to be considered more or less of a fashionable spectacle. Even in my time I remember that lay visitors were occasionally brought into the old operating theatre at the Royal Infirmary in this city, where they joined the considerable number of medical men who dropped in, not for any particular interest they may have had in the actual cases, but just because it was looked upon as a sort of entertainment to spend the morning in the operating theatre. In fact that old operating theatre was a regular rendezvous, and was quite often crowded with people who came to see each other and to have a talk. In the year 1911 I was present at a series of operations carried out by Prof. Tuffier, in Paris, at the Hospital Beaujon. The theatre was a very large one, but there were no tiers of seats, and we were all just standing crowded round about the table. There must have been two or three dozen people present in the room, and in fact at one time I actually counted sixty spectators, though a good many of them would be students. At the back of the crowd I saw an important-looking, elderly lady, dressed quite fashionably in black, and watching what was going on with the aid of a pair of lorgnettes. I took her to be one of the many lady doctors practicing in the gay city, but on inquiry I found she was the Countess ——, who had just come in to see what her dear Professor was doing!

Yours faithfully,

Newcastle-upon-Tyne; *Oct. 20th.* G. GREY TURNER.

CHANGES OF ADDRESS.

BROWNE, Surg.-Cmdr. E. M., R.N., 40, Philbeach Gardens, S.W. 5.
CLEVELAND, J. W., 46, Clarence Road, St. Albans. (Tel. 79.)
CRUMBIE, J. R., 219, Shirley Road, Croydon.
DALE, W. C., Adeoyo Hospital, Ibadan, Nigeria, West Africa.
EVANS, GEOFFREY, 7, Mansfield Street, Portland Place, W. 1. (Tel. Langham 1717.)
FAULDER, T. JEFFERSON, 2, Westland Road, Watford, Herts. (Tel. Watford 4140.)
FEGAN, R. A., 77, Marlborough Mansions, Cannon Hill, Hampstead, N.W. 6. (Tel. Hampstead 3446.)
HUME, J. B., 61, Harley Street, W. 1. (Tel. Langham 1831.)
KEYNES, GEOFFREY, 31, Weymouth Street, W. 1. (Tel. Langham 1723.)
KILLINGBACK, H. C., 4, Wellfield Avenue, N. 10.
MANSELL, Major R. A., R.A.M.C., c/o Messrs. Glyn Mills & Co., Kirkland House, Whitehall, S.W. 1.
MAYO, H. R., c/o Barclays Bank, Hall Quay, Great Yarmouth.
STORRS, W. T., The Storthing, Cliffe Hill, Lewes, Sussex.
WILLIAMS, R. LESTER, 49, Harley Street, W. 1.

APPOINTMENTS.

ALLNUTT, Lt. Col. E. B., R.A.M.C., appointed Officer Commanding Military Hospital, Gibraltar.
MELLOWS, P. B. P., L.M.S.S.A., D.T.M.&H., appointed Assistant Medical Officer, Port of London Sanitary Authority, Corporation of the City of London.

BIRTHS.

GREEN.—On October 1st, 1934, to Sheila (*née* Hodder), wife of Leslie E. Green, M.R.C.S., L.R.C.P., Eastleigh, Hampshire—a daughter.
KNIGHT.—On September 27th, 1934, at 20, Devonshire Place, W. 1, to Helen Amy (*née* Swann), wife of Ronald Knight, M.D., of Crawley—a daughter.
PHILLIPS.—On October 7th, 1934, at 20, Devonshire Place, W., to Barbara, wife of Ralph Phillips, M.S., F.R.C.S.—a son (stillborn).
PRICE.—On October 17th, 1934, to Mary, wife of Roy Kendall Price, M.D., of Brighton—a son.

MARRIAGES.

PHILPS—WOOD-HILL.—On October 6th, 1934, at St. Michael's Church, Beccles, by the Very Rev. Lord Bishop of Southwark, assisted by the Rev. H. L. Birch, M.A., Rector of Beccles, Alan Seymour Philps, elder son of the late Francis John Philps and Mrs. Philps, of Radlett, to Joan, second daughter of Dr. and Mrs. Wood-Hill, Staithe House, Beccles, Suffolk.
SNOW—BURTON.—On October 3rd, 1934, at All Saints' Church, Kirkee, India, Capt. James Elliot Snow, only son of the late Mr. P. W. Snow and of Mrs. P. W. Snow, The Gables, Porlock, to Mary Gertrude Isabel, younger daughter of the late Lt.-Col. Henry Gerard Burton (Indian Army) and of Mrs. H. G. Burton.
WINDLE—ABBOTT.—On October 6th, 1934, at All Saints' Church, Hove, by the Rev. T. H. Windle, Reginald Webb Windle, M.D., son of Mr. A. R. Windle, O.B.E., of Redhill, Farnham, Surrey, to Joyce, only daughter of Mr. and Mrs. Willoughby Abbott, of Exton House, Second Avenue, Hove, Sussex, and of Cape Town.

DEATHS.

BOND.—On October 14th, 1934, at a nursing home, Newton Abbot, Devon, Barnabas Mayston Bond, M.R.C.S., L.R.C.P., aged 73.
LOWE.—On October 21st, 1934, at Clarehaven, Birchington, Walter George Lowe, M.D., F.R.C.S., formerly of Burton-on-Trent, aged 86.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C. 1. Telephone: National* 4444.

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 3.] DECEMBER 1ST, 1934. PRICE NINEPENCE.

CALENDAR.

Sat., Dec. 1.—Rugby Match *v.* Rosalyn Park. Away.
Mon., ,, 3.—Special Subjects: Lecture by Mr. Elmslie.
Tues., ,, 4.—Lord Horder and Sir Charles Gordon-Watson on duty.
Wed., ,, 5.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.
Fri., ,, 7.—Dr. Hinds Howell and Mr. Harold Wilson on duty.
Sat., ,, 8.—Rugby Match *v.* Pontypool. Away.
Association Match *v.* Old Monovians. Away.
Hockey Match *v.* Surbiton II. Away.
Mon., ,, 10.—Special Subjects: Lecture by Mr. Just.
Tues., ,, 11.—Dr. Gow and Mr. Girling Ball on duty.
Fri., ,, 14.—Dr. Graham and Mr. Roberts on duty.
Sat., ,, 15.—Rugby Match *v.* Old Paulines. Away.
Association Match *v.* Merton F.C. Home.
Hockey Match *v.* R.N.C. Greenwich. Away.
Tues., ,, 18.—Prof. Fraser and Prof. Gask on duty.
Wed., ,, 19.—**Last day for receiving matter for the January issue of the Journal.**
Fri., ,, 21.—Lord Horder and Sir Charles Gordon-Watson on duty.
Sat., ,, 22.—Association Match *v.* St. Mary's Hospital. Away.
Tues., ,, 25.—**Christmas Day.**
Dr. Hinds Howell and Mr. Harold Wilson on duty.
Fri., ,, 28.—Dr. Gow and Mr. Girling Ball on duty.
Sat., ,, 29.—Rugby Match *v.* Otley. Away.

EDITORIAL.

THERE still remains one romance untouched by Misfortune, Pain or Poverty: old Time himself pants after it in vain. Before the year is closed finally and packed away, to be forgotten in the lumber-room of the past, its cares and calamities can be covered and hidden by the glittering tinsel of Yuletide.

It is a characteristic and almost instinctive reaction to adversity that makes Christmas in Hospital rival in its gaiety even the most Dickensian of family parties. Of course there are those, such as the fond *pater vel mater familias*, to whom the prospect seems a hardship, and whose chief desire is to "get out before the 25th". Even these, however, are forced afterwards to admit that it was "not bad". To the solitary and the stranger the festival must indeed be a merry paradise, hence the appearance of the expert "snag" in full blossom.

There are some who deplore the modern tendency to make the present the *foyer* of the future, each day stillborn from neglect in the world's anticipation of the morrow. "Where there was once the worship of the Holy Child," says Chesterton in an essay on this season, "there is now rather the worship of the Babe Unborn. And the Babe Unborn bulks very much bigger when he is not there; and sometimes looks surprisingly and pathetically small when he is there." Be that as it may, the expectation of a pleasure is in itself a pleasure, and Christmas Day here would be a very dull affair without the host of preparations associated with it.

This year the mixture is to be as before and "*Rep. Omnia*" has been written. For some weeks already the Surgery has been disturbed by the discordant note and heated word, the alternating gloomy depression and exultant elation inseparable from the ward show rehearsals of the rival dressers. The preliminary posters have appeared, more incomprehensible and mystifying than ever, the first fruits of those masterpieces of caricature and design that are being prepared by the amateur artists—often their first and probably their last plunge into Art. Shortly the fir trees will arrive, and the Sisters will make the most of their shares of the grants from His Majesty the King and the Governors to rival each other in adorning the wards. The generous gifts of puddings and turkeys will arrive and muscular students engaged for their serving.

In case an essential ingredient of the Christmas fare, the Child, might be missed, in spite of the Sisters' efforts to retain him, there is to be on Christmas Eve Sister Surgery's great party in the Out-Patient Hall, with the giant tree, Clown Bertram, Houseman Santa Claus and all.

In the evening the Lord Mayor's Boy Players will sing in the wards, and so strengthen another ancient link between the City and the Hospital. When at last the Day comes, there will be the topsy-turveydom of the old pagan Saturnalia, when master and servant exchanged places. It is the patient's turn to laugh at his "doctor's" antics, the dresser's to ape his Senior Surgeon's mannerisms in lively sketch and song.

It will be with gratitude that Boxing Day will be welcomed by all, as post-operative treatment for the mental and physical fatigue of "that glorious time of great Too-Much".

* * *

The Boy Players mentioned above were founded in 1419. They were especially favoured by Queen Elizabeth, performing constantly at her Court. They built in London the first covered-in theatre in England and Shakespeare made constant use of them in his plays. They played the female parts and were the cause of many adult actors having to retire to the provinces and overseas to find work. They were disbanded in 1609 by James I for performing a play that angered him, and were not revived until 1929, when the energy of Mr. Arthur Poyser, their present master, interested many influential people and members of the Royal Family. They take part now in many of the great operas as well as in charitable work of all kinds.

* * *

After having been spared by the intrepid Icarus, it is a pity that the old wine bottle which the same lightning conductor had supported for more than twenty years should have been removed and destroyed by the diligent Mercury. It contained a note stating its origin and antiquity.

* * *

With the Compliments of the Season.

It shall be with great regret that we say farewell to Prof. Fraser and Prof. Kettle at the end of this month. The latter has already delivered his last lecture to an impressive audience.

We are sorry that their stay in this Hospital has been so short (Prof. Fraser has been here since 1920, and Prof. Kettle since 1927). They have themselves given an active demonstration of the good that is possible as a result of the mutual co-operation and interchange between the great teaching hospitals.

We offer them our best wishes for the future and feel sure that they will not lose interest in this Hospital. We shall certainly follow their course with keen attention.

* * *

One of the Minister of Transport's ubiquitous street decorations was discovered one morning jauntily enthroned on the highest pinnacle of the Out-Patient Block. Its short apotheosis ended at noon when the beacon was removed by Officialdom, to the evident disappointment of the passers-by in Giltspur Street.

* * *

An Honorary Fellowship was conferred on Sir Harold Gillies at the Congress of the American College of Surgeons recently held in Boston.

* * *

Sir Henry Dale will give the first Dixon Memorial Lecture on December 11th at the University of Cambridge. His subject is "Pharmacology and Nerve Endings".

The Raymond Horton-Smith Prize has been awarded to Herman Taylor, M.D., M.Chir., M.A., for the thesis "Osteitis Fibrosa", an experimental study. Honourably mentioned: W. G. Oakley, M.D., M.A., B.Chir., subject "The Erythrocyte Sedimentation Rate in Nephritis"; H. B. Stallard, M.D., M.A., B.Chir., subject, "Radium as a Therapeutic and a Pathogenic Agent in Certain Ophthalmic Disorders".

* * *

The Seventh Autumn Meeting of the St. Bartholomew's Hospital Golfing Society was held at Walton Heath on Monday, October 22nd, 1934. Thanks to the great kindness of Lord Riddell the members were his guests for the afternoon. Unfortunately the weather conditions were not good, and the Foursomes were not played. Twenty-two members played for the Milsom Rees Cup in spite of the rain, but it was decided to cancel the supper arrangements and the meeting broke up after tea.

The results of the Singles are as follows:

Milsom Rees Cup.—Winners: J. Wilson, C. M. Carr, K. D. Waters, 1 down. Runners-up: E. S. F. Gordon, T. H. Just, H. G. Baynes, 2 down. The Cup was presented to J. Wilson as he had the best "last 9 holes". Last 9 holes: J. Wilson, all square; G. Graham, 1 down. Sealed holes: G. Graham, 2 up; J. Parrish, 1 up.

* * *

The Annual Dinner of the Bart.'s Cambridge Graduates' Medical Club was held at the Mayfair Hotel on Wednesday, November 21st.

Prof. Fraser was in the Chair, and there was a very large attendance, including many guests. The Chairman dealt with the history of the Club in the past year in a witty speech. Dr. Geoffrey Evans proposed the toast of "The Guests", among whom were Prof. Witts and Prof. Hadfield, both of whom replied. Dr. Langdon Brown, Regius Professor of Physic at Cambridge, proposed the toast of "The Chairman", which was received with musical honours.

The Chairman expressed the thanks of the Club to its two Secretaries, Dr. Henry Burroughes and Mr. Reginald Vick.

After the dinner members adjourned to Mr. Vick's house, where Dr. Hilton, Dr. Nicholson, Mr. Alan Richards, Mr. Eric Jewesbury and others provided an excellent musical entertainment.

* * *

The Amateur Dramatic Society will produce *The Nelson Touch*, a comedy by Neil Grant, and a slight curtain-raiser by "Saki" called *The Baker's Dozen*. The performances will be, as usual, in the Great Hall on the evenings of Tuesday, January 15th, to Friday, January 18th (inclusive).

* * *

Dr. G. H. R. Holden has been appointed Mayor of Reading.

OBITUARIES.

F. J. L. BEELEY.

FREDERICK JOHN LISLE BEELEY, student of this Medical College, died at 10 p.m. on Wednesday, November 21st, 1934, after a short illness. He was twenty-three years of age, and would have taken his finals in March, 1935. A virulent infection starting from the maxillary sinus ended fatally in a streptococcal meningitis.

Medicine has lost a most promising graduate and his parents have been bereft of their only son. We both know and feel the loss inflicted on his father and mother, and we offer them our deepest sympathy.

Beeley embarked upon his medical career with several advantages. His looks and manners evoked friendliness, and no one could be insensible to his cheerfulness and goodwill. His countenance was fair, his physique robust, though slight, his temperament genial and hopeful, and his character modest and restrained, but determined.

Quickly responsive to all good things, he studied hard, played in several teams, contributed to our corporate life, and worked eagerly to establish the College on the Merchant Taylors' site.

The Army and Navy secure their most highly trained and devoted officers from those who, in their tenderest and most docile years, enter their great training colleges. Epsom College, although its medical cadets are fewer, serves a noble profession in the same spirit as Sandhurst and Dartmouth. Each year it sends to the London Medical Schools those who, by their ability and loyalty, are judged most suitable to meet the intellectual and moral obligations of the practice of medicine. Beeley was one of these and, in all that he did and all that he promised, he stood high among such scholars.

He entered straight upon his professional work, for at school he had completed with distinction his pre-medical studies. He was fortunate in that he had the privilege of assimilating the basic sciences in an atmosphere more diversified and less compulsive than that of the first year in a medical school. The educational and cultural opportunities of this less precipitous entry into medicine Beeley eagerly used.

Despite the clamour of those who live by the bench in this laboratory age it is still true, and the iconoclastic Flexner is a living witness, that the student obtains his best scientific training in the dissecting room and by the bedside. Both of these have a simple technique, but

require long and devoted study; they rely upon observation and logical inference; they lead to general principles and laws and involve a mastery of detail. He who is willing to make sacrifices in these two places will have all other things added unto him. Beeley was himself an eager disciple. All his teachers found him sincere and earnest, bringing to his work a strong character, a clear mind and a persistent industry.

This fair and aspiring young Englishman, this wholesome and well-balanced student was struck down on the very threshold of his career. The memory of him recalls the comment of Santayana, the Spanish philosopher who, writing of England, said of such as Beeley that they are the world's fairest and most boyish masters. H. H. W.

F. H. CULSHAW.

We have just heard of the untimely death of Frank Hubert Culshaw, at the age of twenty-three. He was at the time holding the post of House Physician at Addenbrooke's Hospital, Cambridge, when he contracted pneumonia.

Hubert Culshaw was the only son of Mr. and Mrs. F. Culshaw, of Anlaby Road, Hull. He was educated at Hymer's College, and in 1928 entered St. John's College, Cambridge, where he completed three years of residence, and obtained a 2nd Class in the Natural Science Tripos.

Entering St. Bartholomew's Hospital in July, 1931, he at first worked for the primary fellowship examination, and commenced his clinical study in January, 1932. In June of this year he qualified as M.R.C.S., L.R.C.P., and was preparing to take the final part of his Cambridge M.B. in December.

He was appointed Resident Anæsthetist and Emergency Officer in August, becoming House Physician in October.

In spite of suffering from asthma for many years, he took an active part in various branches of sport connected with the Hospital. He had a very sociable disposition and was a popular figure amongst his contemporaries, both at Cambridge and at this Hospital. There are very many who will miss his cheerful good humour and genial companionship. We offer our very deepest sympathy to his parents.

A Memorial Service was held in Addenbrooke's Hospital on Tuesday, November 13th, the date of his funeral, and he was buried in Grantchester Churchyard.

BASAL NARCOSIS.*

Definition.—A "basal narcotic" is a drug which is administered to a patient before a surgical operation in order to produce unconsciousness prior to the induction of true anæsthesia. These drugs therefore lie midway between preliminary hypnotics such as morphine and scopolamine, and anæsthetics, such as chloroform and ether.

Advantages.—The chief advantages of basal narcosis are:

(1) Apprehension is practically abolished. In certain cases, such as in severe toxic goitre, it is possible to perform the operation without telling the patient for which day it has been arranged.

(2) A very light general anæsthesia is necessary, the majority of patients requiring only nitrous oxide-oxygen. A local analgesia *alone* is rarely satisfactory, since the patient is in a non-co-operative state and may make reflex movements.

(3) After-pain is diminished, as the patient remains drowsy for a considerable period following the operation.

(4) Vomiting is diminished and is usually entirely absent.

Disadvantages.—(1) Some methods of administration (*e.g.* the rectal) take some time, and experience is necessary to judge the correct dosage.

(2) More nursing care is essential after operation.

(3) The diminished or absent reflexes and the shallow respiration may be disadvantageous in certain cases, and may even lead to an increase in the incidence of pulmonary complications.

(4) Basal narcotics may exhibit cumulative effects with other sedative drugs. If this method has been used, the anæsthetist should impress upon all those responsible that no further narcotic of any description should be given after operation until the patient is conscious and complaining of pain, or is very restless.

(5) Restlessness after operation is not uncommon and may be extremely severe.

We will now discuss the various basal narcotics individually.

PARALDEHYDE.

Paraldehyde is the polymer of acetaldehyde, and is a colourless liquid with an unpleasant smell. The drug is generally used in a 10% solution in water and is slowly injected into the rectum at blood heat. The usual dose is 1 drm. of the pure drug per stone of the patient's weight, but it is unwise to exceed a maximum of 8 drm. The injection should be made about 45 minutes before operation and a quiet sleep usually ensues. Paraldehyde is probably the safest basal narcotic known, and, in the dosage mentioned, has little effect on blood-pressure and respiration. This method is of great service for nervous children, but adults may object to the smell, since some of the drug is excreted from the lungs. For this reason the technique does not always find favour with ward sisters and the matrons of nursing homes.

* A post-graduate lecture given at St. Bartholomew's Hospital.

AVERTIN.

(Syn. tribromethanol, ethobrome and E. 107.)

Avertin, the trade name for tribromethyl alcohol, is a white crystalline substance, but for the sake of convenience it is dissolved in amylene hydrate and called "avertin fluid", 1 c.c. of which contains 1 grm. of the solid drug.

Preparation of solution.—A freshly prepared 2·5% solution in warm distilled water is used, and a few drops of Congo red are added as an indicator. A colour change to blue shows that hydrobromic acid is present, which, with other decomposition products, is irritating to intestinal mucosa. If the solution has to be kept for more than a few hours in a thermos flask, redistilled water should be used.

Dosage.—For most patients the average rectal dose of avertin is 0·09 grm. per kgrm. body-weight, the correct amount being readily ascertained from tables supplied by the makers. For patients with high basal metabolic rates (*e.g.* in toxic goitre) a dose of 0·1 is usual, and exceptionally 0·11.

Elimination.—Avertin reaches its maximum concentration in the blood 30 minutes after injection. In the liver the drug loses its toxicity in combination with glycuronic acid, and is finally eliminated by the kidneys.

Toxic effects.—Avertin has a slight but definite toxic action on the liver and kidneys. It causes a fall in blood-pressure and depresses respiration. There is generally a post-operative period of shallow respiration, and depressed or absent reflexes.

Contra-indications.—It follows from the preceding remarks that avertin should not be used for patients with myxœdema or low B.M.Rs. or abnormally low blood-pressure, or with gross hepatic or renal lesions. It is also unwise to use avertin if the superimposed methods of general or local anæsthesia will themselves lower blood-pressure or depress respiration.

There is no doubt that the use of avertin has reduced the mortality of operations for the relief of severe toxic goitre, *e.g.* in the last 300 thyroid cases anæsthetized in this way by the speaker the immediate mortality has been *nil*, and the remote mortality (up to a week from operation) has been 1 (0·3%). It was therefore thought that the brief *technique* used at this Hospital might be of interest. It is assumed that the patient is gravely ill and knows that an operation is imminent, but is unaware of the date.

Two days before operation.—Aperient given. Retention enema of saline given at 12.40 p.m. (Operation is timed for 1.30 p.m.)

One day before operation.—Liquid diet. Barley-sugar (containing 85% glucose). Saline enema repeated at 12.40 p.m.

Day of operation.—6 a.m.: Tea and bread and butter.

8.30 a.m.: Lemonade with glucose.

10.30 a.m.: Beef-tea.

11 a.m.: Lugol's solution ℥xxx.

12.30 p.m.: Morphine gr. $\frac{1}{6}$, scopolamine gr. $\frac{1}{200}$, hypodermically.

12.40 p.m.: Avertin enema given slowly. Spigot placed in catheter, which is then strapped to buttock. When asleep, eyes are bandaged and ears plugged.

At operation patient placed in thyroid position with face-piece held in position by rubber retainer. Infiltration of the neck is then carried out with 0·5% novocaine and 1 in 400,000 adrenalin. The operation is begun after the patient's wrists are secured, and if reflex movements become inconvenient, nitrous oxide and oxygen are administered without delay. When the patient has been put back to bed, a rectal saline containing a further 30 minims of Lugol's solution is given.

BARBITURATES.

Many of the derivatives of barbituric acid have been used for some time as sedatives and hypnotics, *e.g.* veronal, allonal and luminal, but it is only comparatively recently that certain of these compounds have been found sufficiently safe to produce basal narcosis. It has been shown that barbiturates suitable for this purpose should contain (1) an asymmetric carbon atom, and (2) the "Nebenthau factor", *i.e.* the grouping —N = C(OH)—.

It has also been shown that the barbiturates which are good basal narcotics have an antagonistic action on such poisons as strychnine, picrotoxin, cocaine and its derivatives, a property worth noting if any type of local analgesia is used.

Somnifene: (syn. somnifaine) was the first barbiturate used as a basal narcotic, and had some vogue in France after the war. It was used as an intravenous injection.

Sodium amytal, the trade name for sodium iso-amyl-ethyl barbiturate, was introduced in 1928 by Zerfas of Indianapolis. The drug is in the form of a white

powder, which can either be given by mouth (green capsules containing 3 gr.), or injected intravenously in a freshly prepared 10% solution in distilled water at a rate not exceeding 1 c.c. per minute until the patient just loses consciousness. It might here be mentioned that single-handed intravenous injections are facilitated by using a gauge-type sphygmomanometer on the patient's arm and a centre-second-hand watch on the administrator's wrist. The oral method is naturally more convenient, but it is impossible to ensure complete basal narcosis by this route, although sedation and subsequent amnesia are usually satisfactory.

Nembutal (syn. pentobarbital sodium) is sodium ethyl-methyl-butyl barbiturate. This drug can be given orally in yellow capsules containing 1½ gr. each, the average adult dose being 2–3 capsules 1¼ hours before operation. It is said that a quicker and more reliable effect is obtained when the ends of the capsules are pricked. In order to obtain full basal narcosis, however, the intravenous route must be employed, a freshly prepared solution being injected at a rate not exceeding 1 c.c. per minute until unconsciousness supervenes. Under no circumstances must nembutal be given by both routes as a cumulative effect may occur, and fatalities have been caused by this practice.

Pernocton (syn. pernoston) is sodium-2^{8}γ-bromallyl-barbiturate, and thus differs from the drugs previously considered in that it contains a bromine atom in its molecule. Pernocton is used extensively in Germany, and is given almost exclusively by the intravenous route. The main advantage of pernocton is that a 10% solution is stable, so that the injection can be made direct from ampoules.

Sodium soneryl (syn. butobarbital) is sodium butyl-ethyl-barbiturate. This drug is usually given by mouth in white capsules each containing 2¼ gr. The average dose given 1½ hours before operation is calculated upon the patient's weight as follows:

Weight in lb.	Number of capsules.
90–115	3
120–145	4
150–175	5

Hebaral sodium is sodium hexyl-ethyl-barbiturate. The elimination of this drug is stated to be more rapid and complete than those previously considered, so that "hang-over" effects are minimized. In the speaker's experience this claim has been justified. Hebaral sodium is put up in purple capsules of 3 gr., 1–3 being given by mouth 1½ hours before operation.

Evipan and Evipan Sodium.

These drugs, although barbiturates, are not often used as true basal narcotics, but may conveniently be considered here.

Evipan (syn. endorm, methexenyl) is N-methyl-cyclohexenyl-methyl barbiturate. It is put up in 4-gr. tablets, and is used in medicine as a rapidly acting hypnotic.

Evipan sodium is, as the name implies, the sodium salt of evipan, and has attracted considerable attention as being the first satisfactory intravenous anæsthetic. Many other drugs have been tried for this purpose such as ether, alcohol and hedonal, but they have all been abandoned for various reasons. Evipan sodium resembles most of the other barbiturates in that it is soluble in water but unstable in solution. It must therefore be freshly prepared as a 10% solution in distilled water.

Technique of administration.—The injection rate of sodium evipan is higher than that of the barbiturates already considered, being 1 c.c. in 15 seconds. Originally it was recommended that the drug should be injected until consciousness was lost (usually about 3 c.c.), and that then an equal volume (in elderly and feeble patients half the volume) is added, the maximum dose being taken as 10 c.c. The writer has found that the "continuous" method is better; *i. e.* the needle is kept in the vein, and solution is injected as necessary to keep reflex movements just in abeyance. In this way the profound anæsthesia at the beginning is avoided. Attempts have recently been made to perform severe and prolonged operations (such as gastrectomy) under evipan anæsthesia, hypertonic glucose being alternated with evipan, but this must still be regarded as being in the experimental stage. In this country the use of evipan is restricted to fairly short operations not requiring complete muscular relaxation where nitrous oxide-oxygen anæsthesia is, for any reason, unsuitable. It is most important that the anæsthetist should realize that he must take all the precautions necessary for any other type of general anæsthesia.

Toxic effects.—A lowered blood-pressure and transitory respiratory depression are constant with evipan anæsthesia, and for this reason many anæsthetists think that preliminary morphine-scopolamine injections are undesirable. On the other hand, this premedication undoubtedly diminishes the post-operative restlessness which is sometimes such an unpleasant feature of the method. Muscular twitchings frequently occur in the injected arm. They are said to be less frequent if the solution is allowed to stand for 3–4 minutes before use. Evipan has only a slight effect upon the blood-sugar and blood-urea values, and is normally "detoxicated" rapidly by the liver. In children, mental changes have been observed after evipan anæsthesia. Local toxic effects are rare, but venous thrombosis and tissue necrosis have been described.

Contra-indications.—Evipan sodium should not, as a rule, be given to children or to patients who are very toxæmic or jaundiced, or who have respiratory or cardiac embarrassment. It should not be given in the sitting or reversed Trendelenburg positions, nor should it ever be administered by the same person who is to perform the operation. It is essential that the patient be prepared for a general anæsthetic, as fatalities have occurred from syncope due to a loaded stomach.

Mortality.—Most of the deaths described have been due to neglect of some of the precautions mentioned. When used intelligently for suitable cases evipan sodium appears to be a reasonably safe drug. In a consecutive series of 6500 administrations, eight deaths were said to be due to the drug.

Overdosage.—If an overdose has been given inadvertently, the immediate administration of a carbon dioxide-oxygen mixture combined with artificial respiration, if necessary, usually restores deep and regular breathing. Coramine injected intramuscularly or, in an emergency, intravenously, appears to be the most useful drug, and this applies to overdosage with all the barbiturates.

C. Langton Hewer.

INDIAN "FAKIRS".*

(Concluded.)

Of these Rafaee fakir demonstrations in the palace of Nawab Salar Jung the most gruesome were still to come. The first was simply a trick, the only part of the whole performance in which fraud was introduced; a trick described here merely to illustrate how monstrous are the exaggerations that may sometimes arise when people tell at home of experiences in the East, which are repeated by their friends with imagination unrestrained.

A sword is held about 2 ft. from the ground, one man grasping the handle and another the point wrapped up in a cloth. An old fakir lies back with his neck against this sword, and rolls along it from side to side, giving onlookers the impression that the whole weight of his body is resting against its razor edge, which is cutting into his flesh (Fig. 1). From this performance has arisen the myth that there are men in the East who can chop off their heads and stick them on again; when, in reality, all that happens is that the sharp edge is concealed by a fold of skin, while pressure of the body is taken on the flat of the instrument which can be seen in the photograph to be bending under its weight. A few drops of blood and some superficial scratches are all that can afterwards be found.

Another example of this exaggeration is a fable that has arisen from the "mango trick" (described in the October number of the JOURNAL), in which by simple conjuring a mango-stone, planted in some earth, apparently sprouts under the very eyes of onlookers into a little twig, perhaps 10 in. high. Travellers are not unknown who state that in this time the mango tree has grown to a great height, with a trunk 3 ft. in diameter, and with branches laden with ripe mangoes ready to be plucked!

One further myth, prevalent amongst stories from the East, originates from the performance (described by Curzon at Kairwan) of a fanatic, in a state of wild religious ecstasy, slashing with a sword across his abdominal wall. This has been elaborated until the tale is told of men who can disembowel themselves, who walk up and down the streets with their entrails hanging round their necks supported on a plate!

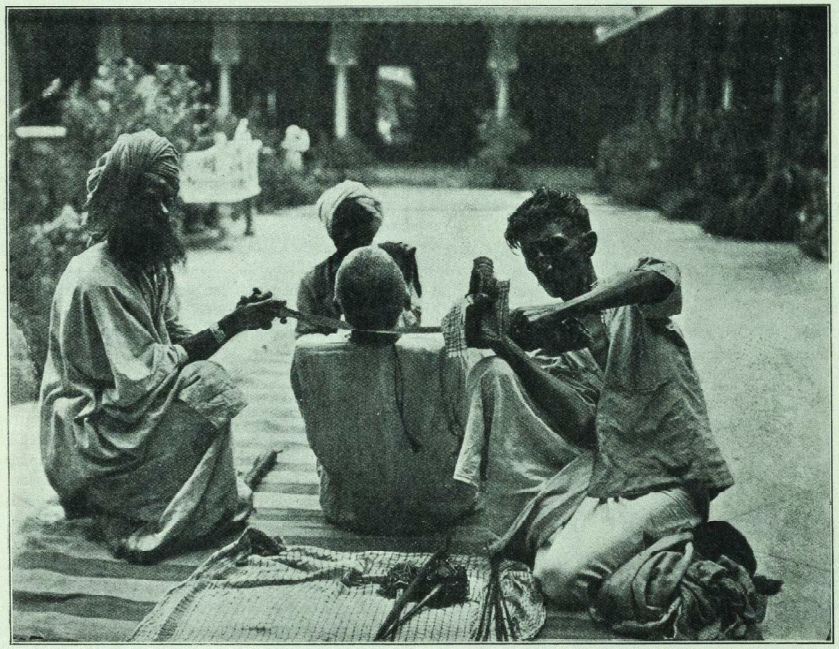
The Neck.

The most extraordinary of all the demonstrations was now to take place, a feat these men have carried out many times before and since, and one that appears more dangerous and alarming each time it is observed. The chief fakir, Zil Fakhr Shah, who but a few minutes before had passed skewers through his tongue, cheeks and abdominal wall (November number of the JOURNAL), came forward with the longest of his instruments and told us he was going to pass it from side to side right through the middle of his neck. Scars of old attempts could be clearly seen scattered up and down just behind the sterno-mastoids, closer together on the right side than on the left.

After licking the instrument to lubricate and clean it, he knelt down and wiped it dry on his shirt; then with his right hand pressing the crescentic end on the ground, and with his left taking a firm hold of his throat, he pressed the right side of his neck steadily against the point, rising a little off his knees. The tissues were tough and the tapering point none too sharp, so that great pressure was needed to force it through to the other side. In Fig. 2 the veins standing out on his forehead, the expression on his face, and the curve of the instrument bent by his thumb, all testify to the amount of force required. After hard pushing and

* A paper read before the Osler Club on May 11th, 1934.

wriggling of his head the point soon emerged through the skin of his neck on the other side. When it was protruding about 2 in. he knelt up thus transfixed, the instrument piercing his neck from one sterno-mastoid to the other, running behind his carotid sheaths, and between his œsophagus and vertebral column. In Figs. 3 and 4, as he holds the instrument with the right hand, his expression can be seen to be one of anxiety



(*Copyright.*) FIG. 1.—ROLLING ALONG A SHARP SWORD. The dark streak down his back is a cord, not blood.

and discomfort rather than that of acute pain. No bleeding can be seen.

In many cases the force required to press the skewer through the neck is more than the fakir himself can manage, and a friend has to lend a helping hand by pressing on his head and shoulder. At the annual nocturnal ceremony the neck is sometimes transfixed from front to back—an unusual direction seldom attempted, as it is a much more difficult and hazardous proceeding. On one occasion, when the point had been inserted just to the left of the thyroid cartilage, very great difficulty was encountered by the fakir in pressing it backwards, even with the assistance of two stalwart friends. Then to the amazement of medical witnesses the point emerged through the shaggy hair at the back of his scalp, just above and to the right of the external occipital protuberance. To withdraw this instrument a struggle even greater than before took place, the help of several men being needed; and when at last it was removed, it was found to have been bent to an angle of about 45°, presumably from striking up against a transverse process of one of the cervical vertebræ in its journey through. Two days later this fakir was perfectly well, very proud of his terrible ordeal, and firmly believing that through it he was nearer heaven.

To return to our demonstration in the courtyard of the palace. Zil Fakir Shah, not yet content even with his neck transfixed, beckoned to a friend to hold this instrument in position, while he himself hammered another into the top of his skull (Fig. 6). His hammer

was a stone. The implement was short and light, but the point penetrated the bone far enough to remain fixed, without support, even when he bent his head (Fig. 7). There is no reason to suppose that the meninges were touched. After a few minutes the smaller instrument was removed from his skull with a jerk, and a friend withdrew the longer one from his neck with a slow and powerful pull, the fakir himself pushing so hard in the other direction that when at last the point came out he staggered and all but fell. For a moment or two he gripped his throat, and on removing his hands not a drop of blood was to be seen. Many of these details are better appreciated by a study of my father's

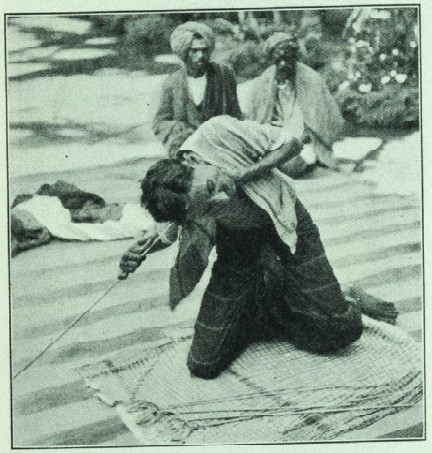


FIG. 2.—FORCING AN INSTRUMENT THROUGH HIS NECK. (*Copyright.*)

cinematograph record than when actually watching the men themselves.

After this performance the fakir made us a present of the two instruments he had just used.

THE EYE.

Although transfixion of his neck was perhaps the most dramatic from a medical point of view, the next demonstration with the eye was by far the most amazing to watch. The instrument used for this was quite different from any we had seen before—an iron rod about 9 in. long and $\frac{3}{4}$ in. thick. One end tapered to a point; the other was surmounted by a metal knob, the size of a large orange, from which dangled about a dozen short chains (Fig. 8). One of the younger fakirs came forward, and poising this strange instrument above his head with arm outstretched, he rotated it rapidly between his fingers and thumb, so that the chains spun out at right angles to the shaft, jingling and jangling as they twirled round and round. Suddenly his body bent forward so that his head nearly touched his knees, and while in this position he pushed the point of the instrument into the outer corner of his right orbit. Slowly then he raised his head, and we saw his right eyeball dislocated forward out of its socket, far enough for the lids to close partially behind it (Fig. 9). The instrument was removed (Fig. 11), and out like this his eyeball stayed, teed-up like a golf ball on his cheek. Showing not the slightest evidence of pain, and rolling his protruded eye about, he walked around so that all might see before pressing it back into place with the palm of his hand. His vision in this eye seemed to be good; indeed, on other occasions his eyes were tested carefully by my father and other medical men both before and immediately after this performance, and every time his visual acuity was found to be $\frac{6}{6}$, his visual fields were full, and the fundi appeared normal.

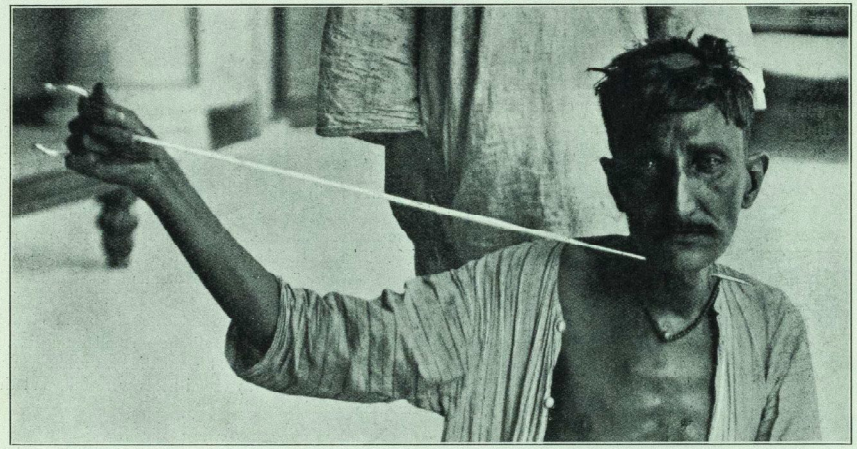
I have already mentioned that these fakirs are starving when they perform. This particular demonstration was no exception; after it they seemed to be ravenously hungry, and they had an enormous meal before returning to their homes.

* * *

There are four most interesting questions that arise from these ceremonies of the Rafaee fakirs. How much pain do they feel? Why do they not bleed? Why do their wounds not suppurate? Does hypnotism play any part? Two further points will be discussed later; they concern the passage of skewers through the neck, and the dislocation of the eyeball.

About the question of *pain* we know very little. That these fakirs at times feel considerable discomfort is almost certain. In their nocturnal ceremony novices may take part, and the sufferings of these young men are obvious, so much so that they are sometimes unable to complete their demonstrations. The older hands, however, usually show no evidence whatever of pain in any performance, possibly due to the fact that scar tissue is anæsthetic.

It is difficult to estimate how great a part drugs play in this type of ceremony. In many parts of the world it is known that drugs are habitually used to produce a state of ecstasy or possession: incense may be inhaled, intoxicating liquors drunk, and opium, laurel leaves or the leaves from the Indian hemp plant smoked, all for



(*Copyright.*)

FIG. 3.—HIS NECK PIERCED.

FIG. 4.—HIS NECK PIERCED (another occasion).
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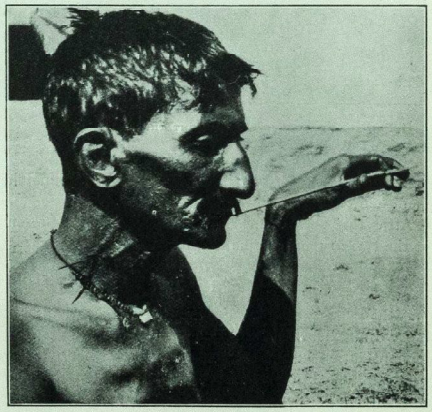


FIG. 5.—HIS NECK PIERCED (still another occasion). Note by how little the external jugular vein escapes. [This photograph has unfortunately been reversed during the process of reproduction.]
(*Copyright.*)

this same purpose. The effects of Indian hemp vary in different individuals. Amongst some classes of "fakirs" it is often used for its property of inducing a pleasant, dreamy, imaginative state of mind, accompanied by feelings of comfort and self-satisfaction, a complete loss of sense of time and space, and sometimes an impression of dual personality; but its effect of dismissing entirely all sense of fear, caution and pain is the one with which we are most concerned here. A case occurring quite recently in India illustrates this last effect well. A railway workshop employee came into my father's hospital with one of his hands torn to ribbons, but apparently quite happy about it all, and obviously feeling no pain whatsoever. He had taken a large dose of Indian hemp; and his story was that for a wager he had told some companions he would put his hand between two revolving cogwheels, that they had defied him to do so, and he had proved them wrong. His hand had to be amputated, but he refused any type of anæsthetic, and during the operation wanted all the time to help by holding the dressings, etc. For thirty-six hours he remained quite cheery, and entertained his ward by singing and dancing, but on the third and fourth days he became terribly depressed as the effect of the drug wore off.

At the ritual of the Rafaee fakirs in the Mohammedan palaces this question of drugs has been gone into most carefully, as Indian hemp would explain a great deal; but, apart from the fact that the men themselves swear they take nothing—their sacred books forbid it—their appearance and general behaviour are not suggestive of any known drug, and it is now the general belief of all who have studied their habits closely that they use no drugs whatsoever.

More important must be the effect of religious enthusiasm and excitement, especially at the annual ceremony in its grim surroundings—the tombs by night—with the huge crowd, the incense, the prayers, the terrible appearance of the other performers and the incessant throbbing of the tom-toms in the air, all diverting the fakir's attention from his own pain and focussing it on the amazing demonstration in which he himself is playing but one small part. In the heat of a battle it is well known how often wounds pass unnoticed at the time they are inflicted. An extreme example of this occurred during a cavalry charge, I believe in the Crimean War, when the leading officer, bearing down on the enemy with sword aloft, was seen suddenly to turn in his saddle and yell to the man behind him, "Dammit I've dropped my sword"; in reality a cannon-ball striking his shoulder had carried away his whole right arm!

FIG. 6.—HIS FRIENDS SUPPORT THE INSTRUMENT THROUGH HIS NECK WHILE HE HAMMERS ANOTHER INTO THE TOP OF HIS HEAD.
(*Copyright.*)

Before leaving this question of pain, the influence of hysteria must be mentioned. It is well known that hysterical patients, as the result of suggestion, are liable to develop sensory loss of a peculiar distribution

—the shape of a sock, stocking or glove, the whole of one limb, all down one side, from the waist downwards, or of the head and neck. At some of the demonstrations of these fakirs conditions are eminently suitable for the development of such hysterical manifestations, and it is difficult to say exactly how great or how small a part this plays in producing their apparent immunity from pain.

The second point of interest, the *absence of bleeding*, is claimed to be a characteristic of fakir performances

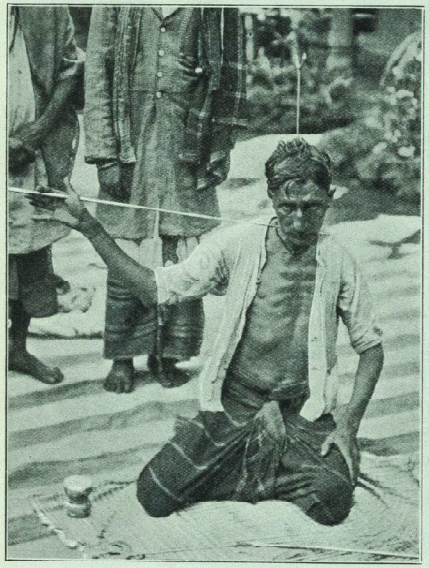


FIG. 7.—THROUGH HIS NECK AND ALSO INTO HIS SKULL. (*Copyright.*)

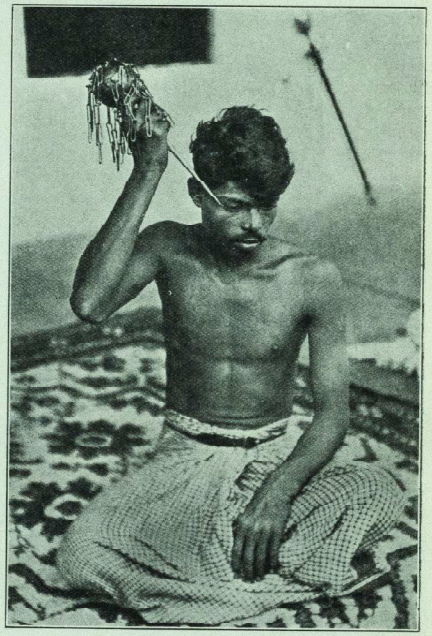


FIG. 8.—TO BE PUSHED INTO HIS ORBIT. (*Copyright.*)

all over the world, and is a wonder of which they proudly boast. You will remember that Curzon mentions it in his description of the rites of Aissa at Kairwan:

> "The most singular feature of all, and the one that almost defies belief, though it is none the less true, was this—that in no case did one drop of blood emerge from scar, or gash, or wound. This fact I observed most carefully . . ."

With our Rafaee fakirs of Hyderabad, however, the usual absence of bleeding does not seem now so difficult to understand as it did when we first saw the ceremony. With the skewer through the tongue the explanation is simple; the midline through which it passes is comparatively avascular and the tongue is pulled out far, well seen in the photographs—a manipulation often used by surgeons for controlling hæmorrhage from the lingual artery. The wounds made by the skewer in other parts of the body—through the cheeks, abdominal wall and neck—are not large; the instrument is so shaped, with a gradually tapering point, that on entering the tissues it stretches and pushes vessels aside rather than pierces them; it is always left in the body for some little while, so that any small internal hæmorrhage may have time to stop, and after its withdrawal the fakir compresses the wound for a moment with his fingers and thumb. One further detail is that scar tissue seldom contains large blood-vessels. In spite of all these factors, however, one would expect to see some degree of hæmorrhage when one remembers for how long a tiny cut on one's cheek may bleed when shaving in the morning.

It might be thought possible that some substance which would clot blood quickly was rubbed on the skewers before they entered the tissues, but careful

observations have made it certain that no such substance is applied—at any rate during the ceremony itself. In connection with Dr. R. G. Macfarlane's recent work with Russell's viper venom, it seems possible that hæmorrhage might be avoided by applying snake venom to the skewer some hours beforehand and allowing it to dry; but, as I have already mentioned, the fakirs themselves deny that any such substance is used.

Some of these men may possibly have a rare type of nervous control over their blood-vessels, as has sometimes been described in Europeans; but I know little about this point beyond what is told us, "that in certain nervous diseases, especially hysteria, the vasomotor reactions of the body are hypersensitive, needles can often be stuck into the tissues without drawing a single drop of blood, and in some cases even the cutting of the radial artery will lead to hardly any hæmorrhage".

The description of the false prophets of Baal on Mount Carmel (1 *Kings*, XVIII, 27) is of special interest here in connection with hæmorrhage. It must have been a most extraordinary gathering: four hundred and fifty priests imploring their god, before an enormous crowd, goaded on beyond endurance by Elijah's mocking voice:

> "Cry aloud: for he is a god; either he is talking, or he is pursuing, or he is in a journey, or peradventure he sleepeth, and must be awaked",

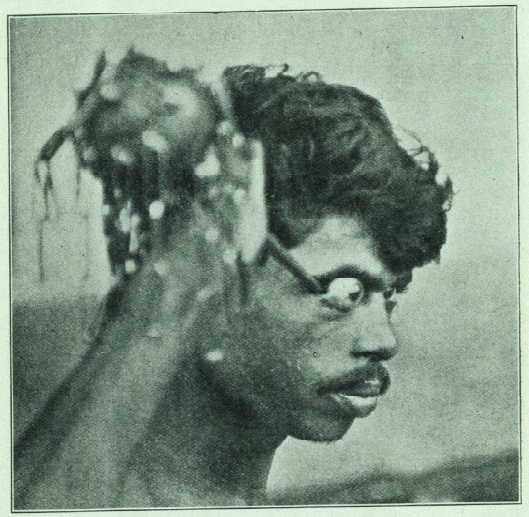
and, with these taunts ringing in their ears, working themselves up into such a state of frenzy and excitement that—

> "they cried aloud, and cut themselves after their manner with knives and lancets, till the blood gushed out upon them."

The words "after their manner" suggest that self-torture was no new thing to them; and the fact that bleeding is stressed like this at the end of the sentence suggests that it is to this bleeding that attention is being especially directed, as an unusual occurrence only happening when, in a state of more than ordinary excitement and despair, they overstepped the limits of their customary rites. A close parallel to this in the performance of the Rafaee fakirs was witnessed by my father during one of their annual ceremonies when Zil Fakhr Shah, unusually worked up and excited during a second demonstration within seventeen hours, was seen to lose about a pint of blood, which he carefully concealed from the crowd around him. In Fig. 5 it can be seen by how little the external jugular vein may escape on some occasions. Sometimes the larynx itself is pierced, and then it is that they spit up blood.

Although the Old Testament tells us that Elijah brought all the false prophets of Baal "down to the brook Kishon, and slew them there", many of the sect no doubt escaped, to hand down through the ages their cruel and grisly rites.

The third point of interest, the *absence of suppuration* in the wounds of these fakirs, is really very remarkable. It might perhaps be explained by supposing that continual exposure to infection had given rise to such an accumulation of antibodies in their blood that they were entirely immune to all the ordinary pyogenic organisms present in the air, on their skins, in their mouths and on their instruments. More important factors, both mechanical, must be the polishing of the instruments before the ceremony, and the wiping of them clean as they squeeze through the skin. However, it is rather fun to speculate what some modern surgeons would say if asked to push an instrument like this blindly through the neck; and then what more they would add when told it had been sterilized by licking, and dried on the tail of a shirt!



(*Copyright.*) FIG. 9.—EYEBALL DISLOCATED FORWARD.

The fourth point of interest concerns the question of *hypnotism*, and it is difficult to be sure that it does not play some part, if this word is used in its wider sense. This "hypnotism" would, of course, concern not the

onlookers but the performer himself. At the nocturnal ceremony in their graveyard, with the continuous drumming of the tom toms, the degree of religious ecstasy into which these men work themselves is one of the most striking features. Even at the rituals in the palaces they always have two or three companions muttering prayers behind them, and in some of the photographs I have shown you, the expressions and attitudes of the two old men are certainly very remarkable. In connection with this I have already mentioned that these fakirs are always starving when they perform, not only at their annual ceremony, but at the rituals in the palaces as well, and I believe that a man starving is

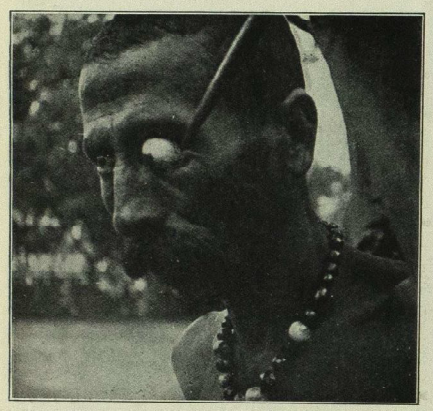


FIG. 10.—THE INSTRUMENT IN A FOLD OF SKIN AND NOT IN CONJUNCTIVAL SAC.
(*Copyright.*)

more susceptible to hypnotism than when he is in a normal condition. It is interesting to remember that King Saul was starving when he visited the Witch of En-dor (1 *Sam.*, xxviii, 7).

"Then said Saul unto his servants, Seek me a woman that hath a familiar spirit, that I may go to her, and enquire of her. And his servants said to him, Behold, there is a woman that hath a familiar spirit at En-dor.

"And Saul disguised himself, and put on other raiment, and he went . . .

"Then said the woman, Whom shall I bring up to thee? And he said, Bring me up Samuel . . .

"Then Saul fell straightway all along on the earth, and was sore afraid, because of the words of Samuel: and there was no strength in him; for he had eaten no bread all the day, nor all the night."

Extraordinary things have been done under hypnotic influence; Mesmer himself was able to perform many surgical operations under it just before the introduction of general anæsthetics; and it is an interesting fact noticed by Dr. James Esdaile, well known as a successful surgeon under mesmeric influence in India about sixty five years ago, that Indians are far more easily hypnotized than are healthy Europeans. I myself know very little about hypnotism, but I think it is unlikely to be concerned in these rites of the Rafaee fakirs mainly because of the unfavourable conditions. Unusual surroundings, bright light and the presence of strangers would, I should say, be very unsuitable for the production of any true hypnotic state.

The importance of starvation suggests that perhaps the symptoms of "spontaneous hypoglycæmia" might throw some light on the mental and sensory states of these fakirs. At the National Hospital, Queen Square, we have recently had a patient under our care suffering from this complaint, a Hebrew whose "epileptic" fits started on a "fast day". If he went without food for more than three hours his blood-sugar fell much below normal, his mental condition became very strange, and afterwards he would remember nothing that occurred while his attack was on. Careful observation, however, before, during and after an attack showed that his pain sensation was normal throughout.

To discover the secret of the fakir who passed the skewer with impunity transversely *through his neck* was an interesting problem. Careful study of this man himself and of cinematograph films of his performances makes it clear that the secret probably lies in what he does with the fingers of his left hand. His right hand is concerned all the time in steadying and directing the instrument, while with the fingers of his left he grasps firmly and pulls forward the important structure in his neck which the skewer must avoid, especially the larynx, œsophagus and the carotid sheath on each side. The prominent veins on his forehead in Fig. 2 testify to this pressure on his jugulars. With all these structures pulled forwards a potential space is left in front of the bodies of his cervical vertebræ, through which the pointed instrument may pass with comparative impunity. On one occasion its course has been confirmed by an X-ray picture taken with it in position.

During the war several cases were recorded of bullets passing right through the neck without causing serious damage. One of these I happened to see in the Surgical Out-Patients' Department at Bart.'s, a man whose neck had been pierced through by a bullet in almost exactly the same direction as that taken by the intruments of the Rafaee fakirs, except that the point of exit was a little lower down.

From a medical point of view the *dislocation of the eyeball* is easier to understand, though more disgusting to behold. In the first place the point of the instrument does not touch the conjunctiva, but is inserted into the

loose fold of skin just above the outer canthus. Fig. 10, from a stereoscopic photograph taken by my brother Alan, shows this very well. Young fakirs practise this demonstration at the annual ceremony and may be seen attempting it without success. Little by little the ocular muscles must be stretched, until by the time adult life is reached the eyeball can with ease be dislocated from its socket. A similar but more rapid process is well known to medical men in the case of tumours growing at the back of the orbit, from which the eye may be markedly proptosed while the visual acuity remains quite normal. In animals, too, examples of the same phenomenon occur. A spaniel out with his master shooting was run over by a railway trolley, and was limping about with an eye protruding in a hideous manner. Its injuries were thought to be so serious that its master picked up his gun to end its misery; the cartridge misfired, the dog shook its head, its eye popped back and all was well!

Dislocation of the eye is but seldom seen by travellers now. Even a hundred years ago in Egypt men of the same sect as our Rafaee fakirs were only pretending to do it. I should like to quote a short passage from a book by E. W. Lane, 'Modern Egyptians', published at that time. It describes a procession of the Kis'weh he witnessed in Egypt on February 5th, 1834:

". . . the most remarkable group in this part of the procession consisted of several durwee'shes of the sect of the Rifa'ees, each of whom bore in his hand an iron spike, about a foot in length, with a ball of the same metal at the thick end, having a number of small and short chains attached to it. Several of these durwee'shes, in appearance, thrust the spike with violence into their eyes, and withdrew it, without showing any mark of injury: it seemed to enter to the depth of about an inch."

Two instruments used nowadays by Dervishes in the Sudan merely for tapping their foreheads are in the Pitt-Rivers Museum at Oxford, and they are identical with those used by the Rafaee fakirs of Hyderabad city. It is really very extraordinary that in Egypt over a hundred years ago these men, with the same name and identical instruments, with much pomp and ceremony, should have been doing imperfectly or only pretending to do the very tricks that their cousins are still doing fully in India to-day.

FIG. 11.—EYE STILL PROTRUDED AFTER THE INSTRUMENT HAS BEEN REMOVED.
(*Copyright.*)

In concluding this brief survey of some of the habits of "Fakirs" in India, there is one point I should like to stress. Oriental races in general, and their religious enthusiasts in particular, have bodies very much like our own. No matter how weird and incomprehensible

a demonstration may appear at first sight, careful examination by a competent observer has always revealed a simple explanation, and never so far has need arisen to ascribe to anyone unusual powers or to invoke the supernatural. Lt. Col. R. H. Elliot, a surgeon in the Indian Medical Service for many years, who made a particular study of unusual demonstrations, and who is now a prominent member of that great association of conjurers "The Magic Circle", throughout all his life in the East saw nothing at any time to suggest that the laws of Nature were ever broken or suspended. Many a myth, like the great rope trick, "never has been performed and never will be", and the sooner they "join the fire-breathing dragons and similar inventions of a credulous past the better".

Physically the bodies of religious fanatics react very much the same as would those of Europeans under similar conditions. It is in their minds that they are different. The qualities of patience, perseverance and acceptance of suffering are developed to a degree quite pathological; and many are content, somewhat selfishly perhaps, to spend every moment of their lives in this world insuring their own souls for comfort in the next.

It would be unfair to end without giving the fakir's reply: "You have your way to God, we have ours. This is ours. If the intention is good all paths lead to God, if only they mount upward. Go your own way and leave us to follow ours."

J. H. HUNT.

ALOPECIA.

MY barber is a very nice man. That is to say, he is a very nice barber. He rarely talks; he never tries to sell me things I don't need. I met him for the first time three years ago, as I had been persuaded that this was the man who would keep on my head what little hair I had left. My barber, who is known simply as John, did not try and impress me with talk about hair-follicles and the various layers of the skin, nor did he make over-confident promises that my hair would be as Samson's was before he had that unfortunate love affair with Delilah. But he implied a lot. The course of treatment he outlined seemed to me to be logical and simple. I was to visit him twice a week. I said I would come every day, if that would hasten matters; but he was firm; twice a week was enough. John had the art of not saying too much. After three or four treatments he remarked, "Your hair is looking more healthy", and I left him that day with my heart full of hope and a new hair-brush which I had purchased from him—and of course the little pot of unguentum with which to continue the treatment at home. This little pot was rather expensive, and to begin with I used to lay it on thick. John, however, was again firm. "Too much," he said, "does harm. Just a little on the tips of the fingers and rub gently into the roots." Here was a man, I thought, who stoutly refuses to exploit me.

At the end of six months John suggested that I should only come every week or every ten days. I confess that I was a little hurt. I was quite willing to attend twice a week, for I felt that I was, in a way, his favourite pupil. True my hair had not grown, but its frontal recession had been arrested. John was master of the situation. He had stopped the rot, and in a short time no doubt he would build up a stout hairy defence against the ridicule of my hirsute friends. The time passed and the seasons followed one another in their own inevitable way, but still the little tuft of hair jutted peninsula-wise at the junction between the head and the forehead. It still had that stubby appearance of an ancient shaving-brush. In fairness to John I must admit that he was, within his professional limits, honest. At times I tried to persuade him that two strands of hair were growing where none had grown before. But John always contented himself by saying, "It's keeping healthy, sir".

* * *

Two years have now passed, and the scene is the same as in Act I. I am leaning back in the chair, and John is massaging my scalp with a rubber pad somewhat resembling an inverted sea anemone. As you may have already guessed, and rightly, I have my fair share of natural conceit. When I look in the glass, or at least, when I looked in the glass in the days before the crop began to fail, I feel, or, if you like, felt, I was quite a fine sort of fellow. It isn't that I think myself to be not as other men are, but . . . well, there is/was a difference. This hesitation over tenses denotes an inward uneasiness. On this particular day the uneasiness grew as I watched the vibrator buzz to and fro across that forbidding frontier between youth and fatty middle age. What, I wondered for the first time, what sort of a man is John, John who was so self-effacing and so soothing to my pride? I looked in the glass and caught John's eyes, so to speak, in mid-air. He ducked his head slightly as if to escape a blow, and as he did so I became aware for the first time that John was bald. The vibrator buzzed helplessly in space while I took a hurried look round the "saloon", and saw two other bald-headed barbers, each of them muttering,

"Your hair is looking very healthy, sir". I was about to accuse John of chicanery and all that, when I suddenly remembered that my doctor who was treating me for adiposity was himself grossly obese, that my dentist had false teeth, that my bank manager had been summoned for not paying his income tax, that my butcher was a vegetarian, that, that . . . In my small world where was there a man without guile?

I kept away from John for several weeks. For many hours I wandered about the National Portrait Gallery compiling a list of the great men who were undeniably bald. Darwin was bald, I reflected, so was Gladstone, so is Winston Churchill, and Charles I had lost his head because he wore his hair too long. Poets and painters, it is true, weren't thought much of unless they had wild locks that could be blown about in a fine frenzy by the wind. Yet there was something dignified and intellectual about a polished dome. My narcissistic reveries were cut short by a remark from a friend that I was getting thin on the top. I phoned up John and made an appointment. When I entered the "saloon" it was empty save for three young-looking men standing to attention by their chairs. They bowed gravely as I took my hat off. "But where is John?" I asked. "Your hair wants attention, sir," said John's voice. I looked. It was John—with a difference. "How do you like them, sir"? he said. "The manager has ordered us to wear them. It is better for business." I gazed in horror as the three unfortunates held their wigs out for my inspection. I fled incontinently.

. . . *De mortuis*. . . . H. C.

OUR LIBRARY.

AN institution which has celebrated its octo-centenary and which was established, and maintained for centuries, under monastic rule, might be expected to possess a library replete with illuminated manuscript making valuable contributions to medieval lore. It is possible that much more existed in the Hospital than survived the dissolution and subsequent spoliation of the monasteries. Our Hospital does indeed possess original deeds and charters, and the Cartulary inscribed by John Cok, who became a brother of the Hospital in 1431, is invaluable, but books and manuscripts of more general interest are absent.

Yet there are indications that a library existed in the Hospital at an early period of its history. Stow records that Wakering, who was Master of the Hospital from 1423 to 1463, gave "to their common library" a Bible which he had himself seen. Sir Norman Moore tells us that two books, or rather manuscripts, which originally belonged to this library are in the British Museum. One is a volume of selections from the writings of celebrated divines, and the other the Decretals of Pope Gregory IX. On the first page of the latter is the inscription, "Liber domus Sancti Bartholomei in Smythfylde". Sir Norman points out that *domus* was the term regularly applied to the Hospital, whereas *ecclesia* or *prioratus* was used for the Priory.

There are other books, however, copies at least of which probably at some time belonged to this library. One is the *Liber fundacionis ecclesie Sancti Bartholomei Londoniarum*, another Mirfield's *Breviarium Bartholomei*, and a third the same author's *Florarium Bartholomei*.

The *Liber fundacionis* is a manuscript on vellum which is now in the Cottonian Collection in the British Museum. It contains practically all that is known of the foundation and early history of the Priory and Hospital of St. Bartholomew. That it once belonged to the library of the Priory is proved by the inscription on one of its pages, "pertinens prioratui ejusdem in Westesmythfelde". The manuscript consists of two versions, Latin and English. Sir Norman Moore, after careful consideration of the internal evidence afforded by the manuscript, comes to the conclusion that the Latin version had been originally written as early as 1180, but that the manuscript in the British Museum was a copy of this original and, with its English translation, was made about the year 1400.

A copy of the English version with copious glossarial footnotes was published by Sir Norman Moore in vol. xxi of the *St. Bartholomew's Hospital Reports*, which are of course in our Library, as is also a copy of the manuscript rendered into modern English for E. A. Webb.

Those who have taken the date of our foundation from the inscriptions on Henry VIII's Gateway, the old Surgery and the Great Hall, will learn from the Book of the Foundation that the date is 1123 and not 1102. They will no doubt come to the conclusion that there is little or no reason to describe Rahere as the Court Jester, but rather that he was a witty courtier, or at least one who by reason of his humour had ingratiated himself with the Court. They will no doubt regard our founder as a man of parts; an architectural genius worthy at least to be named with that celebrated Norman cleric, Bishop Gundulf, who besides being a great architect, was the founder of the namesake of our hospital at Rochester.

The second book to which reference has been made is the *Breviarium Bartholomei*. This is a medical work on diseases and their treatment. It is in fifteen parts and has a glossary and index. Copies of this manuscript are in Pembroke College, Oxford, and the British

Museum. The glossary, edited by J. L. G. Mowat in 1882, is in our Library.

The *Florarium Bartholomei* is also in manuscript, and the only copies known are in the British Museum and the Library of Gray's Inn. It is chiefly theological, but there is a chapter on physicians and their medicines.

Both the last two books were written by John Mirfield (or Meryfeld). Mirfield was one of the *clerici* of the Priory who devoted himself to the study and practice of medicine, in which he gained great eminence. He flourished in the fourteenth century, and it is supposed that the manuscripts were written during the last few years of that century. It would indeed be strange if he had not an intimate connection with the Hospital, although there is no definite proof of this.

Coming to later times, Sir Norman Moore records that in 1667 (the year after the Great Fire) a library was formed "for the use of the Governors and young University scholars", but that no volume of this library is now known.

The present Library had as its basis the library of the Medical and Philosophical Society of St. Bartholomew's. This Society was founded in 1795, almost entirely through the efforts of John Abernethy. Its objects were the reading and discussion of papers on medical subjects and, especially, the formation of a library. It was not, however, until the fifth session of the Society in 1799–1800 that the Library actually came into existence. In that year each honorary member of the Society was called upon either to contribute one guinea, or books to the value of that amount, whilst the ordinary members paid a small subscription weekly. These subscriptions entitled them to borrow books. A copy of the laws of this society, which included the rules of the Library, as confirmed at a full meeting of its members in 1819, is in the Library.

In 1805, in consideration for an annual donation to its funds, the Library was vested in the hands of the Physicians and Surgeons of the Hospital, who were appointed trustees. According to the rules drawn up about this time, gentlemen who had entered to the medical and surgical lectures delivered in the Hospital were entitled to the use of the Library for one year on payment of one guinea, for three years on payment of one pound ten shillings, and for an unlimited period on payment of two pounds ten shillings. They were also entitled to the use of the reading-room and journals for three years on payment of ten shillings. Graduates of medicine in a British University and members of the College of Surgeons of England, or other practitioners of medicine residing in London, being recommended by a medical officer or lecturer of the Hospital, were entitled to become life subscribers to the Library on payment of three pounds. The Medical and Philosophical Society continued to function until 1830, when for a time, owing to the illness of John Abernethy, its meetings were discontinued, and in its place the Abernethian Society for medical pupils of the Hospital was founded in 1832.

Sir James Paget gives us a glimpse of the Hospital, and of its medical and surgical practice, as it was about this time. He says that the majority of the students had been apprenticed to general practitioners for three or four years before coming to the Hospital. Here they spent about eighteen months. The junior staff of the Hospital consisted of one house surgeon and five dressers to each surgeon. The house surgeons lived together over King Henry VIII's gateway. The teaching was entirely by lectures. The main treatment for practically all ailments was bleeding. It was used as a means of producing muscular relaxation, and also as an anæsthetic. There was only one examination at the College of Surgeons for the diploma. This consisted of about twenty five minutes' *viva voce* before a number of the Fellows, all of whom sat at the same table.

Nevertheless this was a time which seems to have marked a definite epoch in the history of surgery. The apprenticeship system, which hitherto had formed the basis of medical education, was being augmented and in time came to be altogether superseded by hospital practice. The activities then in progress may perhaps be described as preliminary skirmishes rather than the great advance itself, but of that great advance when it eventually came Abernethy was a symbol. The new curriculum of medical education which began to shape itself was due in no small measure to Abernethy, and in that curriculum the medical library loomed large. It is not too much to say that Abernethy may be regarded as the most outstanding figure in connection with the foundation of our Medical College. *The Memoirs of John Abernethy with a View of his Lectures, Writings and Character* by Macilwain is in the Library and affords stimulating reading.

For many years the Librarian was a member of the medical staff who acted in an honorary capacity, but later a salaried Librarian was appointed in the person of W. A. Delamotte. Delamotte was also Librarian to the Aldersgate School of Medicine. He was, in addition, an artist, and his zincographs illustrate a small book written by himself, which was published by subscription in 1844, entitled *An Historical Sketch of the Priory and Hospital of St. Bartholomew*, of which a copy is in the Library.

In 1848, at a general meeting of the subscribers to the Library and of the remaining members of the Medical Society of St. Bartholomew's Hospital, it was resolved

"that the books of the Library be presented to the President, Treasurer and Almoners of the Hospital for the use of the Medical School".

Thomas Godart was elected to succeed Delamotte as Librarian in 1852. Like his predecessor, Godart was also an artist, and many of his drawings are still to be found in our Museum. Several of his lithographs were used to illustrate Holden's *Osteology*, which enjoyed a long life as a student's text-book, and even now has not completely lost its popularity. Godart also made a lithograph of the Hospital Square, which can be seen in the collection of prints in the Library.

In 1873 rules were drawn up in form and suspended in the Library, but these were rescinded in 1879, when the present building was erected. The old Library, a domed building, was roughly on the site of what is now the Medical and Surgical Theatre. The Giltspur Street gateway and the road leading to it from the Hospital Square had to give way for the new Library. In anticipation of its opening it had been resolved in 1878 that the Library should be free to all students of the Hospital. Hitherto it had been purely a lending library for subscribers, who were entitled to borrow up to three volumes at a time. The opening ceremony by the Prince and Princess of Wales (afterwards King Edward VII and Queen Alexandra) took place in November, 1879, and on January 5th, 1880, was opened for readers. New rules were framed, and from that time have occupied a conspicuous position over the Librarian's desk, and only those whose concentrated powers of observation are zealously and jealously reserved for the details of their professional studies can fail to have seen them.

Godart continued as Librarian and artist until 1881, when it was decided that the two offices should be separated. Godart retained the latter, and P. F. Madden was appointed Librarian and occupied the post until his death in 1903, when he was succeeded by the present occupant of the post.

A. H. COUGHTREY.

(To be continued.)

LINES.

(On reading somewhere—"not, I think, in Dionysius of Halicarnassus"—that Smithfield was formerly pronounced Smiffle.)

The Scholarship (Entrance) in Artholomew's
Was won by a pupil of partholomew's;
His rivals wrote pithfield,*
So come not to Smithfield,
Nor flit round the Fountain at Bartholomew's.

* The incident is fictitious.

"THE LIFE AND WORKS OF CHARLES BARRETT LOCKWOOD, 1856–1914."

(Continued.)

IV. INTERLUDE—SAILING.

"They are grander things than all the arts of towns,
Their tests are tempests and the sea that drowns."
John Masefield, "Ships".

It may not be amiss at this point to penetrate a little behind the professional front which Lockwood, in his days as Demonstrator of Anatomy, presented to those amongst whom he was so strenuously engaged at work. He had taken rooms in 1882 at 8, Serjeant's Inn, and here, when time allowed him, he was always a good host, and enjoyed entertaining a few chosen friends. Shy by nature, he was never intimate with many, and in his younger days, in particular, he was kept much to himself by his concentration upon research work, coupled with a hard upward fight, unaided by the support of money or powerful friends. His spirit might very nearly have broken had it not been for a friendship which he formed with Marmaduke Shield of St. George's. Shield was a man whose character and opinions Lockwood at once respected, and the two of them used regularly on Sundays to escape from the grip of London and walk long distances amid the freshness of the countryside. By this means more than any other Lockwood managed to maintain his physical fitness; his friendship with Shield remained one of the unwavering things in his life.

In 1886 Lockwood took a house at No. 19, Upper Berkeley Street, and here he continued to live to the end of his days. The house was too big for his own requirements, and, after the manner of the demonstrators in those days, he took to live with him resident pupils, for whose studies he made himself responsible. Their company was welcomed by him and he spared no pains on their behalf. One of them has described the generous way in which Lockwood treated them, and how their affection for him increased with their knowledge of him. Amongst other things he provided them with latch-keys, which was by no means customary, preferring, as he said, to regard them as sensible fellows whom he could trust not to make fools of themselves. Lockwood, referring to them himself many years afterwards, wrote: "Those resident pupils could be a source of great pleasure and interest. The few that I had nearly always came at the beginning of their careers, and did not leave until they were qualified, behaved like angels in the house, and were afterwards the best of friends".

There were two Bart.'s men, contemporaries of Lockwood, who got to know him well at this time, and one of them in particular introduced him to recreation after

his own heart. W. Bruce Clarke, a fellow demonstrator, had a practical turn of mind that appealed to Lockwood. Bruce Clarke was a strong character and full of energy. Whether it was panelling rooms in his own house or making a weather-vane for the Pavilion at Winchmore Hill, his hands were seldom unoccupied. He and Lockwood were eventually together on the surgical staff of the Hospital for many years.

Lockwood's other friend was a man beloved by all, namely, Lewis Jones, and it was to him that he owed a great deal. Lewis Jones was interested in medical electricity and subsequently took charge of this department at Bart.'s; and it is worth recording here what he did with it. When he came the apparatus consisted

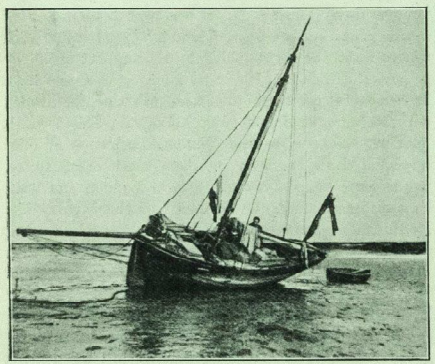


FIG. 2.—"THE TEAL."
(From a photograph taken by Lewis Jones.)

of three element boards connected with sixty Leclanché cells in the basement, an electrical bath, a Carre's static machine, and an operating table for electrolysis, and that was all. He left a splendid and completely fitted electrical and X-ray department, occupying a well-arranged series of rooms.

Lewis Jones was interested in many things, particularly in gardening and in sailing. His father had been a naval chaplain, and he shared with Lockwood a strong affection for the sea and for ships. Both of them longed for a chance to sail, and determined to purchase together a boat in which to make cruises. They obtained a little sailing-craft of 3½ tons, named "The Teal", and kept it at a small creek at Leigh, on the Essex coast; it was looked after by an old sailor named Henry Cotgrove, but whom, for an obscure reason, they always called "Benson".

Lewis Jones and Lockwood made many week-end cruises down the Thames, the Medway and the Essex rivers. Their adventures caused no less amusement to themselves than to their friends, some of whom were from time to time invited to accompany them. Bruce Clarke was amongst the more appreciative of these. The lot of the voyager, be he host or guest, was often as hazardous as unexpected, and once or twice at critical times the crew even tumbled overboard *en masse* to help the vessel off the sands.

As a rule they carried large quantities of bulls-eyes "for their medicinal virtues", as Lewis Jones said, "and to ward off dyspepsia which is likely to arise when one is living on food of one's own cooking". They both hated cooking, and eventually made it their custom to take with them a large piece of boiled beef to counteract the occasional startling originality of their own dishes.

One of their friends who went for a cruise in "The Teal" with them to the Norfolk Broads, used to go ashore at night and sleep in hotels, whenever hotels were available, and would turn up next morning pretending that he had lost himself the previous evening in the dark and could not find his way back to the boat. He was not anxious to sleep again on a small boat after that cruise and vowed he never would.

But Lewis Jones and Lockwood enjoyed the invigorating effect of these holidays, and put up with a good deal together. Lockwood used afterwards to tell of an incident which was characteristic of Lewis Jones. They were starting on one of their trips and Lockwood had with him his dog. "Lockwood, why did you bring that brute of a dog aboard?" demanded Lewis Jones testily. Yet when the poor animal was taken very ill the next day, Jones sat up with it all night.

Benson, who looked after "The Teal", was a well-known character of the district and a source of amusement to his employers, who frequently chided him for his idleness. Lewis Jones told how Benson's friends would say, "Them gents o' yours, Benson, will drownd theirselves one of these days", but he would reply, "No, I don't think; they knows how to act within a little and they've got a stubborn little boat". Anxiety for the safety of his employers never disturbed him.

Lockwood led the way as pilot in many of the more distant trips, and Lewis Jones spent a great deal of time taking photographs with a hand-camera, then somewhat of a novelty. So many adventures occurred and so many pictures were taken that Jones, with Lockwood's assistance, began to compile a book, giving an illustrated account of their cruises. This was eventually published in 1892, and was called *Swin, Swale and Swatchway*. Although now out of print, a few private copies still exist, and the book is to be seen in the library of the British Museum. It is a delightful and most humorous record of navigation. We catch a glimpse of Lockwood in a towering rage with a man who had rowed about half a mile to offer assistance when "The Teal" was aground—"Assistance indeed! I suppose you think I don't know where I am. I suppose you fancy I have never been ashore in this craft before. I don't want much help from you to get off again on a rising tide, do I? I hope you will enjoy your row back again against the stream."

Often, apparently, they met with difficult situations, and there is a suggestion of bitter experience in the remark "How annoying it is to be shouted at by unintelligible people at critical moments".

Of the many tales related in the book, perhaps the following should be quoted as it shows well the atmosphere of the whole of the expeditions.

"Once, when we were anchored near the Sun Pier, about five in the morning, an enterprising young ruffian thought the occasion a good one for coming alongside to prospect for movables, little reckoning that as he touched the little vessel's side, there would emerge, Jack-in-the-box-like, a half-dressed and dangerous-looking figure from the forehatch and another from aft, with a truculence of aspect heightened by a pair of gold spectacles; and that both, in well-drilled chorus, and in accents bland, would demand an explanation of the unexpected visit. The double-barrelled apparition proved too much for our young friend; his jaw dropped, he hastily withdrew, murmuring by way of apology for his intrusion, 'I say, d'yer stay out all night in that 'ere?'"

To Lockwood these brief holidays at the mouth of the Thames Estuary meant a regular renewal of his overtaxed energies. From Saturday to Monday, if he was able to get away, it was possible for him to be in an atmosphere that he loved, breathing the fine sea air, anchoring for the night in some lonely creek and charting out new waters the following day. The exuberant spirits of Lewis Jones were always heartening, and something of the light-hearted enjoyment that he and Lockwood shared is conveyed by their challenge; "Give us the man who can greet with laughter the spray as it comes smashing aft over the weather bow, and thinks it a good joke to find his sea boots full of water, which has reached them down the back of his neck, and can think of the well earned pipe of peace which he will enjoy when he has found his way into some little harbour and has changed his wet things, and is demolishing his supper in comfort."

E. C. O. JEWESBURY.

(To be continued.)

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£ s. d.	*	†
Staff	12,727 15 10	(72)	
Demonstrators	1,716 11 0	(69)	
Students	799 6 9	(289)	
Old Bart.'s men:			
†Bedfordshire	25 3 6	(7)	(26)
Berkshire	123 3 0	(16)	(37)
†Buckinghamshire	76 19 0	(14)	(29)
†Cambridgeshire	183 6 0	(17)	(42)
‡Cheshire	6 16 6	(3)	(20)
‡Cornwall	31 11 0	(8)	(36)
Cumberland	5 0 0	(1)	(9)
Derbyshire	19 14 0	(4)	(17)
‡Devonshire	558 15 0	(52)	(117)
‡Dorset	52 1 0	(14)	(30)
‡Durham	17 7 0	(4)	(11)
Essex	249 19 6	(19)	(69)
‡Gloucestershire	229 19 6	(23)	(66)
Hampshire	446 14 0	(46)	(134)
‡Herefordshire	17 12 0	(4)	(10)
Hertfordshire	84 11 0	(16)	(73)
Huntingdonshire			(1)
Isle of Wight	186 13 0	(13)	(25)
‡Kent	573 13 0	(69)	(146)
‡Lancashire	91 4 6	(12)	(82)
Leicestershire	136 15 0	(7)	(28)
‡Lincolnshire	58 17 0	(17)	(27)
Middlesex	385 6 0	(21)	(68)
‡Norfolk	173 0 6	(21)	(60)
‡Northamptonshire	59 1 0	(5)	(17)
‡Northumberland	101 1 0	(2)	(11)
‡Nottinghamshire	19 19 0	(3)	(28)
‡Oxfordshire	185 3 0	(18)	(29)
Rutland			(2)
Shropshire	35 9 0	(8)	(22)
‡Somersetshire	1,180 3 0	(28)	(43)
Staffordshire	193 17 0	(5)	(37)
‡Suffolk	313 3 6	(24)	(46)
Surrey	473 3 6	(55)	(180)
Sussex	410 1 6	(59)	(174)
Warwickshire	179 2 6	(19)	(56)
Westmorland	2 10 0	(1)	(5)
‡Wiltshire	110 11 0	(12)	(26)
‡Worcestershire	158 19 6	(24)	(24)
‡Yorkshire	302 6 6	(24)	(101)
Wales	61 9 0	(10)	(150)
London	2,904 9 8	(192)	(971)
Channel Islands	20 0 0	(2)	(9)
Scotland	15 5 0	(5)	
Abroad	114 1 0	(13)	
South Africa	362 15 6	(19)	
Canada	114 3 6	(8)	
East Africa	87 12 0	(10)	
West Africa	146 10 0	(5)	
India	201 0 0	(11)	
Ireland	19 14 0	(4)	
North Africa	1 0 0	(1)	
North Borneo	3 5 0	(1)	
Australia	122 2 0	(6)	
China	52 8 4	(9)	
Siam	10 0 0	(1)	
France	50 0 0	(1)	
British West Indies	50 8 0	(5)	
Straits Settlements	7 1 0	(3)	
New Zealand	6 1 0	(3)	
Services	616 17 6	(42)	
Others	32,484 3 5	(332)	
Lord Mayor's Appeal	12,327 15 0		
Funds of College	8,000 0 0		
Value of Building	20,000 0 0		
	£100,484 11 6		

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County ‡ Counties with Secretaries.

STUDENTS' UNION.

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* REDRUTH.

Played at Winchmore Hill on Saturday, October 20th, and lost by 1 goal (3 pts.) to *nil*.

Play during the opening stages of this match was very scrappy and uninteresting to watch. The only pleasing feature was the good defensive work of the Bart.'s pack. The handling of the backs was poor, and no movement made any real progress.

We were unfortunate in losing Youngman, who left the field for the remainder of the game after receiving a nasty kick over his eye. Mundy was brought from the pack to take his place. Shortly after this, from the first good three-quarter movement of the game, Robbins caught the Bart.'s defence on the wrong foot, and ran through to score a good try, which was converted.

After the restart Bart.'s displayed more enterprise and did the attacking for some time, but when this burst was over they were again on the defensive. Redruth pressed continuously, and the fact that the score was not increased is due to the splendid struggle put up by our depleted pack, and also perhaps to the bad finishing of their backs. Wilson at the base of the scrum did a tremendous amount of work, and his timely touch-finding did much to conserve his forwards' energies. Capper was the best of the forwards, who all worked hard, but were inclined to be rather slow on the ball.

This is the first of many matches in which we shall miss C. R. Morison. We wish him a quick and complete recovery from his illness, and hope to have him back in the side soon after Christmas.

Team.—J. G. Nel (*back*); J. G. Youngman, G. Fairlie-Clarke, A. W. Little, J. S. Cookson (*three-quarters*); J. D. Wilson, J. R. Kingdon (*halves*); P. D. Swinstead, K. D. Moynagh, E. M. Darmady, A. H. Grant, G. Gray, A. Innes, W. M. Capper, R. M. Mundy (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* BEDFORD.

Played at Bedford on Saturday, October 27th, and lost by 4 goals and 3 tries (29 pts.) to *nil*.

From the first Bedford established a definite superiority, and only for a few moments in the second half did Bart.'s look like reversing this position. The play of the whole team lacked spirit, the forwards being slow and the backs making the mistake of not going for the man with the ball, their hesitation being fatal against such an incisive three-quarter line. From quick passing and hard-running movements three tries were scored in the first half, one of which was converted.

In the second half we were winning most of the scrummages, but the ball was heeled rather slowly and our backs failed to make progress. Twice we might have scored if there had been efficient backing-up, once when Kingdon broke through the centre, and again when Burrow dribbled cleverly up to the full-back. Our short spell of ascendancy soon waned, and the Bedford forwards joined their backs in some very fine passing movements, which brought them four more tries, three of them being converted. Hard and determined tackling could easily have prevented such scoring in this game, but it was not forthcoming on this occasion, when our side played sadly below their real form.

Team.—C. W. John (*back*); J. S. Cookson, G. A. Fairlie-Clarke, A. W. Little, S. T. Hayes (*three-quarters*); J. D. Wilson, J. R. Kingdon (*halves*); E. M. Darmady, K. D. Moynagh, P. D. Swinstead, G. Gray, A. H. Grant, K. C. Burrow, R. Mundy, J. C. Newbold (*forwards*).

HOCKEY CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* R.M.A., WOOLWICH.

Played on Wednesday, November 14th, at Woolwich. Won, 9—2.

The match was played in a drizzling rain, but fortunately the ground was in good condition and a very enjoyable game ensued. Bart.'s started with ten men, but neither side gained any advantage during the early part of the game. Later Lumsden, who had very kindly consented to play at a moment's notice, arrived, and our forward line, now complete, began to combine and attack more dangerously. After several unsuccessful attempts they eventually scored with a goal from Sharpe. This was followed a few minutes later by Woolwich breaking through, and scoring a quick goal before our backs could intercept them. Play was in mid-field for a time, but Bart.'s gained a well-deserved lead again before half-time. Score 2—1.

From the start of the second half, for about a quarter of an hour, Bart.'s continued to press very strongly and scored about five goals. The backs did not have much work to do during this time, but Masina at left-half was playing well and hitting the ball very hard. For the next ten minutes or so Woolwich improved considerably, scoring again and keeping the ball well in our "twenty-five". However, they could not keep up this pace, and the game ended by Bart.'s winning by 9 goals to 2. Goals were scored by Sharpe (3), Heyland (2), Lumsden (2), Barrett and Hill.

Team.—J. P. Mullen (*goal*); J. A. Atwill, A. D. Messent (*backs*); P. Jayes, J. R. Winter, A. H. Masina (*halves*); P. G. Hill, R. Heyland, A. E. Sharpe, K. Lumsden, R. H. Barrett (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* TULSE HILL II.

Played on Saturday, November 17th, at Winchmore Hill. Lost 2—4.

This was probably the best match of the season so far, and Bart.'s had bad luck in not winning. The team, not at its full strength, played very well indeed in holding a side that beat them badly last year. The game opened evenly, Bart.'s playing up the hill. Very soon they took the ball up to their opponents' circle and Sharpe scored a good goal. This greatly encouraged the side, and they continued to attack, giving Tulse Hill very little of the ball. A short while later Blackburn scored from a "corner", and after several more "corners" had bad luck in being disallowed another. Tulse Hill were well held, but before half-time they scored once, their inside left finding himself with the ball, and seeing our goalkeeper out of position, banged it into the net.

During the second half Tulse Hill began to attack strongly, and soon equalized. Bart.'s were finding some difficulty in clearing the ball, but eventually the game opened out again and they had bad luck in not scoring. During the last few minutes the opposing inside left broke through the defence and scored twice, making the game safe for Tulse Hill.

Team.—J. F. Mullen (*goal*); J. A. Atwill, A. D. Messent (*backs*); P. Jayes, J. R. Winter, A. H. Masina (*halves*); P. G. Hill, R. Heyland, A. E. Sharpe, G. Blackburn, J. M. Lockett (*forwards*).

REVIEWS.

HANDBOOK OF GYNÆCOLOGY. By BETHEL SOLOMONS, B.A., M.D., F.R.C.P.I., F.C.O.G., M.R.I.A., late Master Rotunda Hospital, Dublin. Third edition. (London: Baillière, Tindall & Cox, 1934.) Pp. 368. Price 15*s*.

This book is a short one, containing only 368 pages, and has been written for the student and the general practitioner. The third edition is enlarged by 50 pages, but an effort has been made to retain its character as a handbook. The illustrations are numerous, but some are difficult to understand for those who are not familiar with the subject, as also are the microphotographs.

The book is divided into ten chapters. In Chapter III, which deals with menstruation and its disorders, it is refreshing to find a section on such practical aspects of the subject as "a short note on the treatment of certain menstrual disturbances with ductless gland preparations", and "advice to young women concerning the monthly period". In the former section the author wisely states that successful results have been obtained in some cases, but the treatment is still empirical to a large extent. In the same chapter a small list of prescriptions suitable for the treatment of various menstrual disorders is given, and should be useful in emphasizing the practical side of the subject.

No less than sixty pages are devoted to the chapter on operations, and although the descriptions are lucid and the illustrations good, it would probably have been better to devote some of this space to a wider discussion on tumours of the genital organs, which are described only very briefly.

The chapter on gynæcological lacerations, malformations and displacements is very good and easy to understand. The final chapter is written by Oliver Chance, and deals with radium and X-rays in gynæcology; this is particularly useful for students, as the physical and mathematical side of the subject is dealt with briefly but clearly, and the various conditions which are amenable to treatment by irradiation are described, with the appropriate technique in each case.

The third edition of this book should prove useful to both the practitioner and the student who requires a rapid review of the whole subject of gynæcology.

INDUSTRIAL MALADIES. By Sir THOMAS LEGGE, C.B.E., M.D., D.P.H. Edited by S. A. HENRY, M.A., M.D., D.P.H., D.T.M. (London: Humphrey Milford, Oxford University Press, 1934.) Pp. 234. 13 figures. Price 12*s*. 6*d*. net.

In 1700 a Paduan physician, Bernardo Ramazzini, published a book entitled *A Treatise of the Diseases of Tradesmen*, and in the preface, after explaining why he thinks it should be useful, particularly as he knew of no previous work on the subject (it is in fact the first book on industrial disease), he goes on to say, "So, I freely confess that what I now publish is but an imperfect Performance, or rather an Incitement, to others to lend their helping hands, till an intire and compleat Treatise is obtain'd, that may deserve a place in the Commonwealth of Physick. Questionless, we owe this piece of Service to the miserable Condition of Tradesmen, whose Handy-Works, even those of the meanest and most sordid production, are so advantageous and necessary to Mankind." I have little doubt that he would have gained much pleasure in reading the book under review and would have felt that it was the "intire and compleat treatise", just as much as Sir Thomas Legge enjoyed reading Ramazzini's *Treatise*. For, in spite of nearly thirty years' routine work in what must be the most hideous of all Government offices, Sir Thomas Legge maintained a love of history and art, and in 1931 gave a lecture on the history of trade guild windows in his and our Great Hall in aid of our rebuilding appeal.

This book is more than a mere text-book of industrial medicine, for it is a lasting memorial to the author, who did more than any man in that field; further, the arrangement of the book reminds us of this, for Sir Thomas Legge died before it was ready for publication, and it was seen through the press by one of his colleagues at the Home Office, Dr. S. A. Henry, who has added a delightfully interesting biographical preface and a complete bibliography, which reveals the breadth of his knowledge and also that artistic streak in him which has already been mentioned.

It is no ordinary text-book in another sense, for it can really be read for the pleasure of the writing, and many of the accounts of problems solved rival the best "scientific" detective stories. A good example of this is what might be called "The Strange Case of the Dundee Jute Mills". In 1899 Legge noticed a relatively high incidence of tetanus in Dundee, and wondered whether it could have any relation to jute-spinning, which was the chief industry carried on there; on further inquiry all the cases had occurred in actual millhands or their relations. He remembered having seen Solomon Islanders dipping their spears into some mud to ensure their lethal effect; this mud was virtually a pure culture of tetanus bacilli. It occured to him that the alluvial soil in Bengal where the jute grew might also be rich in tetanus bacilli, and the high incidence of the disease be attributable to spores brought over in the mud adhering to the jute fibres. Samples of dust from the factory floor, of raw jute dust and of Russian hemp dust as a control were sent to Sir Frederick Andrewes; the first two contained large numbers of bacilli. Finally specimens of the actual Bengalese jute field earth were examined and the tetanus content was shown to be far above the average cultivated earth figure. Thus it was established that there was the same connection between tetanus and jute as was known to exist between anthrax and wool.

It should not be thought, however, that the book is written in a "popular" style, for facts and detailed references are given throughout and the incidence charts are of amazing clarity. In conclusion it is hardly necessary to add that Mr. Milford has done full justice to a graduate of the University in the matter of binding and typography.

HIGH BLOOD PRESSURE. By J. F. HALLS DALLY, M.A., M.D., M.R.C.P. Third edition. (Wm. Heinemann (Medical Books), Ltd.) Pp. xxii + 281. Price 15*s*. net.

The present edition has been largely revised and brought up to date. It contains a useful account of our knowledge of the subject, and will be found valuable by those who desire to know more about high blood-pressure than can be gathered from the standard text-books of medicine. The chief defect is that the author devotes too much of the total space to a consideration of the mechanical and technical aspects of the subject, and does not sufficiently stress the clinical importance of the problems which are raised by a study of abnormally high arterial pressure. In the discussion on obstruction to the outflow of blood from the heart, coarctation of the aorta is not mentioned. The chapter on high blood-pressure in relation to life assurance is valuable, but it could usefully be expanded.

THE RHEUMATIC DISEASES. A CONCISE MANUAL FOR THE PRACTITIONER. By G. D. KERSLEY, M.A., M.D.(Cantab.), M.R.C.P. With a Preface by F. R. FRASER, M.A., M.D., F.R.C.P. (William Heinemann, Medical Books, Ltd.) Pp. xvi + 88. Price 6*s*. net.

The most interesting and unusual feature of Dr. Kersley's book is the chapter on Physiotherapy. In this chapter he describes in some detail the various methods of massage, balneotherapy, and heat and light treatment, which are employed in a modern British spa for the relief of the rheumatic disorders. This chapter would be of greater use to the practitioner if more indication was given of the particular type of physical treatment likely to be of use in the different types of disease; also it would be of greater value if an account of the results to be expected from the different forms of treatment was added.

From the clinical standpoint the accounts of the chief rheumatic disorders are short but good, and it is interesting to see that a separate chapter has been devoted to climacteric arthritis. In a future edition of the book a short account of gonorrhœal fasciitis and arthritis might be added with advantage, to stress the points of differential diagnosis from the non-specific forms of fibrositis and arthritis. This is undoubtedly a book which will be of great value to the practitioner in treating the chronic rheumatic disorders.

AIDS TO OPERATIVE SURGERY. By C. P. G. WAKELEY. 2nd edition. (London: Bailliere, Tindall & Cox, 1934.) Pp. viii + 225. 3 figs. Price 3*s*. 6*d*.

A useful little book that can be used as an adjunct to the larger works for rapid revision. That it cannot in any way replace these is emphasized in reading the text, for without a primary knowledge of the procedures involved, each description would be unintelligible to the student. Much of this would be removed by the inclusion of a number of small diagrams in, for example, the sections on plastic operations. An indication of post-operative measures would also be useful. There are a few mistakes (for example, Morison's name is misspelt, and we are told to clamp the BONE of each pile with forceps!).

AIDS TO OSTEOLOGY. By PHILIP TURNER, B.Sc., M.S., F.R.C.S., and N. L. ECKHOFF, M.S., F.R.C.S. Third edition. (Baillière, Tindall & Cox.) Price 4*s*. 6*d*.

The new terminology is now used throughout this book, which gives a concise account of the anatomy and relations of the bones. These certainly lend themselves well to such treatment, and the book should therefore be useful both to beginners and those revising for exams., to whom the importance of a knowledge of osteology is difficult to exaggerate.

EXPERIMENTAL PHYSIOLOGY FOR MEDICAL STUDENTS. By D. T. HARRIS. Second edition. (London: J. & A. Churchill, Ltd., 1934.) Pp. viii + 248. 230 illustrations, with plate in colour. Price 12*s*. 6*d*.

This well-known manual on practical physiology, which in the previous edition was entitled *Practical Physiology*, by Anrep and Harris, has now reverted to its original title.

The present edition has been considerably extended, and in the selection of experiments the author achieves his aim of a nice balance between the science of physiology and its clinical applications. The chapters dealing with the circulation, muscle and nerve are well set out. An entirely new chapter on body temperature has been added, and in view of the close relationship between physiology and practical pharmacology, a chapter on the latter by Prof. Clark has been included.

The illustrations are numerous and good and the book maintains its previous high standard of clarity.

Although primarily intended to cover the requirements of the 2nd M.B., it may profitably be used by students reading for an honours degree and by the research worker.

CORRESPONDENCE.

To the Editor, 'St. Bartholomew's Hospital Journal'.

SIR,—I read with very great pleasure the article in your last issue dealing with mysterious religious frenzies, both in Northern Africa and in India.

I hope your readers will not be unduly impressed by the pictures and text to assume that there is anything outside our common range of observation performed at these mysterious ceremonials.

I have personally been present at the old Sacred Mohammedan City of Kairouan, situated in the desert, and for ages forbidden to any non-Mohammedan to enter.

I also had the privilege of being present in the black tent, where the performances were carried on, exactly as related in your last number.

I was very satisfied that there was nothing mysterious about it. The performers' cheeks had been pierced, and tongues had been pierced long before, so that the only difficulty was to find the holes before pushing in the spears and skewers and knives.

There was nothing more mysterious in it than a man putting his false teeth into his mouth, or a woman putting an ear-ring into her ear that had been pierced in childhood.

With regard to the eating of glass, and of thorns, the first is a performance quite common to all old English fairs, and the second is constantly carried out by donkeys and camels, so that the whole thing was merely a result of practice and organization.

There is one element, of course, which is always mysterious, that is the psychology of motion and sound and mass. I felt myself the urge to join in the frenzied dance, and howl with the rest of them. Anyone who goes and sees "Jew Suss" will see an illustration of this same phenomenon, when the crowd howls and shrieks and belabours the Jew.

In India I had a specially interesting experience. I was a guest of one of the Rajahs, and was taking a tour, and my quarters for the night were in a devil's temple. The villagers gave me a demonstration of the same sort of thing, where a man bashed himself with iron chains, ate glass, howled and contorted himself, and in the end mouthed large quantities of red powder, which they assured me was virulent poison. When they looked to me to be impressed, I pulled out of my waistcoat pocket a little pill, and said, "This pill is powerful enough to kill three men; if your man there is so protected by the devil, that as you say he can swallow poison without doing him any harm, will you give him this pill please, but understand that it contains deadly poison, and that I am assured that he will die in three minutes after swallowing it". The only reply they made was, "Ah, Sahib, you know too much". And then we had a pleasant confab together.

Jugglers and jonglers have amazed the world since the earliest time, and every religion has utilized psychological phenomena to gain power for their priests.

Yours faithfully,
JOSIAH OLDFIELD.

[We have spoken to Dr. Hunt, who says there is no question whatever, as far as Rafaee fakirs of Hyderabad are concerned, of there being permanent holes present in their tongues, cheeks or abdominal walls. These men have been carefully examined, by daylight, many times by several medical men, each of whom has tried hard to discover how the demonstrations were done. A series of "close-up" photographs were taken to prove this point, and Dr. Hunt will be very pleased to show these to Dr. Josiah Oldfield at any time he chooses.

It is well known that in many a ceremony original practices have been replaced by trickery, and it is just possible that this had occurred in some of the performances seen by Dr. Oldfield.

We shall be interested to hear if Dr. Josiah Oldfield finds anything "outside our common range of observation" in the photographs, published for the first time, in the present number of the JOURNAL. —ED.]

EXAMINATIONS, ETC.

Conjoint Examination Board.

Pre-Medical Examination, October, 1934.

Chemistry.—Anklesaria, J. M., Bell, C. J. A., Slowe, J. J.
Physics.—Bell, C. J. A., Slowe, J. J., Thomson, T. G. L.
Biology.—Harvey, T. E., Slowe, J. J., Thomson, T. G. L.

First Examination, October, 1934.

Anatomy.—Cawthorne, J. E., Jamieson, J. G., Mundy, N. B., Nixon, J. C., Welply, R.
Physiology.—Harrisson, G. J., Jamieson, J.G., Kershaw, R., Witt, R. C.
Pharmacology.—Berry, J. G., Gibson, R. G., Heasman, L., Owen, W. A., Salmon, J. K.

Final Examination, October, 1934.

The following students have completed the Examinations for the Diplomas of **M.R.C.S., L.R.C.P.:**

Blomfield, D. M., Bressler, D. M., Conway-Hughes, J. H. L., Dale, R. H., Fernandes, H. P., Hill, J. R., Hunt, A. H., Hussain, R., Lloyd, G. M., Lyons, R., McAvoy, J. C., Merriman, B. M., Mullick, S., Noordin, R. M., Osen, H. E., Pan, M. L., Rees, J. H. S., Rouse, A. J., Seidman, J. I., Thorne Thorne, B., Tregaskis, T. G., Waks, W., Williams, E. G. K.

CHANGES OF ADDRESS.

APPELMAN, M., 405 Rockaway Parkway, Brooklyn, New York.
BACH, F., 49, Wimpole Street, W. 1. (Tel. Welbeck 3720.)
COLT, G. H., 30, Harley Street, W. 1. (Tel. Langham 3726.)
JEPSON, W. B., Orchard Cottage, Edenbridge, Kent
JOLLIFFE, Surg.-Cmdr. W. A., R.N., H.M.S. "Cairo", Home Fleet, c/o G.P.O., E.C. 1.
JONES, P. T., Coleford House, Coleford, near Bath, Somerset.
KING, Lt.-Col. H. H., I.M.S., Englefield, 106, Hornsey Lane, Highgate, N. 6.
LLOYD, W. JEAFFRESON, East Hill, Aldeburgh, Suffolk.
MCBRIDE, J. R. B., Rowan House, East Bergholt, Suffolk.
RADCLIFFE, F., 79, Montague Street, Kettering, Northants.
WARD, Surg.-Lt. F. H., R.N., H.M.S. "Sussex", c/o G.P.O., London.
WAY, LESLIE, Cosycot, Fox Hill, Haywards Heath.

BIRTHS.

BONNER-MORGAN.—On October 16th, 1934, at Penang, to Susan and Dr. W. R. Bonner-Morgan—a son.
FRANCIS.—On November 7th, 1934, at 20, Devonshire Place, W. 1, to Patricia, wife of Clement A. Francis, M.B., B.Ch., 56, Queen Anne Street, W. 1 a daughter.
PENTREATH.—On October 30th, 1934, at the Livingstone Hospital, Dartford, Kent, to Marjorie, wife of Dr. E. U. H. Pentreath—a daughter.
RUSSELL.—On October 31st, 1934, at 20, Devonshire Place, to Doreen, wife of Baron Russell, M.R.C.S., L.R.C.P.—a daughter.
TRACEY.—On November 5th, 1934, to Katherine Reavell and Basil Martin Tracey, of 62, Thorpe Road, Norwich—a son.

MARRIAGES.

CARTE—ELLINGER.—On November 10th, 1934, at St. Andrew's Church, Cheam, Geoffrey W. Carte, to Desiree, daughter of Florence Ellinger and the late James Ellinger, of Manchester.
MCMASTER—NUTTER.—On August 29th, 1934, at the Methodist Church, Baillie St., Rochdale, by the Rev. S. G. Dimond, M.A., Arthur Maurice, elder son of Dr. and Mrs. A. B. McMaster, of Dover, to Dorothy, only daughter of Mr. and Mrs. Herbert Nutter, of Rochdale.

DEATHS.

CARTER.—On November 2nd, 1934, at Hillbrow Cottage, Liss, Hants, Frederick John Carter, M.R.C.S., L.R.C.P., aged 66.
CARTER.—On November 7th, 1934, at Westview, Yelverton, Devon, peacefully, Thomas Edward Carter, M.B., formerly of Stamford, Lincs.
CULSHAW.—On November 10th, 1934, of pneumonia, Frank Hubert Culshaw, M.R.C.S., L.R.C.P.
HEATH.—On October 26th, 1934, suddenly, at Lynwood, Moor Park, Arthur Heath, M.D., F.R.C.S., aged 60.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C. 1. Telephone: National* 4444.

St. Bartholomew's Hospital JOURNAL.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 4.] JANUARY 1ST, 1935. PRICE NINEPENCE.

CALENDAR.

Tues., Jan. 1.—Dr. Graham and Mr. Roberts on duty.
Fri., ,, 4.—Prof. L. J. Witts and Prof. Gask on duty.
Sat., ,, 5.—Rugby Match *v.* Harlequins. Home.
Association Match *v.* Old Monovians. Home.
Mon., ,, 7.—Special Subjects: Lecture by Dr. Cumberbatch.
Tues., ,, 8.—Lord Horder and Sir Charles Gordon Watson on duty.
Wed., ,, 9.—Surgery: Clinical Lecture by Mr. Wilson.
Hockey Match *v.* Guy's Hospital. Home.
Fri., ,, 11.—Dr. Hinds Howell and Mr. Wilson on duty.
Medicine: Clinical Lecture by Dr. Hinds Howell.
Sat., ,, 12.—Rugby Match *v.* Wasps. Home.
Hockey Match *v.* Sevenoaks. Away.
Mon., ,, 14.—Special Subjects: Lecture by Mr. Elmslie.
Tues., ,, 15.—Dr. Gow and Mr. Girling Ball on duty.
Christmas Entertainment: "The Nelson Touch" (Jan. 15th to 18th).
Wed., ,, 16.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.
Fri., ,, 18. Medicine: Clinical Lecture by Dr. Gow.
Dr. Graham and Mr. Roberts on duty.
Sat., ,, 19.—Rugby Match *v.* Nuneaton. Away.
Association Match *v.* Old Bradfieldians. Home.
Hockey Match *v.* Harlesden. Away.
Pot-pourri of Christmas Ward Shows.
Last day for receiving matter for the February issue of the Journal.
Mon., ,, 21.—Special Subjects: Lecture by Mr. Just.
Tues., ,, 22.—Prof. Witts and Prof. Gask on duty.
Wed., ,, 23.—Surgery: Clinical Lecture by Mr. Wilson.
Thurs., ,, 24.—1st Round Inter-Hospitals Hockey Cup. Bart.'s *v.* Westminster. Away.
Abernethian Society: Mid-Sessional Address by Mr. Hugh Cairns on "Recent Advances in Intra-cranial Surgery".
Fri., ,, 25.—Lord Horder and Sir Charles Gordon-Watson on duty.
Sat., ,, 26.—Rugby Match *v.* Old Alleynians. Home.
Association Match *v.* Old Aldenhamians. Home.
Hockey Match *v.* R.N. & R.M. Chatham. Home.
Mon., ,, 28.—Special Subjects: Lecture by Mr. Sidney Scott.
Tues., ,, 29.—Dr. Hinds Howell and Mr. Wilson on duty.
Wed., ,, 30.—Surgery: Clinical Lecture by Mr. Girling Ball.
Association Match *v.* Balliol College, Oxford. Away.
Hockey Match *v.* Shoeburyness Garrison. Away.

EDITORIAL.

WE have been assured by the Press, the politicians, and even by the usually morose Old Moore that the New Year was the corner beyond which prosperity has lurked for so long. The assurance comes with the same optimism that the doctor employs to rouse a despairing patient: "You're getting on finely: we'll have you up in no time." Whether the patient has been duly impressed or not, a new spirit of gaiety and almost extravagant abandon has marked such occasions as the Royal Wedding and the Christmas festivities, and "Spend" has been substituted for the dismal password "Save" with refreshing results.

It is inevitable that an institution so dependent on public generosity as a voluntary hospital should suffer as a consequence of such a wave of economical depression: the suspension of the Great Appeal was sad evidence of this. Great courage must have been needed to launch another appeal, in this case to buy and equip the site for the new College, but the urgency of the call and the energy of its advocates have produced a goodly tale of bricks with such scanty straw.

Money is ill saved that shames its owner and, with the removal of the only cause that we can charitably assign to lack of support, we hope that more Bartholomew's men will interest themselves in the only vehicles that convey to those that have left an accurate impression of the work and activities of the Hospital. Figures reveal the lamentable fact that of nearly 4000 old Bart's men, only a bare 1500 subscribe to this Journal and less than 400 to the *Reports*. When the JOURNAL was first published in 1893 it had as its object, besides the recording of lectures and clinical work and the promotion of "a feeling of *esprit de corps* among the students", to quote from the first Editorial, that of "binding as much as possible the past

with the present, and to keep up the interests of old students in the doings of those now at the Hospital."

We for our part endeavour to make the articles and news of the greatest possible interest to the majority. The articles are, as far as is possible, practical in their application as well as instructive and entertaining. Attention is drawn to a series of short articles beginning in this issue with the title of "Clinical Methods". It is hoped that the series will be permanent, and its object is to record those "wrinkles, dodges and gadgets" which have been found of value in practice for diagnosis and treatment. Many of those working in the Hospital have agreed to contribute, but the success of the series will rest on the response of those outside. There is always a grateful welcome for contributions and news, or criticisms and suggestions of any kind from students and old Bart.'s men.

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The new issue of the *St. Bartholomew's Hospital Reports*, of which there is a review in the appropriate column, well maintains the high standard of excellence of its predecessors. We append a list of the articles:

I. In Memoriam: W. Foster Cross, by C. E. West.
II. The Problem of Peptic Ulcer. Introduction by Lord Horder of Ashford.
  i. Observations on the Anatomy and Physiology of the Stomach. By Prof. H. H. Woollard.
  ii. The Pathology of Peptic Ulcer. By Prof. E. H. Kettle.
  iii. Duodenal Feeding in the Treatment of Peptic Ulcer. By Geoffrey Bourne.
  iv. Results of Surgical Treatment of Gastric Ulceration. By W. Girling Ball.
  v. A Survey of the Results of Treatment of Gastric and Duodenal Ulceration. By R. W. Raven.
III. The Active Agent in the Treatment of Urinary Infections by Ketogenic Diet. By A. Q. Wells.
IV. Papers on Anæmia in Infancy. (*a*) By Ian Jeffreys Wood; (*b*) by Alfred W. Franklin.
V. Lectures on Toxic Goitre.
  i. Anatomy and Physiology of the Thyroid Gland.
  ii. Toxic Goitre.
  iii. Treatment of Toxic Goitre. By Prof. Francis R. Fraser.
  iv. The Surgery of Toxic Goitre. By Sir Thomas P. Dunhill.
VI. Researches on the Ætiology of Goitre. By A. W. Spence.

* * *

We extend a cordial and sincere welcome to the newcomers on the Senior Staff, Prof. L. J. Witts and Prof. Geoffrey Hadfield. The former we receive as a stranger in presence only, for many have availed themselves of the instruction given in his lectures and in his published work; the latter as an old Bart.'s man returning to his first home, whose work hitherto has been followed with much interest and great personal benefit.

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In the New Year's Honours a Baronetcy was conferred on Sir Holburt Waring, C.B.E., M.S., F.R.C.S. Prof. Walter Langdon Brown, M.D., F.R.C.P., was created a Knight Bachelor, and Dr. Percy Brigstocke, M.B., M.R.C.S., L.R.C.P., was awarded the O.B.E.

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The freedom of the Society of Apothecaries was conferred on Prof. Langdon Brown at the Yeomanry dinner of the Society. Sir William Wilcox, who made the presentation, paid a tribute to his valuable work in research and as Consulting Physician to this Hospital.

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We omitted to announce in our last issue the appointment of Dr. James Maxwell as Assistant Director of the Medical Unit. He had been Acting Assistant since the resignation of Dr. Hilton in October.

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On February 18th and 27th and on March 4th Mr. J. E. H. Roberts will deliver the Lettsomian Lectures to the Medical Society of London. His subject is to be "The Surgery of Pleural and Pulmonary Infections". Mr. Geoffrey Keynes will introduce on February 25th a discussion in the same Society on the value and limitations of radium therapy.

* * *

For the past twenty years there has appeared in the *Times* in the New Year a comprehensive review of the longevity figures which Mr. C. B. Gabb has collected from the front page and the news columns of that paper. He states that the deaths of 460 nonagenarians and 11 centenarians were recorded in 1934. Of the nonagenarians, 127 were men and 333 women (207 of these latter were married). There was only one man among the centenarians.

Mr. Gabb qualified from St. Bartholomew's fifty-six years ago.

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The frescoes on the staircase leading to the Great Hall have been thoroughly cleaned by a firm of experts. They were painted by Hogarth in 1736 in memory of his birth near the Hospital, and represent the Pool of Bethesda and the Good Samaritan. Smaller panels portray the dream of Rahere, the building of St. Bartholomew's and work inside the Hospital. Much of the detail of the paintings has been for a long time obscured by the grime of ages and difficulties of lighting, but skill and ingenuity have revealed their richness and nobility in a way hitherto unknown. Mr. Clark and his assistants are to be congratulated on the excellence of their delicate work, and gratitude expressed to Lord Bearsted and Lord Duveen for the generosity that has made the restoration possible.

OBITUARIES.

VISCOUNTESS SANDHURST.

THE St. Bartholomew's Hospital Women's Guild mourns the death of its beloved Chairman, Viscountess Sandhurst, O.B.E., who died at her home, 60, Eaton Square, S.W. 1, on December 5th, 1934. She had not been well for some time, but we did not know her illness was serious.

She was Eleanor Mary, second daughter of Matthew Arnold and grand-daughter of Dr. Thomas Arnold, the famous Headmaster of Rugby. She married firstly the Hon. Armine Wodehouse, second son of the first Lord Kimberley, and had one son, the Rev. Roger Wodehouse, Vicar of St. Paul's, Oxford, and secondly, as his second wife, Lord Sandhurst, later Viscount Sandhurst, Treasurer of St. Bartholomew's. Her interest in the Hospital and in our Guild, over which she presided ever since it was founded in 1911, was deep and unflagging, and her services cannot be estimated. Under her guidance the Guild has grown from small beginnings to hold an important place in the organization of St. Bartholomew's. Her steady judgment, her charm of manner, her ready sympathy and her sense of humour are gifts invaluable to any career, and these were all hers. We shall ever cherish her memory.

We think the best tribute we can pay her is an increased zeal for the welfare of all that concerns our Hospital, for which she cared so much and worked so cheerfully.

The Committee and the "Bees" were represented at the funeral service at St. Michael's, Chester Square.

R. FLETCHER MOORSHEAD.

St. Bartholomew's has lost one of its best sons in the death of Dr. R. Fletcher Moorshead, M.B., B.S., F.R.C.S., L.R.C.P., on December 4th, as the result of a rapidly fatal attack of double pneumonia. He qualified here in 1898, and took his Surgical Fellowship in 1903. Having to decline medical missionary work overseas owing to none too robust health, he set to building up in conjunction with Sir Alfred Pearce Gould, former Senior Surgeon to the Middlesex Hospital, the medical missionary organization of the Baptist Missionary Society, of which he was Medical Secretary, recognized as one of the first Protestant medical agencies at work to-day. Dr. Moorshead was an ardent advocate of the essential unity of spiritual and physical healing—an ideal well emphasized in his books, *The Way of the Doctor* (1926), and *Heal the Sick* (1929). His magazine, *Conquest by Healing*, of which he was editor, embraces Protestant medical work in general, and gives a good bird's-eye view of medical work going on all over the world.

He was a great organizer, and his Dispensary in Shortt's Gardens, London, is a standing tribute to him, affording relief and inspiration to countless people.

He also founded four years ago the Missionary Association of Baptist Medical Students that meets regularly during term.

He did very useful work as a Clinical Assistant to the Ear, Nose and Throat Hospital at Golden Square.

He was always passionately fond of his *Alma Mater*, and was very keen to know of the latest progress of Bart.'s nowadays. He had Mr. McAdam Eccles as his colleague in many spheres of his labour. He was, then, a many-sided man and one whose death leaves the world definitely a poorer place. J. B. G. S.

CHRISTMAS WARD SHOWS.

FOREIGNERS are apt to twit us for our moroseness and our lack of gaiety. The legend of our melancholy has persisted for centuries in France. Indeed, one visitor she sent us in the eighteenth century returned to tell his readers that the authorities in London took care to block up the approaches to the Thames in order that a glimpse of the river should not tempt their citizens to suicide. But it is not surprising perhaps that the abundance of English humour should be known only to ourselves, for its essence is its intimacy, and its good-humoured yet curious combination of tolerance and mockery. "The ludicrous takes hold of the English imagination and clings to it with all its ramifications," wrote Hazlitt. "We resent any difference or peculiarity of appearance at first, and yet, having not much malice in our hearts, we are glad to turn it into a jest—struck with oddity from not knowing what to make of it, we wonder and burst out alaughing at the eccentricity of others, while we follow our own bent, and thus afford them, in our turn, matter for the indulgence of the comic vein."

That the comic vein is a structure found almost invariably in inhabitants of these islands would surely come to be the view of anybody who began his studies by visiting the wards of Bart.'s on any Christmas Day. Comedians spring up on all sides, topical songs and caricatures mingle with magic and melodrama. Talent often manifests itself in the most unlikely quarters, and for six hours during the afternoon a great deal of hard

work is done by all the players, who press on from ward to ward with their eagerly anticipated performances.

Each year these shows seem to become more ambitious in programme, costume, lighting and effects. As many

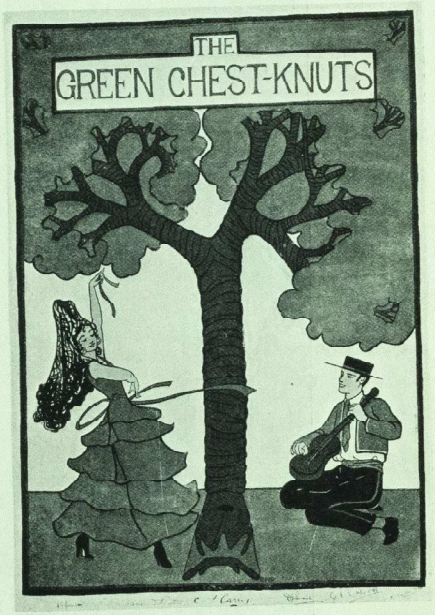
as ten different troupes went the round this Christmas, and as the general standard was very high indeed, it is good to know that we shall have an opportunity of hearing the best numbers again in the Great Hall.

The name of Roger Gilbert has already become legendary in the matter of Christmas Shows, and his masterly hand was evident in the production of *The Blue Boarders*, which was the Resident's show. It was a model of its kind, attaining exactly the mixture of intimacy, gusto and topicality at which every firm aims. The opening chorus immediately put people in the right mood, and Messrs. Wheeler, West and Ghey kept this up by a humorous sketch called "The End of the Match".' Led by Hadfield, the company then showed that they could do a non-frivolous song tunefully, Latter's usual skill as an accompanist being much in evidence. A scene in a school contained some rather poor jokes, but Ghey's gustiness as the master and Gilbert's perfect portrayal of the 97-year-old "Harbottle" managed to make a success of it. The chorus song for everybody was well chosen and well produced; it was clearly an advantage for the audience to be able to see the words. We hoped for one of Gilbert's monologues, and when a sad figure appeared, announcing himself as "the chief of the anti-arson squad", we were not disappointed. Having heard, amongst other things, how he had found it essential to have rungs in ladders, we passed on to "Tommy Hayes' Party", a topical song set to a "Merrie England" air. It was one of the best items of all the shows, and we heard how various members of the Staff reacted to the party—either the noise was too great, their digestion was not good enough, it elevated their blood-sugar, made them break into North-country dialect, and so on. Altogether an excellent company. May "Rep. Omnia" be added to their Blue Board on January 19th.

Another contingent who achieved the right sort of intimate contact with their audience were *The First Floor Follies*, who incidentally were heralded by a poster deserving special praise. Newbold carried the weight of the show on his shoulders, and sang a song with amusing imitations of an old sow. When he sang "Kiss me, Dear", we were at first impressed by the back view of a nurse, but, as time went on, we would very much have liked her to turn round. "At St. Bartholomew's Hospital" was a good topical song, and two lightning sketches went down well, particularly the first. A sketch about a hole in the road was well acted, but would probably have been improved by being shorter. The success of the show was due in great part to excellent chorus-work and a good pianist.

To the strains of "Clap hands, here come Charlie's boys", *The Charladies* made their rakish appearance in charge of a baby in a pram. Friedburg played both the mouth-organ and accordion with skill, while a scantily-clad leading lady danced to his music. "For England" was in the best style of patriotic melodrama. The villain held tightly to his moustache, but Richards, in a more heroic part, seldom seemed to have both beard and moustache on together at any one moment! The part of a naval captain was humorously acted by Dunn. There followed a duet which was too long, and a final effective, if rather lurid, chorus of charladies led by Phillips singing triumphantly "With her Rectum underneath her Arm".

The Senna Podians gave a polished performance, and their costumes were exceedingly smart. An original introduction was a loud-speaker, but it had the disadvantage of sometimes obstructing the view (though this was probably corrected in later shows), and of causing the otherwise excellent singers of a topical duet, "From my Window that Looks on the Square" to bury their faces in the microphone when we should like to have seen more of them. A fairy story acted with feverish activity was amusing, and Howell gave a hearty imitation of Mr. Girling Ball conducting a



ward-round and reminiscing on his gall-bladder. Armstrong did unexpected things with oranges, and Herbert acted well. The wartime chorus songs were a safe choice, but a little hackneyed. The final tuneful chorus, "They wheeled him away with the greatest of ease, that funny old man with the unknown disease", was one of the best songs of the afternoon.

It was characteristic of *The Eclamptics* that they, too, had a microphone, but omitted to possess a loud-speaker. There was an air of craziness about the lightning imitations of such variegated celebrities as Schnozzle Durante, Dr. Donaldson, Herr Hitler, Mae West, Dr. Barris and several others. Whether it was the offer of

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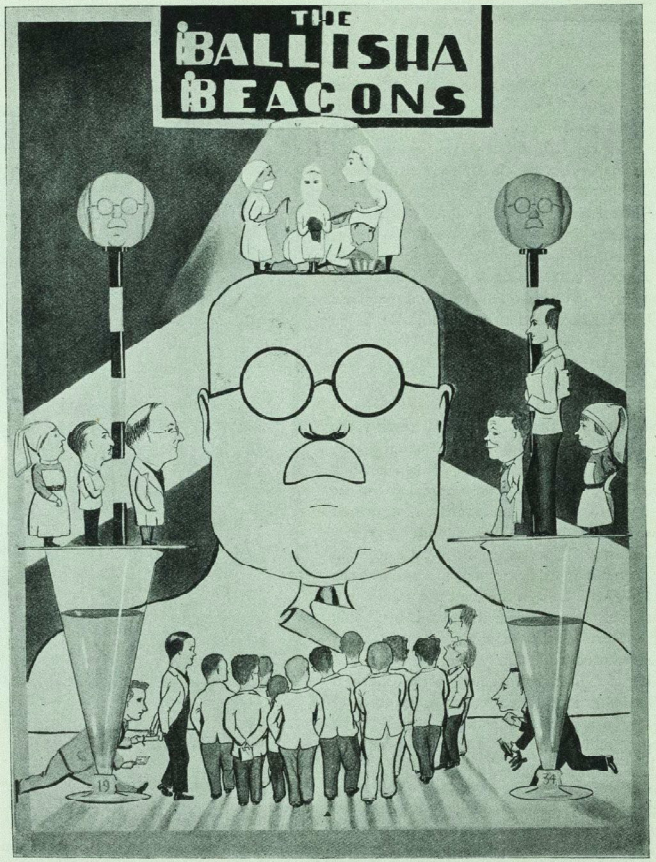
a "double-decker perambulator" as prize for the mother who identified most, or whether it was the skilful rapidity with which Beizer put the impersonations across, his complete lack of make-up and very slight voice-changes were hardly noticed. Surely, however, there are marked vocal characteristics about some of his subjects, which he might have introduced to complete the pictures. An excellent topical song commented on Dr. Shaw's memory for the Christian names of all his patients, and Dr. Beattie's enthusiasm for squash. Schiller sang a song in the best (or worst?) American style, and gave a silent imitation of a traveller on the Underground at 5 p.m. This was one of the best turns of the Shows. The coffee-stall sketch was too slow, but Grant made a good conjuror, and slyly pulled the leg of his audience.



There was conjuring, too, by Clifford Smith, who also played the violin well in *The Blue Birds of 1934*. They began with an adaptation of "On Ilkley Moor baht 'at", which rather lacked punch for an opening number, although the chorus were well together. There was a good topical song about the Surgical Unit, but their best item was a well-produced sketch in which Frost demonstrated the perils of being a pedestrian. The adventurous husband who, rather than riding easily in the Bentley, preferred "the thrill of walking", only succeeded in obtaining a pedestrian's licence after he had proved himself, amongst other things, completely noise-proof, shock-proof and curse proof—yet even so, when first let loose, he ran straight into the inevitable Delisha Beacon. We look forward to seeing this again.

The Green Chest-knuts performed very effectively in a Spanish setting. Prothero sang of "Frankie and Johnnie" in front of a portable bar-counter, and a silent drama was skilfully enacted behind him in order to prove the moral that "there ain't no good in men". A series of sketches about the interchange of professions went with a swing, as did a song touching on aspects of Mr. Roberts as a raconteur and Mr. Corbett as a motor-owner. "The Sunny Side" was a good song, but the chorus had not been trained in their movements, which were haphazard, and they did not look properly at their audience.

The Ballisha Beacons, on the other hand, fully understood the duties of a chorus, and in their opening number, "All good pals and jolly good company", they employed plenty of action, looked their audience full in the face, smiled hard at them, and generally radiated the atmosphere of the song. Their costumes were excellent. Two songs deserve special mention, "The Surgeon's name was Girling B, and he shouted for the sucker in Theatre C", and "We dropped the patient on the floor". A "levitation act" was as original as mysterious, and carols played by Moynagh on specimen glasses were equally unusual. The melodrama was rather too slow, but Crowther distinguished himself in four parts simultaneously—those of the butler, the policeman, the heroine, sticking to her husband "through thick or clear", and the hero, who, deserting his fretwork for drink, took to the Saloon when his furious and somewhat fungus-faced father had intended him for the Bar. Ward led the chorus with admirable spirit.

The Loose Livers, considering their multi-coloured origin, were rather disappointing, but they sang and acted with great vigour. A sketch compounded from the titles of popular songs was one of their best numbers, as was "Over to Nurse", sung by Prewer and Fisk. Armstrong made a good sergeant-major.

I have deliberately postponed mention of *The White Hart Inn* until the end, because it was in a different category from the other shows. It was not a revue, it contained no modern songs, and there was nothing topical about it. It was a parody of Victorian melodrama written by George Ellis and based on "The Streets of London". To attempt such an undertaking seemed, on the face of it, ambitious, but George Ellis is established as a C. B. Cochran of Bart.'s, and the cast which he gathered together were all experienced stars who understood exactly how the thing ought to be done. The costumes were first class, and the whole company deserve to be congratulated on their enterprise. Evans made a most successful if substantial heroine, who sang well and rent our hearts with such tragic lines as "I have no futuah and the present it is a tortuah", and by eventually attempting suicide in a portable gas-oven. The Dragon like Bloodgood was truly villainous. His moustache, his cigar, his laugh and the hisses which he aroused all showed that he was a thoroughly bad man, whose only soft spot was his love for his "cheild" (portrayed alluringly by Macdonald). Messrs. Kingdon and Dorrell, representing Virtue, did valiant work in a fire scene, the effect of which was largely due to Gibson's performance on the piano. Gabb sang "Silver Threads among the Gold" melodiously if, perforce, somewhat powerfully for so senile a lady, while Gray, as the Innkeeper, and Hewlings as the Gipsy, both entered fully into their parts. It was to "The White Hart" that I first returned for refreshment when I had seen each of the ten shows.

But I would have missed none of them, for, although some were more stimulating than others, each had some tonic ingredient that the others lacked, and all of them were evidence of the ubiquitous existence of the particular brand of humour that is our own. "Christmas," says Robert Lynd, "is obviously either the happiest, or the most depressing time of the year, according to one's circumstances". If you were in Bart.'s on Christmas Day, you were one of the lucky ones.

E. C. O. J.

CHANGING VALUES.

A MEDICAL student's first contact with clinical medicine is a great event. After years of work spent in the study of pure science, during which a fairly solid foundation of knowledge has been laid, the goal is at last in sight. The preliminary subjects of chemistry, physics, biology and botany have already faded into the background. In passing they have claimed a few disciples, but the majority have passed on to the study of anatomy and physiology. These subjects are on the borderland of medicine, and they also claim a few adherents. But the majority of

medical students shut down on anatomy and physiology with a sense of relief on their first contact with clinical medicine in the surgery of a large hospital. Compared with human material anatomy is cold meat, and compared with practical work in the surgery physiology is too theoretical, and has too strong a flavour of frogs to hold the student's interest any longer.

It is interesting to reflect that although there is no dividing line between the normal and the abnormal, nevertheless, on one day as it were, the medical student closes his books on anatomy and physiology, puts on his white coat, and hardly realizing his complete change of outlook he turns his mind from an interest in the normal to the study of disease. At the same time what were people become patients, and what were personalities in ordinary life become composite beings now realized in terms of their component parts, or in terms of their complaints. Thus the importance of a man is his injured finger; the only interest in a woman is the inflammation of her breast; and if an infant claims attention to itself by persistent crying this is only the unreasonable barrage put up to prevent a proper examination of its throat or chest.

This sudden change of front is simply due to the fact that the study of injury and disease is the all-absorbing work from the first day in the surgery until the last professional examination has been passed. The new outlook which results is partly unconscious and partly the result of considerable effort. To the ordinary man, and especially to the young man, deformity is ugly and disease rather horrible. The sight of blood is sickening to some, and more so in circumstances which are "cold-blooded". Suffering, too, is always sad, and to a sensitive medical student it may be painfully so. Yet in a few days or weeks physical deformity assumes a new interest. The student is grateful to a friend who shows him a baby with six fingers on each hand, and he may go without his mid-day meal in order to see the supernumerary digit cut off. Disease soon loses its unpleasantness as it is analysed in terms of its location, its nature and its cause, while the prospect of its alleviation or cure by treatment is realized at once as one of the real joys in the practice of medicine. At a later stage, perhaps only after some years of practice, satisfaction is also to be found in attendance on quite hopeless illness, and indeed in easing the approach to death. These things, however, belong more to private practice, for in hospital practice most attention is likely to be given to those patients and to those diseases for which most can be done.

It is of course obvious that the first need of the medical man and the prime object of medical education is to recognize physical injury and organic disease. No other member of the community than a doctor has the scientific training and clinical knowledge requisite for the diagnosis of disease, and without this special knowledge medical treatment (and *a fortiori*, surgical treatment) can hardly succeed. As a result the teaching of medicine is almost entirely concerned with the study of injury and disease. So much is this the case that the student is allowed, if not actually advised, to report the result of his examination of a healthy body in some such phrase as "nothing abnormal discovered", usually more shortly written "n.a.d.". The interest in disease as distinct from health is so overpowering that positives are expressed in the form of double negatives; a mucous membrane of normal colour is described as not anæmic or not pale, a well-nourished body is written up as not wasted, and a healthy-looking patient is said not to look ill. It may be natural caution or even the fear of making a mistake that is responsible for this curious terminology, as it prompts commercial firms to write the mysterious letters "E. & O.E." at the foot of their accounts. But as a matter of fact there is more to it than that. The medical mind in hospital and hospital-trained becomes obsessed with disease, and it is inclined to assume a cast of such one-eyed form that it sees in health only an absence of disease.

This has led to an interesting situation. There is on the one hand a lay public that wants health and knows something of it. A proportion of laymen give the subject of good health some special study, as for instance athletes, trainers of athletes and animals, breeders of live-stock and others, all of whom have a special interest in physical health. Again there are some who take an interest in the health of the mind, as for instance Christian Scientists, who make it their first concern, while religious bodies in general are also concerned with the health of the mind, though their first concern is the welfare of the spirit. On the other hand there is the medical profession, to whom the public goes for help when in need of health, although the chief interest of the profession is in disease. These objects, the public's desire for health and the profession's effort to cure disease, are not the same thing, even though they seem to be the same thing seen from different angles.

But now the difference between the lay and professional objectives has been realized, and medicine is taking steps to meet the public's need. The age-long interest of medicine has been in injury and disease. In recent times it embarked on the prevention of disease. Now it is taking another step forward, and is making the study and the achievement of health one of its principal aims. When this stage in the evolution of medicine is better established, the study of anatomy and physiology will be continued side by side with the study of clinical medicine, and the present clear distinction between what is normal and what is pathological will cease to exist. The learning and understanding of medicine will be simplified by strengthening its physiological foundation, and in the cure or alleviation of functional disease at least, and perhaps also in the prevention of organic disease and structural change, a sound knowledge of normal function will provide the basis of medical treatment.

These few observations have been prompted by the approach of a new year, and it is perhaps excusable to offer a word of advice to those who are at an early stage of their clinical studies. Carry forward into medicine all the anatomy and physiology that you know, and continue to read and learn both subjects. Both medicine and surgery are built on anatomy, and there is much in clinical medicine that is a mere expansion of physiology. By the same token carry forward into your clinical work all your knowledge of human character and life. When you go into the wards at first you may be dominated by the sensation of something new and of which you are ignorant. The beds are indeed filled with patients suffering from injury or disease which is the subject for study, but they are also filled with ordinary people who need to be treated with kindness and respect; only on account of their infirmity they want extra care in addition to the professional attention you are able to give them. I believe that it makes the study of disease easier if there is carried forward with it a close study of health. It certainly helps the understanding of patients to realize them first as ordinary folk, and by doing this successfully the gap between hospital and private practice is much lessened.

It is in variations of health that there is the first warning of disease. It therefore follows that it is in the study of persons, the study of the habits of their bodies and the working of their minds both in themselves and in relation to their environment and to their undertakings, that the seeds of weakness and disease may be found. It is in this field that the study of health can be most profitably pursued.

GEOFFREY EVANS.

AVE ATQUE VALE.

A mother's loss may craze her,
May give the reft brain fits;
But it's odd, when Bart.'s lose Fraser,
That Guy's should lose their Witts.

THE PATHOLOGY OF CORONARY OCCLUSION.*

THERE would appear to be two main factors concerned pathologically in the production of a clot in a coronary artery. The first is local disease of the vessel, and the second a tendency to thrombosis.

Local disease of the vessel is not the more important of the two, for the majority of cases of atheromatous disease of the coronary arteries die without coronary thrombosis.

Attention must therefore be focused upon the question of a tendency to clotting.

Causes for the production of a local clot may themselves be general or local; an example of a general cause is seen in cases of acholuric jaundice, where splenectomy is known to be followed by local thrombosis in veins. Two cases of coronary occlusion, which I have recently seen, have drawn my attention to the possibility of the presence in cases of coronary infarction of some general cause of thrombosis. The first, a man of 54, suffered a typical coronary thrombosis, proved electro-cardiographically. During convalescence, six weeks after the onset of his disease, he suffered from a thrombosis of the right femoral vein. On consulting his oculist, after convalescence, he was found to have a small central scotoma, due to a small thrombosis in the right retinal artery.

The second patient, a man, æt. 78, suffered from a coronary infarction, proved electro-cardiographically. Four weeks previously he had suffered a sudden partial loss of vision in the right eye. This was due to a widespread thrombosis of the lower branches of the retinal artery.

On consulting the literature the following further two cases have come to light: Allan (1) reported the case of a man, æt. 39, who was admitted to hospital with a coronary thrombosis. At the post-mortem an old organized clot of the left subclavian artery, which had given rise to no symptoms during life, was found. Also the right renal artery was occluded by a recent red thrombus.

Watkins (2) reports the case of a woman, æt. 50. The history of pain was typical of coronary thrombosis, and pericardial friction was heard. No electro-cardiographic evidence was offered. Fourteen days after the attack a superficial thrombosis of the veins of the calf of the leg was noticed.

These cases of multiple thrombosis may be examples

* A paper read at the British Medical Association meeting at Bournemouth, July, 1934.

of coincidence, and it would seem that obvious thrombosis elsewhere in the body is not a common complication. Levine (3) draws attention to hemiplegia as a sequela of the disease, and attributed it to embolism resulting from detachment of a piece of the mural intra-ventricular clot present in most cases during the healing process.

The case reported by Allan shows that thrombosis of quite large vessels may occur without marked symptoms. Personally I feel that local rather than general causes are likely to be responsible for the lesion, but until a sufficient amount of autopsy material has been carefully examined to discover the incidence of thrombosis in other parts of the arterial tree, the possibility of some general cause for clotting cannot be excluded. In order to exclude a general tendency to thrombosis a definite line of research is suggested. This would be along hæmatological lines. Biochemical and hæmatological investigation of the clotting process in blood taken from patients recently suffering from a coronary thrombosis is desirable, attention being particularly directed to the type of clot formed, the clotting time, the platelet count and the blood calcium content. Should this investigation also be followed by a negative result it will then be time to consider what local process, near to the diseased vessel, could initiate or predispose to the formation of a local clot.

The second point to which I would like to draw attention in a discussion on the pathology of coronary occlusion is one of definition. It is now widely held that cardiac pain in organic heart disease results from partial or complete interference with coronary flow, but the relationship between the pathological lesion found post-mortem and the type of cardiac pain suffered during life cannot be clear unless the type of pain is accurately defined. The term "angina" or "angina pectoris" is far too vague to be logically applicable, and its use should be discontinued. Patients suffer from coronary thrombosis, from angina of effort or from spasmodic angina. The morbid anatomy and the clinical diagnosis of the first of these, namely coronary thrombosis, has been fairly fully worked out.

The angina of effort is a quantitative symptom, pain being accurately proportioned to the effort undertaken. Since these two factors, pain and effort, vary directly with one another, it would seem that there must be a constant factor in the equation. This factor is presumably the decreased lumen of the coronary branch. Since this partial occlusion produces pain after a definite given amount of exertion in any one case, its degree is presumably constant, or only very slowly variable. Spasm of the vessel here is thus unlikely.

Cases of angina of effort who have died should be examined post-mortem with this history in mind. It should be determined in such cases whether atheroma of a coronary artery or syphilitic obstruction to its mouth is invariably present.

In spasmodic angina a further factor enters in. Angina of effort has generally been present for months or years before the onset of spasmodic angina. These new acute sudden attacks would appear to be the result of the presence of some further factor. It is unlikely that repeated small occlusions are responsible; a patient under my care had attacks for three to four years, to a number of two to three a day. If occlusion were the cause there would be no patent arteries left in the heart in such a case. The question as to whether these sudden attacks are due to spasm remains to be answered. A man, æt. 42, was under my care at St. Bartholomew's Hospital. He had suffered from angina of effort for about fifteen months. A few months previous to admission he had begun to get attacks of spasmodic angina. He was also a severe diabetic, and whilst under treatment he died. At the post-mortem examination atheroma of the left coronary artery was found. There was no sign of old or recent coronary thrombosis. The lumen of the artery was narrowed, but the vessel was still easily elastic throughout its course. There was no absolute rigidity from severe calcification.

It was thus theoretically possible that the earlier symptoms of angina of effort were due to the smaller lumen, resulting from arteriosclerosis, and that the attacks of spasmodic angina which arose later were the result of spasm in the not yet rigid vessel.

Whether such a simple explanation as spasm of the vessel is sufficient to account for attacks of spasmodic angina is debatable. But the theory cannot be excluded except by the careful correlation of a sufficient series of post-mortem findings with the previous clinical history of the cases. Such a correlation will remain impracticable unless the loose term "angina" is given up.

My opinion is that all cardiac pain, due to organic disease of the heart, with the exception of heart consciousness and the dull ache found in some cases of mitral stenosis, is to be classified under one of the three heads, coronary thrombosis, angina of effort, and spasmodic angina, and that all three are due to interference with coronary flow, permanent or transitory, partial or complete.

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GEOFFREY BOURNE.

DENTAL CYSTS AND EPITHELIAL ODONTOMES: THEIR PATHOLOGY AND TREATMENT.

REVISED DEFINITION OF AN ODONTOME.

UNTIL recently dental cysts have always been classified, by writers of authority in books on general surgery, among the odontomes—an odontome being defined as a "tumour composed of dental tissues". But a cyst does not conform to the surgical definition of a tumour; so that if dental cysts are still to be included among the odontomes, the definition of an odontome must be enlarged to include "any abnormality of excessive growth derived from the dental formative organs" (Sprawson).

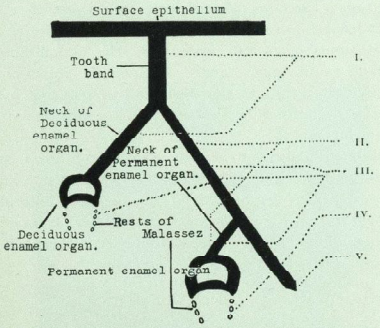
CLASSIFICATION OF EPITHELIAL ODONTOMES.

The epithelial odontomes develop abnormally from the dental epithelium only, and are subdivided into—

(*a*) Cysts of eruption.
(*b*) Dental cysts.
(*c*) Dentigerous cysts (follicular—Bland-Sutton).
(*d*) Multilocular cysts (adamantinomata).

PATHOLOGY.

In order to understand more easily from which dental epithelial cells the various epithelial odontomes originate, I refer my reader to Diagram I. This represents the epithelium of the gum and its downgrowth forming the tooth band, from which arise the deciduous and permanent tooths buds.



I.—DIAGRAM OF NAMED PARTS OF EPITHELIAL DENTAL FORMATIVE ORGANS (FROM EVELYN SPRAWSON).

Site of cells which probably give rise to: I. Cyst of eruption over a deciduous tooth. II. Cyst of eruption over a permanent tooth without predecessor; dentigerous cyst enclosing permanent tooth without predecessor (rare). III. Dental cyst on deciduous tooth; dentigerous cyst enclosing permanent with predecessor. IV. Dental cyst on permanent; dentigerous cyst when it tracks back and encloses a third molar (rare). V. Multilocular cyst ??

(*a*) *Cysts of Eruption.*

Very small cysts of eruption are quite commonly seen in infants and young children as blue blobs overlying an erupting tooth—they have the same appearance as a small blood blister. Cysts of eruption may occur, however, over any tooth, deciduous or permanent, where the normal eruption is delayed.

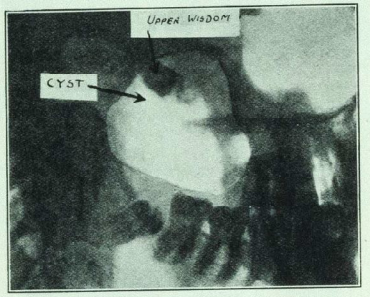


FIG. 1.—LARGE CYST OF ERUPTION, involving upper wisdom tooth displaced high above tuberosity of maxilla. (Cowan.)

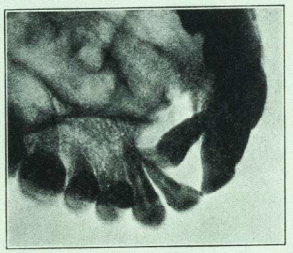


FIG. 2.—CYST OF ERUPTION, involving a misplaced upper central incisor.

In the normal process of eruption of a tooth the epithelial remnants of the tooth band, superficial to the tooth in question, degenerate, and so open up a path for eruption. The prolonged stimulus of delayed eruption causes a reversal of the normal process—a proliferation instead of a degeneration of these epithelial remnants—and the result is a cyst. In the early stages cysts of eruption are *not* infected; but, as they increase in size and their walls become thinned, they are almost certain to become so secondarily.

Large cysts of eruption (Fig. 1), containing up to 10 c.c. of fluid, frequently occur over wisdom teeth.

Clinically they are identical with dentigerous cysts, but their origin is different. The wisdom teeth have no predecessors; and the presence of cysts over them goes

3

4

FIG. 3.—A GRANULOMA, on a root-filled upper second premolar, pushing up the floor of the antrum of Highmore.

FIG. 4.—A LARGE LOW-DIPPING ANTRUM, easily confused with a cyst, and often accidentally opened in extraction of upper molars.

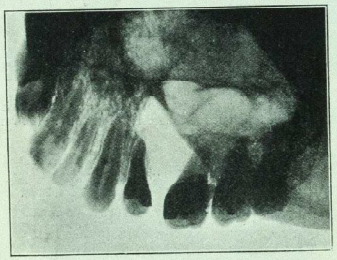


FIG. 5.—DENTAL CYST OF THE MAXILLA, arising from second bicuspid (absent), and extending back to the tuberosity, obliterating the antrum.

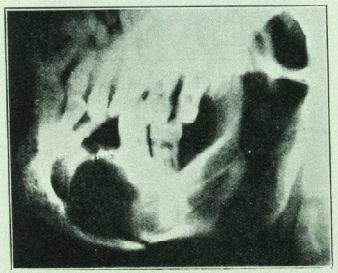


FIG. 6.—LARGE DENTAL CYST OF THE MANDIBLE resulting in pathological fracture.

far to support the view that delayed eruption, so common in wisdom teeth, is the exciting cause of epithelial proliferation and cystic formation (Fig. 2).

(*b*) *Dental Cysts.*

Dental cysts generally arise from the epithelial remnants of the tooth-bud found at the apices of either deciduous or permanent teeth. These epithelial remnants are known as the "rests of Malassez", and are actually the remains of the epithelial sheath of Hertwig.

In the case of a deciduous tooth, however, the cyst may also arise from the part of the tooth band, deep to the deciduous tooth, which went to form the permanent successor (see Diagram I).

In both cases the exciting cause of the epithelial proliferation is either (i) infective a dead pulp or chronically inflamed periodontal membrane—by far the more common—or (ii) traumatic—trauma sometimes causing proliferation of the rests of Malassez without death of the pulp.

The apical granuloma (Fig. 3) is the early stage of a dental cyst. But it does not follow that all granulomas become cystic; many break down and form abscesses, or they may remain quiescent indefinitely. It has been proved, however, that *all granulomas contain bacteria*—generally streptococci of the *viridans* group—*and also the walls of dental cysts*, although their contents may be sterile (Arthur Bulleid). A large cyst with thin, distended walls almost invariably ends in acute or chronic suppuration, and as a result is frequently misdiagnosed.

Dental cysts are quite common on milk teeth, and only less common than on permanent teeth because of the long time cysts take to develop. *When the dental cyst, arising from a milk tooth, involves the crown of its permanent successor, a dentigerous cyst is formed.*

It has been proved that neither cysts of eruption nor dentigerous cysts can arise from the actual enamel organ—as previously taught—because the crown of the tooth projecting into the cyst is always covered by an intact Nasmyth's membrane, itself the remains of the enamel organ.

Radiographically it is quite easy to confuse a large, low-dipping antrum (Fig. 4) with a dental cyst. Fig. 5 shows a large dental cyst of the maxilla obliterating the antrum. Fig. 6 shows a pathological fracture of the mandible due to a large dental cyst in the premolar region.

(*c*) *Dentigerous Cysts.*

As previously stated, dentigerous cysts are pathologically identical with dental cysts, except that the cyst meets and wraps itself over the crown of the permanent successor, and, by its tension, displaces or prevents the latter from erupting normally. Clinically there is, therefore, a permanent tooth missing from the arch in the region of a cyst. They occur most frequently

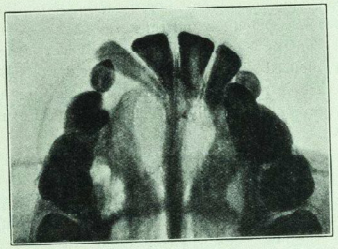


FIG. 7.—A CYST IN THE UPPER CANINE REGION CLINICALLY SIMULATING A DENTIGEROUS CYST. The milk canine is present, but the permanent successor is not visible—it is lying above the roots of the bicuspids.

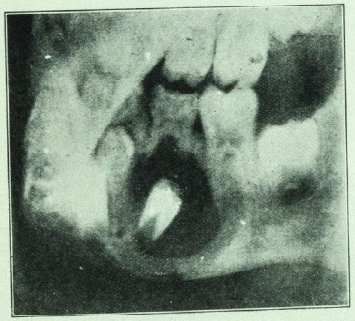


FIG. 8.—A DENTIGEROUS CYST OF THE MANDIBLE, arising from second deciduous molar, involving second premolar. (Sprawson.)

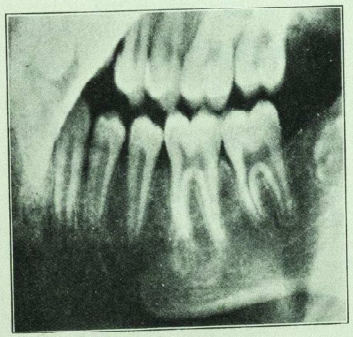


FIG. 9.—SAME AS FIG. 8. DENTIGEROUS CYST. Four years after operation. The second premolar has erupted into perfect position. No sign of cyst. (Sprawson.)

in the canine and premolar regions in subjects under twenty years of age.

Fig. 7 shows a dental cyst in the upper canine region clinically simulating a dentigerous cyst.

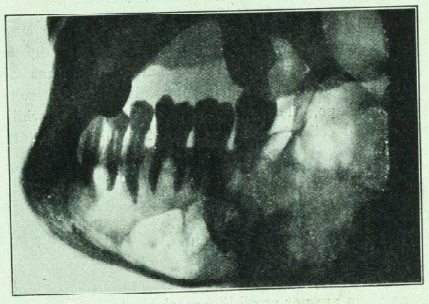


FIG. 10.—MULTILOCULAR CYST OF THE MANDIBLE extending from canine to coronoid process. All teeth standing.

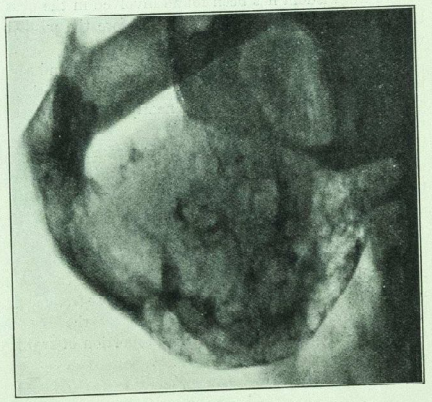


FIG. 11.—MULTILOCULAR CYST OF MANDIBLE—recurrence and involvement of tissues of neck. Some thirty years' duration. Had been excised locally many times, but always recurred.

Fig. 8 shows a large dentigerous cyst in the mandible involving the second premolar. This was discovered at an age when the involved successor was still due to erupt and was not displaced.

Fig. 9 shows the same case four years later—involved tooth in perfect position and no sign of the cyst. The cyst was opened and kept open by an obturator; but

most of the cyst lining and the involved tooth were left intact. I thank Dr. Evelyn Sprawson for permission to reproduce this case.

(*d*) *Multilocular Cysts* (*Adamantinomata*).

According to Bland-Sutton, "the multilocular cyst arises from the enamel organ; and histologically it consists of branching and anastomosing columns of epithelium, some of which form alveoli. The cells vary in shape, the outer ones being columnar, while the central cells degenerate and resemble the stellate reticulum of the enamel organ".

To discount this view the following facts are evident:

(1) The age-incidence of multilocular cysts is at about thirty years. If the cysts arise from the enamel organ, they ought to occur in the young.

(2) Calcified dental tissues have never been found in multilocular cysts; and the columnar cells found lining them are not at all like ameloblasts.

(3) In many cases (Fig. 10) the whole dentition has erupted normally, and the cyst lies beneath the teeth. Where the wisdom has been found involved in the cyst, the cyst more likely began to form before the wisdom was due to erupt.

(4) If a portion of the cyst lining is removed and sent to a pathologist for microscopical examination, without stating the locality, the section is nearly always reported to be a "basal-celled carcinoma".

(5) Sprawson has pointed out the marked similarity under the microscope of (*a*) rodent ulcers, (*b*) epithelial tumours of the anterior portion of the pituitary body, and (*c*) multilocular cysts of the jaws.

Their probable origin is an actual ingrowth of the gum epithelium, with a local malignancy similar to rodent ulcers. Fig. 11 is a good example of the local malignancy of these cysts. They occur most frequently in the mandibular third molar region, at the age of thirty years, and in females in the proportion of two to one male.

The Lining Membrane and Contents of Cysts of Eruption, Dental and Dentigerous Cysts.

The type of lining membrane seems to depend on the age and size of the cyst. In small cysts of eruption and in small dental cysts on deciduous teeth of short duration, the lining epithelium is many layers thick; the cells are spheroidal on the outside and stellate on the degenerative cystic side; also the fibrous wall contains many cells and the blood-supply is free.

The larger the cyst and the greater the tension, the thinner the lining epithelium, which appears stratified or even squamous. The fibrous tissue bounding the cyst becomes bloodless and thicker.

The contents vary from a translucent straw- or brown-coloured fluid, sometimes viscid, to a semi-solid cheesy mass. Cholesterin crystals are nearly always present in the fluid. The contents are usually sterile.

DIAGNOSIS.

I do not intend to discuss the history, signs, symptoms and differential diagnosis of epithelial odontomes or cysts of the jaws, but will content myself by stressing the importance of very careful examination of all swellings of the jaws, inflammatory or painless, no examination being complete without X-ray evidence. Many small cysts are discovered only by the routine dental X-ray examination—they give no signs or symptoms. The large cyst is fairly obvious, unless purulent and masked by the additional signs of acute inflammation.

TREATMENT.

(A) *General.*

All cysts, except multilocular, must be opened and kept open or else completely excised.

If they are left alone they will gradually increase in size; when large, containing 10 c.c. of fluid or more, they may cause serious symptoms and disability due to the pressure on, and displacement of, surrounding structures; they cause disfigurement, and are very liable to become acutely infected, leading to cellulitis of the face and neck.

If the cyst is not acutely infected, all other sepsis in the mouth should be eradicated before operating on the cyst itself, and a week allowed in between for sockets, etc., to heal. Any root or tooth involved in the cyst is best left *in situ* until the time of the operation.

The anæsthetic of choice is endotracheal gas and oxygen; but if necessary the operation can be done quite painlessly under regional block novocain 2%, helped by 1½ to 3 gr. of nembutal given by mouth half an hour before commencing.

(B) *Detailed.*

(1) SMALL SURFACE CYSTS OF ERUPTION, over milk or permanent teeth which are erupting normally, need only be punctured or incised.

(2) CYSTS OF ERUPTION OR DENTIGEROUS CYSTS.—(a) *Where the tooth involved is at its normal age for eruption, and is not displaced or impacted.*

First the infected deciduous tooth, if present, is extracted. Then a fairly large opening is made into the cyst over the erupting tooth, the surface segment of gum and cyst lining is excised, and then means taken to keep the opening patent—if necessary by a plug or obturator of vulcanite. The erupting tooth and deep part of the lining are left undisturbed, and the tooth will eventually erupt into normal position (Figs. 8 and 9).

(b) *Where the tooth involved is past the age for normal eruption, or is displaced or impacted.* The gum covering the cyst is incised and reflected, as in Diagram II. A large opening is then made into the cyst and the tooth removed. If possible this should be done without removing the deep part of the lining membrane with it; but this will be found difficult to accomplish, because the membrane is often firmly attached round its neck.

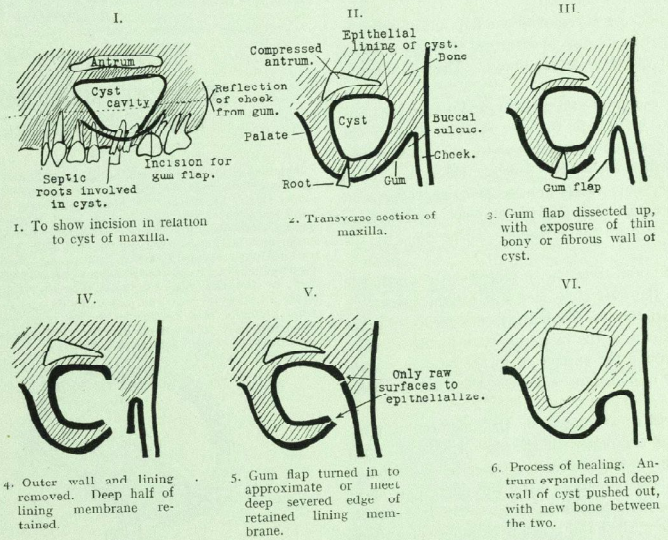
If the tooth can be extracted without disturbing the deep part of the lining, so much the better; it then only remains to keep the opening patent while the raw edges epithelialize.

But if the whole lining is removed a large raw cavity is left, with rigid bony walls. This is generally too large a cavity to hope for healing by organization of blood-clot, and the wound cannot be closed with stitches; consequently the raw cavity must be packed and is liable to turn septic. It has to epithelialize over its whole surface, growing in from the gum edge, before dressings of the wound can cease. In fact the process may mean many weeks of disability for the patient.

3. DENTAL CYSTS.—(a) *Small dental cysts, up to half an inch in diameter*, can be dealt with by first extracting the tooth or root if present—from which the cyst originated, then by reflecting the gum in the buccal sulcus and removing the bone covering the outer wall of the cyst, removing the cyst lining entire, allowing the cavity to fill with blood, and finally by stitching the edges of the wound together.

(b) *All other dental cysts*, whether sterile or infected, and, if possible, all cysts of the jaws except multilocular, I treat as follows (see Diagram II):

Operative procedure.—First the tooth from which the cyst has originated, is extracted. Then a large half-moon incision is made through the gum on the buccal side, starting from behind at the limit of the cyst and at the reflection of the cheek from the jaw, and carried forward to the anterior limit of the cyst. The curve of the incision is towards the alveolar ridge, and must come within a quarter of an inch of the alveolar crest, but not on to it—the crest must be carefully preserved so that any denture or prosthetic appliance made later may have a good foundation.



1. To show incision in relation to cyst of maxilla.
2. Transverse section of maxilla.
3. Gum flap dissected up, with exposure of thin bony or fibrous wall of cyst.
4. Outer wall and lining removed. Deep half of lining membrane retained.
5. Gum flap turned in to approximate or meet deep severed edge of retained lining membrane.
6. Process of healing. Antrum expanded and deep wall of cyst pushed out, with new bone between the two.

II.—DIAGRAMS OF SURGICAL TECHNIQUE FOR DENTAL CYSTS (AFTER E. B. DOWSETT.)

The gum is then reflected as a flap, separated from the outer wall of the cyst and carefully preserved.

Next the outer wall of the cyst, including bone and soft tissues, is excised to its widest limit, leaving the inner half intact with its membrane.

The operation is then completed by turning in the gum flap. The flap must not overlap the lining, and if too long, must be pared; if a little short it does not matter. *The cavity is packed with paraffin gauze for twenty-four hours only* to check any hæmorrhage, and to press the raw under-surface of the gum flap against the raw deep edge of the cavity.

When the packing is removed the flap will usually be firmly adherent to its new position, so that the opening is now raw at the alveolar edge only. There is scarcely any after-pain.

By leaving the inner half of the cyst-lining intact and turning in the gum flap, the raw alveolar edge is the only part of the wound which has to epithelialize, and this will be healed within two weeks. From the second day the cavity only needs gentle syringing to prevent the collection of debris; the cavity itself is quite clean, and after a few days the syringing can be done by the patient.

A point of interest is the rapidity with which the inner wall of the cyst is pushed out by the formation of new bone around and behind it; this naturally takes place more quickly in the mandible than in the maxilla, but in the maxilla the expansion of the antrum pushes out the cyst and compensates for the lack of bony growth.

In the maxilla, as shown in the diagram, a large dental cyst may completely fill the site normally occupied by the antrum of Highmore, the latter being flattened against the side of the nose. After this operation, where particular care has been taken to leave the inner lining of the cyst intact, the nasal pressure expands the antrum once more, and in doing so helps to push out and obliterate the cyst cavity.

On the other hand, if the whole cyst lining is removed, the odds are that the antrum will be opened at the same time—an unnecessary and tiresome complication.

If a large maxillary dental cyst contains pus and has been chronically infected for some time, the antrum is almost certain to be infected as well. These are the only circumstances under which I deliberately puncture the inner wall of the cyst, and thus effect drainage of the antrum.

4. MULTILOCULAR CYSTS.—Unless every scrap and cell of the cyst lining are removed, multilocular cysts will recur locally.

Radium or X-ray treatment does not meet with success. It seems, therefore, that partial excision of the jaw is the only certain cure, followed later by a bone-graft.

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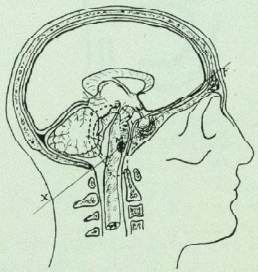
GEORGE T. HANKEY.

CLINICAL METHODS.

CISTERNAL PUNCTURE.

Puncture of the cisterna magna may be required for diagnostic or therapeutic purposes. A specimen of the cerebro-spinal fluid can almost always be obtained by lumbar puncture, but the diagnostic value of cisternal puncture depends upon the information which may be obtained by comparing manometric readings of the pressure of the fluid in the cisterna magna with that in the lumbar sub-arachnoid space when a block in the spinal subarachnoid space is suspected, and also upon the possibility of localizing the site of the block by injecting heavy lipiodol into the cisterna magna and taking a radiogram with the patient in the upright position. Cisternal puncture may be helpful in the treatment of meningitis, being used both to drain off infected cerebro-spinal fluid, and to inject the appropriate therapeutic substances.



To reach the cisterna magna the needle must pass through the posterior atlanto-occipital membrane, which is considerably thinner than the ligamenta flava between the laminæ of the lumbar vertebræ. A rather more delicate "touch" is therefore required to recognize the sensation of piercing this thin membrane with the needle. The only important structures situated posterior to the membrane are the vertebral arteries, but, as they curve round its lateral borders, if care is taken to keep the needle in the middle line the vessels run very little risk of injury.

In saggital section the cisterna magna is almost triangular in shape, with the apex of the triangle pointing downwards. It thus comes about that the distance from the posterior rim of the foramen magnum to the posterior surface of the medulla oblongata measures just over 1 cm., whereas the lowest point of the medulla is only 0·5 cm. from the posterior arch of the atlas. It is therefore important to make the puncture as close to the upper edge of the atlanto-occipital membrane as possible and to incline the needle upwards.

The patient may be placed lying on the left side or sitting upright; in either case the head must be held erect or only very slightly flexed. The skin having been cleaned with spirit, the left index finger of the operator is placed upon the prominence of the spine of the axis vertebra, the uppermost bony point palpable in the mid-line at the back of the neck. The tissues should be anæsthetized with a 1% solution of novocaine and adrenalin or with novutox, a small weal being made in the skin with a fine hypodermic needle just above the tip of the left index finger, at the point X in the diagram, and a longer and stouter needle being used for infiltrating the deeper layers.

The needle used for puncturing the cisterna magna should be a *fine* lumbar puncture needle with a very short bevel at its point. It must pierce the skin in the middle line at the point X just above the level of the spine of the second cervical vertebra, and should pass forwards and upwards in a line which runs through the external auditory meatus (M) and cuts across the forehead at a point (F) about 3 cm. above the glabella. If the puncture is correctly carried out the needle should first strike the occipital bone just behind the foramen magnum, and when the correct depth is thus ascertained the needle should be withdrawn, directed slightly downwards, and re-inserted so that it just slips in close below the rim of the foramen magnum. The sudden diminution in resistance after the posterior atlanto-occipital membrane and the dura have been pierced may be felt distinctly, but in order to run no risk it is well to pass the needle in for a short distance at a time, withdrawing the stilette at frequent intervals so as to avoid passing the point unnecessarily far into the subarachnoid space. If this line is followed there is an average distance of 1·5 cm. between the puncture in the dura and the medulla, so that the margin of safety is considerably greater than it would be if a more horizontal line were used.

In the average adult neck the dura is reached at a depth of 4·5 cm. from the skin surface, but in a child's neck the distance will be much shorter than this, whereas in a fat and muscular person it may be as much as 6 cm. It is therefore clear that, as in the case of all such punctures, angles and measurements may be misleading, and the only reliable method is to *feel* the way in.

J. P. R.

THE NURSING OF PATIENTS WITH HYPER THYROIDISM BEFORE AND AFTER OPERATION.

THE consideration of the management of a case of toxic goitre during the period of the operation presupposes an adequate course of preliminary medical treatment, and this article is intended to deal with the nursing of patients suffering from hyperthyroidism only during the time immediately before operation and until the stitches are removed.

DIET.

This should be liberal, containing protein of the less stimulating varieties (*e. g.* fish, eggs, white meat), sufficient raw fat to supply the necessary vitamins, and a great deal of carbohydrate. The patient should be encouraged to drink large quantities of water, and extra carbohydrate can be given in the form of glucose in orange-juice and lemonade.

REST.

It is imperative that before the operation the patient should have at least one good night's sleep. Luminal gr. j, or medinal gr. viiss, given about 6.30 p.m., has been found useful in this respect, while in difficult cases hypodermic injections of heroin or morphia may be required to ensure sleep.

MEDICATION.

This is not, strictly speaking, a nursing point, but it is worth remembering that Lugol's solution is more efficacious when given in milk than when given in a watery solution.

The routine preoperative treatment carried out in the wards of the Surgical Professorial Unit is as follows:

Two days before operation the patient is weighed. The intake of food is diminished slightly so as to avoid any "heavy" or indigestible substances, and the intake of fluid is increased. A mild aperient is usually administered, but if there has been any tendency to looseness of the bowels this may wisely be omitted.

On the evening before operation a soap and water enema is given.

DAY OF OPERATION.

For operation 9 a.m.

5 a.m.	Tea. Barley-sugar to eat.
6.30 a.m.	Lugol's solution, ♏xxx in milk.
7 a.m.	Morning toilet.
8 a.m.	Preoperative injection (morphia gr. ½, or morphia gr. ⅓ + atropine gr. $\frac{1}{150}$).
8.15 a.m.	Avertin given slowly *per rectum*, taking 20–30 mins., using a No. 8 or No. 9 catheter. Catheter to be left in rectum, spigot inserted and strapped to buttock.

For operation 1.30 p.m.

6 a.m.	Tea and toast.
7 a.m.	Morning toilet.
10.30 a.m.	Glucose ʒij in ʒviij orange-juice and water; barley-sugar to eat.
11 a.m.	Lugol's solution, ♏xxx.
12.30 p.m.	Preoperative injection.
12.45 p.m.	Avertin.

Note.—If the avertin solution is dispensed overnight it should be warmed by standing the bottle in a bowl of water, T. 120° F., for ½ hour. At the end of the procedure the patient is usually asleep, and the head should be turned on one side to prevent saliva collecting in the mouth. Operation garments should then be put on, eyes bandaged and ears covered with pads of wool.

Moving the patient to the theatre may rouse her slightly, but any conversation carried on at this time is completely forgotten later when she is fully conscious. It is always wise for a nurse with whom the patient is familiar to be in attendance until the local anæsthetic has been injected and gas and oxygen anæsthesia is established, in case there should be this semi-conscious phase

AFTER OPERATION.

The bed will be prepared for the reception of the patient as follows:

1 pillow for the head.
1 sheet } to cover the patient.
1 quilt }
1 thin blanket if desirable (in cold weather or for elderly patients).
2 bedsides.

Hot-water bottles are never required, and are, in fact, harmful, and a blanket must not be placed next to the patient. If the patient is extremely toxic, or the weather warm, a cradle may be necessary, and an electric fan near the bedside is also helpful.

On return to the ward, the patient must be lifted into bed with great care, the head and neck being supported all the time. The bedclothes should not be tucked in, as this tends to aggravate restlessness, but should be draped over the bedsides (Fig 1).

A rectal saline (ʒv to ʒviij) containing Lugol's solution ♏xxx should be given immediately, the saline being regarded as a vehicle for the iodine, except in cases where there has been much loss of blood, when a larger quantity of fluid may be ordered. The pulse-rate is recorded hourly during the first day, and 4-hourly subsequently.

As soon as possible, depending on the patient's condition, she should be propped up with a knee pillow to prevent her slipping down (Fig. 2).

As soon as swallowing is possible, the patient's usual dose of Lugol's solution should be administered by mouth. Fluids should be given freely, *e. g.* iced water, glucose water, orangeade or lemonade with glucose.

Mucus in the throat is sometimes troublesome, and the patient should be encouraged to give one good cough occasionally and to try to get it up. For this reason occasional doses of heroin have been used successfully to control restlessness without causing a deep sleep and loss of the coughing reflex.

A mixture containing aspirin gr. x and phenacetin gr. v (*without* caffeine) is invaluable in relieving the pain of swallowing, and during the first few days is usually ordered half an hour before the

principal meals of the day. Luminal gr. j is usually given about 6.30 p.m. on the evening of the operation day. An injection of heroin gr. $\frac{1}{3}$ is usually required at 8 p.m. or 9 p.m., and may be repeated when necessary.

Patients vary considerably as regards the food which they can manage to take on the day following operation. Some will have fluids only, and so long as an adequate quantity is taken one is satisfied. Most of them enjoy ice cream or jelly at this stage, while others feel hungry and will eat minced chicken, mashed potato and gravy, custard and thin bread and butter. In a very short time this is gradually increased until the preoperative diet is reached.

If necessary, a mild aperient is given on the evening of the second day after operation.

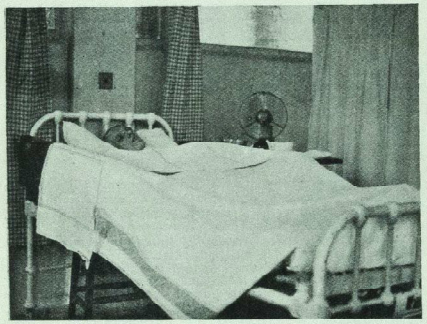


FIG. 1. PATIENT SHORTLY AFTER RETURN FROM OPERATION THEATRE.

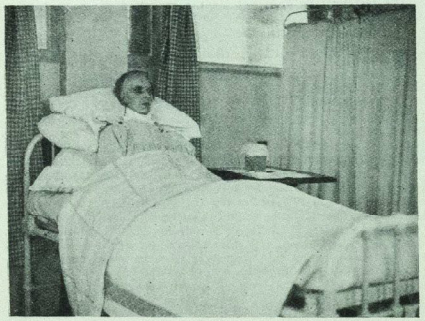


FIG. 2.—PATIENT ON DAY AFTER OPERATION.

DRESSINGS.

The first dressing is done on the evening of the operation day, to make the patient more comfortable and to observe if there is any discoloration or puffiness of the flaps indicative of oozing.

On the evening of the day after the operation the drainage-tubes are removed, and on the third evening the stitches are removed. The only exception to this rule is the uncommon case in which the operation has been performed in several stages, when it may not have been possible to suture the platysma. Under such circumstances the skin sutures should be left for five days.

GENERAL MANAGEMENT.

In a general ward it is advisable to arrange the beds so that patients with hyperthyroidism are not near one another.

Quietness and avoidance of any excitement are essential. Visitors tend to agitate these patients to a marked degree, and the co-operation of the relatives is very necessary in the attempt to remove all exciting factors.

I am indebted to Miss Vaughan for the accompanying photographs.

M. B.

NONE SO BLIND.

As we entered the courtyard of the Doctor's Cave Hotel we were surprised to see our acquaintance Mr. Harrison seated beside his baggage. Only the previous evening he had talked to us and said nothing about his leaving; in fact we understood he intended to remain at this famous Jamaican bathing-place for several weeks longer.

We were surprised and sorry at his going, and said we hoped that his sudden departure was not due to any bad news from home.

In reply he invited us to sit down while he explained to us exactly what had happened to cut short his visit; for the station bus was not due to call for him for another ten minutes.

He told us, what we already knew, that he had been staying at Montego Bay for several weeks and intended to remain there until the weather became too hot, when he would return to the States.

Owing to something which had happened the night before he was leaving at once, to embark at Kingston on the first steamer bound for New York.

During his visit he had not made many friends, or mixed much with the other hotel guests. But he had made two friends, both ladies, both young, and both, in their different ways, charming. One of these two he used to meet every morning on the beach; and after bathing they used to sit and talk until it was time to return to the hotel for lunch. He did not know the lady's name nor where she was stopping; probably she stayed at one of the hotels on the hill above the town, for he never saw her except on the beach in the mornings, where she was much admired for her swimming, her elegant figure and her very original bathing costumes.

His other lady friend, also charming, and also, but in quite another way, good looking, was staying at the Doctor's Cave Hotel, and gradually she and Mr. Harrison had got into the habit of meeting an hour before dinner, to sit and chat while they drank their rum-punch.

On the previous evening, while they were sitting together as usual and talking, Mr. Harrison happened to say how surprised he was that she never bathed.

The bathing at Montego Bay, he pointed out, was famous, not only in Jamaica, but the world over; and he tried to persuade her to come and bathe with him one morning. In answer to this the lady, after looking hard at him for a few moments, protested in an injured voice, "But I *do* bathe, *every* day. I bathed with you this very morning and sat with you for more than an hour afterwards, on the beach!"

"So you see," concluded Mr. Harrison, "there is nothing else for me except to leave, but" he added, turning to my wife, "why, and how do women manage to look so utterly different in evening dress and bathing suits?"

P. G.

OUR LIBRARY.

(*Continued from p. 67.*)

In a brief sketch of the history of the Library some reference was made to the history of the Hospital. In giving a short description of the contents of the Library, it is not altogether out of place at this point to refer to other books in the Library dealing with the history of the Hospital.

First and foremost must be mentioned the erudite history of the Hospital by Sir Norman Moore in two impressive volumes. A smaller history by Sir D'Arcy Power makes an admirable introduction to the larger volumes. This was written in 1923 in time for the Octo-centenary celebrations, and a copy on hand-made paper was presented to each of the delegates attending. It also contains prospective plans for the rebuilding of the Hospital by Sir Holburt Waring.

The *Records of St. Bartholomew's Priory*, in two volumes, by E. A. Webb, is also invaluable to the student of the history of the Hospital, because necessarily the two institutions have much in common.

Mr. Morrant Baker, who was Warden of the College from 1867 to 1874, and later became Surgeon to the Hospital, took great interest in its history. In 1885 he published *The Two Foundations of St. Bartholomew's Hospital*, and a reprint of the *Orders and Ordinances for the better government of the hospitall of Bartholomew the lesse*. The latter were originally printed in 1552, and a copy of this edition, published by the Early English Text Society for F. J. and P. Furnivall in 1888 is also in the Library. This volume also contains copies of the 1548 edition (as re-issued in 1577) of Vicary's *Anatomie of the Bodie of Man*, as well as documents of great interest to the historian.

Morrant Baker also collected prints of our Hospital and kindred institutions, and on his death these were presented to the Library and form the basis of our collection, which was considerably added to by the collection of the late W. H. H. Jessop. The collection has now been classified and catalogued.

An interesting book in the Library is the *Carmen Elegiacum* by Robert Bridges, the late Poet Laureate. The elegiacs are in Latin and start with the foundation of the Hospital. Short impressions of those connected with the Hospital up till the time of publication in 1876 form the chief feature. Dr. Mervyn Gordon, who presented a copy to the Library, says in an inset, "Copies of this are exceedingly rare, as the author is said to have destroyed all of them that he had in his possession". Whether Dr. Bridges was satisfied with his effort or not, the book was reprinted with considerable alterations the following year, but with no indication on the title-page that it was either a reprint or a second edition.

A further reference to Dr. Bridges may be allowed here. In vol. xiv of the *St. Bartholomew's Hospital Reports* he wrote "An Account of the Casualty Department", and a most interesting account it is, although it is whispered it did not meet with universal approval.

A. H. COUGHTREY.

(*To be continued.*)

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£	s.	d.	*		†
Staff	12,727	15	10	(72)		
Demonstrators	1,721	11	0	(69)		
Students	810	18	3	(290)		
Old Bart.'s men:						
‡Bedfordshire	25	3	0	(7)	.	(20)
Berkshire	123	3	0	(10)	.	(37)
‡Buckinghamshire	76	19	0	(14)	.	(29)
‡Cambridgeshire	183	6	0	(17)	.	(42)
‡Cheshire	6	16	6	(3)	.	(26)
‡Cornwall	31	11	0	(8)	.	(36)
Cumberland	5	0	0	(1)	.	(6)
Derbyshire	19	14	0	(4)	.	(17)
‡Devonshire	560	17	0	(52)	.	(118)
‡Dorset	52	1	0	(14)	.	(30)
‡Durham	17	7	0	(4)	.	(11)
Essex	249	19	6	(10)	.	(60)
‡Gloucestershire	229	19	6	(23)	.	(66)
Hampshire	448	16	0	(47)	.	(134)
‡Herefordshire	17	12	0	(4)	.	(10)
Hertfordshire	84	11	0	(16)	.	(73)
Huntingdonshire						(1)
Isle of Wight	186	13	0	(13)	.	(25)
‡Kent	578	18	0	(70)	.	(140)
†Lancashire	91	4	6	(12)	.	(82)
Carried forward	£10,249	16	7			

	£	s.	d.		
Brought forward	18,249	16	7		
Leicestershire	136	15	0	(7)	(28)
‡Lincolnshire	58	17	0	(17)	(27)
Middlesex	385	6	0	(21)	(68)
‡Norfolk	173	0	6	(21)	(60)
‡Northamptonshire	59	4	0	(5)	(17)
‡Northumberland	101	1	0	(2)	(11)
‡Nottinghamshire	19	19	0	(3)	(28)
‡Oxfordshire	190	3	0	(19)	(29)
Rutland					(2)
Shropshire	35	9	0	(8)	(22)
‡Somersetshire	1,180	3	0	(28)	(43)
Staffordshire	193	17	0	(5)	(37)
‡Suffolk	324	4	0	(23)	(46)
Surrey	473	3	6	(53)	(180)
Sussex	410	1	6	(59)	(174)
Warwickshire	184	7	6	(20)	(56)
Westmorland	2	10	0	(1)	(5)
‡Wiltshire	110	11	0	(12)	(26)
‡Worcestershire	158	19	6	(24)	(24)
‡Yorkshire	302	6	6	(71)	(101)
Wales	61	9	0	(16)	(150)
London	2,930	15	8	(104)	(971)
Channel Islands	20	0	0	(2)	(9)
Scotland	15	5	0	(5)	
Abroad	114	1	0	(13)	
South Africa	362	15	6	(19)	
Canada	114	3	6	(8)	
East Africa	87	12	0	(10)	
West Africa	146	10	0	(5)	
India	201	0	0	(11)	
Ireland	19	14	0	(4)	
North Africa	1	0	0	(1)	
North Borneo	5	5	0	(1)	
Australia	122	2	0	(6)	
China	52	8	4	(9)	
Siam	10	0	0	(1)	
France	50	0	0	(1)	
British West Indies	50	8	0	(5)	
Straits Settlements	7	1	0	(3)	
New Zealand	6	1	0	(3)	
Services	631	17	6	(44)	
Others	32,785	3	5	(342)	
Lord Mayor's Appeal	17,933	1	0		
Funds of College	8,000	0	0		
Value of Building	20,000	0	0		
	£106,467	7	6		

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County. ‡ Counties with Secretaries.

STUDENTS' UNION.

ASSOCIATION FOOTBALL CLUB.

HALF-SEASON REPORT.

Owing to lack of space the JOURNAL has not been able to publish reports on matches. In view of this a *résumé* of the season to date is appended.

The term's football has been one of splendid success. Not for very many years has the Club had such a run of victories. The season opened with a win 5—2 against St. Thomas's, our opponents in the Cup Final last season. In the following match the Casuals paid us the compliment of fielding a very strong XI, and we were well beaten 6—3. The game against Reading University was a really excellent game of football, and resulted in a draw 1—1. A new fixture against Metropolitan Police College resulted in our losing 2—3, after being 2 up 15 minutes from time. The magnificent physique of our opponents undoubtedly had a lot to do with their victory. From then on seven victories have followed one another. Downing College, Cambridge, was defeated 1—0 in a gale of wind; Balliol College, Oxford, lost to us 6—3; 6 goals were scored against Old Brentwood's to their 4, Lancing Old Boys were beaten 5—3, and Borough Polytechnic 8—0. On each of these last four matches every forward scored. Old Monovians were beaten 5—1, while finally a Merton XI were trounced 8—0.

For eight weeks, from the Reading game to the game against Merton, the team has been unchanged, and the Committee feel that the policy of sticking to one team has been justified.

The team has been: T. O. McKane (*goal*); H. Knowles, G. Herbert (*backs*); W. A. Owen, D. R. S. Howell, G. H. Darke (*half-backs*); C. Nicholson, P. A. K. Brownlees, N. H. Bloom, C. J. Carey and R. C. Dolly (*forwards*).

The 47 goals scored in the 11 matches have been fairly evenly distributed among the forwards. Nicholson, whose shooting and centring has been outstanding, claims 11, Dolly on the other wing 9, Carey 8, Brownlees 8, and Bloom 7.

The strength or weakness of a team lies in the half-backs, and the Hospital is fortunate in having a wealth of talent.

The 2nd XI have shown a great improvement on last season's record. They have played 12 matches, won 9, drawn 1, and lost 2, scoring 53 goals against 20. Here again success has been largely due to the halves, Maidlow and Waring, who were 1st XI regulars last year. Among the Freshmen, Harold, James and McElder are showing excellent promise.

For the future a stiff programme lies ahead. The two cups have to be defended, and on present form ought to be retained. The 2nd round on Wednesday, February 20th, is a difficult one, being against U.C.H.—always a hard team to beat. A cheer will always help; so don't forget the date.

If there are any Freshmen coming up this term who play Soccer will they make themselves known to the Secretary?

REVIEWS.

ST. BARTHOLOMEW'S HOSPITAL REPORTS. Vol. LXVII. (London: John Murray, 1934.) Pp. xxiv + 279. Price 15*s*.

This volume is well worth possessing, if only for the group of papers on goitre. That by Dr. A. W. Spence dealing with his researches on the etiology of goitre should be read first, and together with the three lectures by Prof. Fraser on the treatment of toxic goitre, and the one by Sir Thomas Dunhill on the surgery of the condition, provide the reader with a clear conception of modern views on its causation and management. The Editorial Committee is to be congratulated on obtaining this comprehensive review of the joint work of the Professorial Units on goitre before Prof. Fraser's departure.

There is a symposium on the problem of peptic ulcer, which is concerned chiefly with the results of the treatment of simple ulceration of the stomach and duodenum as judged by the reports from the Follow-up Department. Prof. H. H. Woollard and Prof. E. H. Kettle contribute valuable summaries of the anatomical and pathological considerations bearing upon the nature of the process of ulceration as a guide to treatment, and Dr. Geoffrey Bourne has written a short account of his experience of duodenal feeding which should prove a great help in practice. Mr. R. W. Raven has produced a most illuminating analysis of 357 cases of chronic gastric ulcer, and 272 cases of chronic duodenal ulcer which have been followed up since 1929, and his main object has been to try to deduce the features which should lead us to advise prolonged medical treatment or to have recourse to surgery as an adjuvant to medical methods. Mr. Girling Ball has made an independent review of 38 of his own cases of gastric ulcer treated by partial gastrectomy, and brings forward good evidence to show that this operation ensures the best after results in cases of chronic ulcer in the common situation on the lesser curvature which have not yielded to medical treatment.

In addition to these two groups of papers there is an instructive article by Dr. A. Q. Wells pointing out the importance of β-hydroxybutyric acid as the active agent in the treatment of urinary infections by ketogenic diet, and two papers by Dr. I. I. Wood and Dr. A. W. Franklin on the detailed investigation and treatment of some unusually interesting cases of anæmia in infancy. Mr. William Foster Cross, Consulting Anæsthetist to the Hospital, died in July, 1934, and Mr. West has written a sympathetic appreciation of an admirable character who will long be remembered by large numbers of old Bart.'s men. Brief accounts of the activities of the Library, Museum and the Hospital societies complete a volume which is intended primarily to keep Bart.'s men in touch with the life of the Hospital and Medical College.

A MANUAL OF PRACTICAL ANATOMY. Part I: Upper and Lower Limbs. By THOMAS WALMSLEY. (Longmans, Green & Co.) Pp. viii + 376. Price 12*s*. 6*d*. net.

Although this manual was first published immediately after the war, one feels that it has only recently made itself known to students in the London medical schools. In most of these the student relies on one of two well-known dissecting manuals to guide him in his practical work. He wisely refrains from experimenting with less well-known text books. Indeed any new anatomical text-book must be regarded with suspicion unless it has some distinct claim to originality, for there is already a sufficiency of the larger works, and a definite excess of those volumes which are recommended for their small size, and whose value is as small as their size.

But Prof. Walmsley's book departs from the traditional arrangement of a dissector's guide. In the first part—with which this review is concerned—the anatomy of the arm and leg is considered. The first fifty pages are devoted to a description of the various structural elements of a limb. Many interesting facts are clearly stated, the description of muscular form and the mechanics of muscular contraction being particularly good. In the remainder of the book the anatomy of the limbs is considered originally, and interspersed with the ordinary descriptions there is a minimum of instructions to the dissector. The latter fact makes the book more readable to those not actually using it during dissection. There is a large number of very clear diagrammatic drawings of dissected specimens which the student is invited to colour. A number of diagrammatic cross-sections of both limbs is a useful feature. These have not been annotated, so that in doing so the student will have impressed upon his mind the details of the various sections—knowledge which is useful not only in the examination room, but also in the surgery of amputations.

Throughout the book an endeavour has been made to stress important practical points, such as the anatomy of the breast, the mechanical functions of the clavicle, the tarsal joints and their movements, etc. A complete account of the regional anatomy of the limbs is given, no important fact is omitted, the style is clear and the book easy to read. It can be confidently recommended, especially for revision before examinations, and can be read with greater ease and much more benefit than the very popular books "which can be easily slipped into the pocket"—and which for the most part are best left there.

SURGICAL APPLIED ANATOMY. By Sir FREDERICK TREVES. 9th edition. Revised by Prof. G. C. CHOYCE. (Cassell & Co.) Pp. 720. Price 14*s*. net.

Treves' *Surgical Anatomy* is a classic which has been altered and improved with the advance of surgical knowledge. It gives a clear account of the essential anatomical details of the various regions of the body, with an outline of their practical applications. While there are other text-books of applied anatomy which are of greater value as works of reference, and give far better accounts, for example, of the sympathetic nervous system, yet, for general purposes and preparation for all surgical examinations, this book must still hold the first place. The book is well produced, and the majority of the illustrations are satisfactory. It seems a pity that the annotations in Fig. 88 should be in the B.N.A. terms, which in this instance are barely understandable, and not in accord with the text or previous illustrations.

GONOCOCCAL INFECTION. By R. V. STORER, M.R.C.S., L.R.C.P. (John Bale, Sons & Danielsson.) Pp. viii + 91. Price 7*s*. 6*d*.

This book has a two-fold object—primarily to assist in the field of research, and to guide the general practitioner in his treatment of a case of gonorrhœa.

Apart from the accuracy of many statements in the first two parts being open to criticism from a technical point of view, the first question which arises is, "What purpose do they fulfil in the diagnosis and treatment of a case of gonorrhœa by the general practitioner?" The majority of these parts consists of a mass of detailed pathology difficult to understand and at times even to accept, it would seem that these can do little to help in the diagnosis of gonorrhœa.

The section on treatment begins with an interesting *résumé* of methods of treatment, they are dismissed rather summarily, some justifiably, others without justification. Surely oral urinary antiseptics do not predispose to complications; they may do little good, but they do no harm, while their psychological effect is frequently valuable. The section continues with a method of treatment advocated by the writer which is in many ways orthodox, but on certain points unusual. Undue space is given to vaccine preparation of little interest or value to the practitioner.

After reading the book a general practitioner must feel that treatment is difficult, and that he needs a wide selection of chemicals and a complex armamentarium of instruments for the treatment of those infrequent cases of gonorrhœa occurring in his practice which may be able to remunerate him adequately for his skill, time and overhead expenses.

The book is interesting to read, but one hardly feels that it has achieved the object of clarifying the field of research in the subject.

VENEREAL DISEASE: ITS PREVENTION, SYMPTOMS AND TREATMENT. By WANSEY BAYLY. 5th edition. (London: Chapman & Hall, Ltd.)

Having reached the fifth edition in the space of fifteen years, this book has proved its usefulness to the profession. The value of this work lies in the fact that here we have the essentials for the prevention, diagnosis and treatment of venereal disease in a concise and readable form. This edition is entirely up to date and embraces recent advances in the treatment of general paralysis and tabes. A useful bibliography is given for those who wish to pursue the subject further.

The book is recommended to practitioner and student as a concise work on the subject of venereal disease.

THE CANCER PROBLEM AND ITS SOLUTION. By HASTINGS GILFORD. (London: H. K. Lewis & Co., Ltd.) Pp. ii + 60. Price 2*s*. 6*d*.

The author believes that there is no disease about which we have accumulated more facts than cancer, and that no more facts are needed in order to determine the genesis of the disease. This statement is, of course, open to criticism. He discards much of that which has come to light from animal experimentation, and believes that the problem has been obscured by these experiments rather than clarified. We agree with the attitude that a good deal more attention should be given to the study of cancer in man.

The idea is put forward that the precancerous state is due to the appearance of embryonoid characteristics in the cells before their time. These cells are vulnerable to certain stimuli which cause multiplication, and eventually a new parasitic growth which we call cancer. The nature of these stimuli are discussed, together with those factors which favour the occurrence of precancerous cells.

The book is interesting, and will be profitable reading for those who are engaged in elucidating the cause of cancer.

The Editor regrets that it has been found necessary to postpone the concluding chapters of "The Life and Works of Charles Barrett Lockwood, 1856–1914", by Mr. E. C. O. Jewesbury.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ABRAHAMS, ADOLPHE, O.B.E., M.D., F.R.C.P. "Athletic and Training Dietetics." *Practitioner*, December, 1934.

ADAMSON, H. G., M.D., F.R.C.P. "Eczema as a Clinical Entity and its Fundamental or Essential Lesion." *British Journal of Dermatology and Syphilis*, December, 1934.

AINSWORTH-DAVIS, J. C., M.D., F.R.C.S. "Chronic Cervicitis: Its Influence on the Urinary Tract and its Treatment by the Diathermy Caustic." *British Medical Journal*, November 24th, 1934.

ANDREWES, C. H., M.D., M.R.C.P. "Viruses in Relation to the Ætiology of Tumours." *Lancet*, July 14th and 21st, 1934.

——— (and LAIDLAW, P. P., F.R.C.P., F.R.S., and SMITH, W., M.D.). "Susceptibility of Mice to the Viruses of Human and Swine Influenza." *Lancet*, October 20th, 1934.

ATKINSON, E. MILES, M.B., B.S., F.R.C.S. *Abscess of the Brain: Its Pathology, Diagnosis and Treatment.* London: Medical Publications, 1934.

ATTLEE, WILFRID, M.D., D.Ch., M.R.C.P. "The Prognosis of Orthostatic Albuminuria." *Lancet*, September 29th, 1934.

BACH, FRANCIS J., M.A., M.D. "Congenital Heart Disease." *Medical Press and Circular*, September 19th, 1934.

BALL, W. GIRLING, F.R.C.S. "Renal Carbuncle." *British Journal of Urology*, September, 1934.

BARNETT, BURGESS, M.R.C.S. *See* MACFARLANE and BARNETT.

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EXAMINATIONS, ETC.

University of London.

Third (M.B., B.S.) Examination for Medical Degrees, November, 1934.

Pass.—Blomfield, D. M., Capper, W. M., Cartwright, W. H., Jones, F. Avery, Kingdon, J. K., Purnell, K. H., Reavell, D. C., Roden, A. T., Russell, B. F. B., Smith, M. C. L., Stephens, K. F., Tregaskis, T. G.

Supplementary Pass List.

Group I.—Harvey, P. G. F., Kanaar, A. C.

Group II.—Jones, D. M., Martin, J. R. M.

CHANGES OF ADDRESS.

ABERCROMBIE, G. F., 76, Fitzjohn's Avenue, Hampstead, N. W. 3. (Tel. Hampstead 0652.)

CARVER, A. E. A., Cassel Hospital for Functional Nervous Disorders, Swaylands, Penshurst, Kent.

CLARK, FRANCIS, 41, King's Road, Berkhamsted, Herts. (Tel. Berkhamsted 657.)

HANKEY, GEORGE T., 100, Harley Street, W. 1. (Tel. Welbeck 0343.)

MATHESON, I. W., King Edward VII Hospital, Windsor, Berks.

MAXWELL, J. P., Union Medical College, Peiping, N. China.

THWAITES, P., "Chalk Hills", 52, Beverley Road, Whyteleafe.

WAY, L., 108, Plashet Grove, East Ham, E. 6.

APPOINTMENT.

CARVER, A. E. A., M.D., D.P.M.(Cantab.), appointed Medical Director of the Cassel Hospital for Functional Nervous Disorders, Swaylands, Penshurst, Kent.

BIRTHS.

BAXTER.—On November 30th, 1934, at a West End nursing home, to Betty, wife of Dr. William Baxter, 61, Whitton Gardens, Greenford, Middlesex—a daughter.

BOLTON.—On October 14th, 1934, at the Methodist General Hospital, Hankow, to Eileen, wife of Dr. Ralph Bolton—a son.

DOYLE.—On November 7th, 1934, at The Square, Fakenham, Norfolk, to Gladys (*née* Martin), wife of Dr. J. L. C. Doyle—a son (Christopher John).

GORDON. On November 28th, 1934, at 20, Devonshire Place, W., to Phyllis (*née* Milholland), wife of Dr. E. F. S. Gordon—a son.

MCCURRICH.—On November 25th, 1934, at 31, Brunswick Road, Hove, to Bettine, wife of H. J. McCurrich, M.S., F.R.C.S.—a daughter.

POPE.—On December 1st, 1934, at Buckingham, to Barbara (*née* Innes-Lillingston), wife of Dr. E. S. Pope—a daughter.

RUSSELL.—On December 4th, 1934, at Mohnyin, Upper Burma, to Muriel (*née* Selwyn), wife of S. Farrant Russell, F.R.C.S.—a daughter.

WILLIAMSON.—On December 15th, 1934, to Muriel, wife of Dr. H. W. Williamson, of 33, Westbourne Terrace, W. 2—a son, who survived only a few hours.

WILLIS.—On November 29th, 1934, at Sussex House Sutherland Avenue, W. 2, to Rosalie, wife of Dr. Saxby Willis—a daughter.

MARRIAGES.

APTHORPE-WEBB—MASTIN.—On November 21st, 1934, in London, Dr. Hugh Apthorpe-Webb to Kathleen Mastin.

HARVEY-WILLIAMS—MARSHALL.—On December 6th, 1934, at St. Andrew's, Cheam, Robert Harvey-Williams, F.R.C.S., to Evelyn Margaret (*née* Orr-Ewing), widow of Lieutenant Herbert Marshall, R.A.F.

MELLOWS—WEBB.—On November 27th, 1934, at the Guildhall, City of London, Dr. Percival B. P. Mellows to Gwendolen Webb.

WILLIAMS—SIZER.—On December 22nd, 1934, at Northaw Church, Hertfordshire, T. P. Williams to Evelyn Sizer, of Adrogué, Buenos Ayres.

DEATHS.

BIRD.—On December 6th, 1934, at 43, Church Road, Whitchurch, Glamorgan, after a short illness, Dr. Ashley Bird, aged 78.

ELLIS.—On December 19th, 1934, at Victoria, British Columbia, Henry Reginald Ellis, M.B., Barrister-at-Law, sometime Assistant Director of Medical Services, Nigeria, aged 61.

FOUNTAIN.—On November 25th, 1934, at Crossley House, Ruislip, Edward Osborne Fountain, B.A., M.D., aged 77.

MOORSHEAD.—On December 4th, 1934, at his home at Fairfield, Cornwall Road, Sutton, Surrey, Robert Fletcher Moorshead, M.B., F.R.C.S., aged 60.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C. 1. Telephone: National 4444.*

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 5.] FEBRUARY 1ST, 1935. PRICE NINEPENCE.

CALENDAR.

Fri., Feb. 1.—Dr. Gow and Mr. Girling Ball on duty.
Medicine: Clinical Lecture by Dr. Graham.
Sat., ,, 2.—Rugby Match *v.* O.M.Is. Home.
Association Match *v.* Old Cholmelians. Home.
Hockey Match *v.* Hertford College, Oxford. Home.
Mon., ,, 4.—Special Subjects: Lecture by Mr. Bedford Russell.
Tues., ,, 5.—Dr. Graham and Mr. Roberts on duty.
Wed., ,, 6.—Hockey Match *v.* R.M.C. Sandhurst. Away.
Thurs., ,, 7.—**1st Round Inter-Hospitals Rugby Cup. Bart.'s *v.* Guy's. Richmond.**
Fri., ,, 8.—Prof. Witts and Prof. Gask on duty.
Medicine: Clinical Lecture by Dr. Hinds Howell.
Sat., ,, 9.—Hockey Match *v.* Seaford College. Away.
Mon., ,, 11.—Special Subjects: Lecture by Mr. Elmslie.
Tues., ,, 12. Lord Horder and Sir Charles Gordon-Watson on duty.
Wed., ,, 13.—Surgery: Clinical Lecture by Mr. Roberts.
Thurs., ,, 14.—Rugby Match *v.* Northampton. Away.
Fri., ,, 15.—Dr. Hinds Howell and Mr. Wilson on duty.
Medicine: Clinical Lecture by Dr. Gow.
Sat., ,, 16.—Rugby Match *v.* Bridgewater Albion. Away.
Association Match *v.* Brighton Old Grammarians. Home.
Hockey Match *v.* Staff College. Away.
Mon., ,, 18.—Special Subjects: Lecture by Mr. Bedford Russell.
Tues., ,, 19.—Dr. Gow and Mr. Girling Ball on duty.
Wed., ,, 20.—Surgery: Clinical Lecture by Mr. Girling Ball.
2nd Round Inter-Hospitals Association Cup. Bart.'s *v.* U.C.H. Away.
Last day for receiving matter for the March issue of the Journal.
Thurs., ,, 21.—**2nd Round Inter-Hospitals Rugby Cup. Bart.'s *v.* St. Mary's. Richmond.**
Fri., ,, 22.—Dr. Graham and Mr. Roberts on duty.
Medicine: Clinical Lecture by Lord Horder.
Sat., ,, 23.—Rugby Match *v.* Coventry. Away.
Association Match *v.* King's College. Away.
Hockey Match *v.* Old Cranleighans. Away.
Mon., ,, 25.—Special Subjects: Lecture by Mr. Higgs.
Tues., ,, 26. Prof. Witts and Prof. Gask on duty.
Wed., ,, 27.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.

EDITORIAL.

THE authorities of the University of London have been much concerned about the alarming leakage that occurs from the ranks of its undergraduates. The University annually sets apart a large sum of money to be distributed among its medical schools, and has cause for dismay at the decreasing numbers of students that graduate. The local authorities of the colleges have been asked to investigate the causes and to suggest possible remedies.

Correspondence in the medical press, initiated by a letter from Sir Ernest Graham-Little, has produced many theories and some practical suggestions. To summarize the main points may be of interest. The chief loss occurs between the Second and Final Examinations, less than 60% of those that pass the former taking the degree. There are various reasons put forward: the financial strain of waiting nearly six months after taking the qualifying Conjoint Examination, though this is offset by the relative expense of "Conjoint"; the average student, having allowed his *pia mater* to be stretch'd by the Conjoint, will refuse to have his brain unhing'd by the formidable task of taking the many subjects—midwifery, surgery, medicine, pathology, bacteriology, forensic medicine, public health and hygiene at one time, with the alternative of waiting a further six months: and, probably the commonest, the great temptation to commence practice or apply for an appointment, the degree not being sufficient inducement to be patient.

It was suggested that a degree should be instituted corresponding to the B.A. of the older universities, to be taken after about a term's further study of pre-clinical subjects. There is at present the B.Sc., but so eager is the student to be "in the wards" that few take it. Other suggestions are the combination of the licensing bodies with a single qualifying examination; the division of the Final Examination into two or three parts to be taken during the final year in a way similar to that for the Diploma, which appears the best answer to the difficulty; and, least satisfactory, the lowering of the high standard required for the Final.

The matter is being investigated in this Hospital and the results will be awaited with great interest.

We have received the following encouraging letter:

MY DEAR MR. EDITOR,

It will be, I know, a matter of great satisfaction to a large number of St. Bartholomew's men to hear that the building operations in Charterhouse Square in connection with the Physiology, Chemistry and Physics Departments, the Dining Hall and the Cloak Room have begun to-day, so that we may hope to hold the next Old Students' Dinner in the Great Hall of the Medical College at the beginning of October, and to start work there on that day.

It is unfortunate that we cannot proceed with the Anatomical Department at the same time, but we are £25,000 short of the money we want for that purpose.

I hope next month to give you further information.

Yours sincerely,

W. GIRLING BALL,

February 4th, 1935. *Dean of the Medical College.*

* * *

In the current issue of *Blackwood's Magazine* there is a most absorbing article, "A Bart.'s Student in the 'Eighties", by Lt.-Col. R. H. Elliot. It deals with part of the life of a student of that, to us, romantic age of "rags" and other alarums and excursions. The article illustrates how little it is that the life has changed. The ingredients are identical, and will remain so as long as there exists the close union of medicine with men and women, their pains, poverties and crimes, their births and deaths. Perhaps the quantities are a little altered, but it is only the flavour of the *vehiculum* that has changed materially with the passage of the years.

The way of the district clerk was then a good deal more hazardous than it is to-day, and it behoved him to imitate Agag in his manner.

"Jack the Ripper was on the warpath, and we had all been warned to be careful and circumspect in our behaviour, as a rumour had been started that he was a medical student out to collect anatomical specimens. On the face of it the idea was foolish and absurd, but the East End crowds were terribly worked up as day after day passed and this human fiend still remained at liberty. . . . The effect on the East End was such that if some foolish or mischievous person had raised the cry of 'Jack the Ripper' behind one of us, the victim would probably have been torn to pieces before he could either explain or call for help. From that time on, we went about our work with a considerable load of anxiety."

Then there are the encounters with the unmentionables, *pulex irritans* and the bed-bug, and an ingenious "tip" is given for dealing with the latter. We meet "the great Matthews Duncan", Paget, Savory, Lauder Brunton and other lecturers, some notable only in their inability to curb the rowdy student.

The writer learnt from the failures and successes of his teachers here much that was to prove invaluable to him in his later life on the professional staff of an Indian medical college.

* * *

Sir D'Arcy Power and Sir Holburt Waring have sailed for Australia on S.S. "Barrabool" for the opening of the new building of the Royal College of Surgeons of Australasia. In a letter to us, the former writes from Malta, "So far we have had a pleasant voyage with cheery companions".

* * *

Hunterian Lectures at the Royal College of Surgeons have been delivered on January 30th, by Mr. G. C. Knight, on "The Innervation of the Œsophagus in Relation to the Surgery of Achalasia of the Cardia", and on February 4th by Mr. H. J. Seddon on "The Morbid Anatomy of Spinal Caries in Relation to Treatment".

* * *

Many will be very sorry to hear that Miss K. W. Soden (Sister Rahere) has retired from the Nursing Staff of the Hospital after twenty years' service. She entered the Hospital in 1915, was appointed sister in charge of the Throat Department in 1920, and Sister Rahere in 1924.

Miss K. Turnock, formerly Night Superintendent, has been appointed to take her place.

* * *

After a rather unsuccessful season, the Hospital met Guy's on February 7th at Richmond. Pessimism has been confounded by the marked improvement since the vacation and, as we go to press, by the magnificent display and inspiring victory of the "Cupper". We offer our warmest congratulations and our best wishes for the next match against St. Mary's on February 21st.

* * *

We have just heard of the sudden death of Mr. H. W. Williamson, Junior Demonstrator of Pathology. An obituary notice will appear in our next issue.

* * *

We are requested to state that the closing date for House Appointments in May is 12 noon, Saturday, February 16th, 1935.

* * *

In June of last year a letter was published in the medical press over the signatures of Mr. Stanley Baldwin and some of the leaders of the profession. It proposed that subscriptions should be invited to a fund as a tribute to the late Sir William Morley Fletcher. Part of the sum collected was to be used for the erection of a memorial at the National Institute for Medical Research in Hampstead, and the remainder for the foundation of a Walter Fletcher Laboratory at Mill Hill of nutritional investigation.

Over £2000 has now been collected, but it is felt that there must still be many who wish to express their regard by subscribing to the fund.

OBITUARY.

HEYMAN WREFORD, of Exeter, died on New Year's Day, aged 84. He qualified from St. Bartholomew's in 1901 and went to Exeter, where his personality and attraction rapidly acquired a large practice. He was always out of the common run both in hospital and in practice on account of his age (he was past middle age when a student), in his appearance—he looked like what he was, a poet, and wore more than the usual quantity of hair—and his mode of life. He was the solitary third of the medieval proverb, "*Ubi tres medici, duo athei*", for religion played a great part in his every-day life. He combined the work of evangelist and healer, and it was to this that he owed his character and sympathy.

He was for fifty years editor of a monthly paper, and was the founder of a Bible and Testament Depot in Exeter.

His wife died in 1932, and he is survived by a son and daughter.

A friend writes of him: "His life was a beneficent one, and gained the trust and affection of those among whom he worked and of the many he reached through his writings. Few of the sons of St. Bartholomew's Hospital will have commanded a wider sphere of influence than that which Dr. Wreford obtained through his whole-hearted devotion to the One in whom he believed."

THE PAINTINGS OF HOGARTH ON THE STAIRCASE LEADING TO THE GREAT HALL, ST. BARTHOLOMEW'S HOSPITAL.

IN Bartholomew Close in 1697 there was born William Hogarth, a painter of no mean order, but like many another, not appreciated as deserved until after his death.

Successively he was engraver of coats of arms, crests, etc., designer of plates for booksellers, and portrait painter. But he will ever be remembered, nay, reverenced and honoured "in his own country" on account of the paintings he produced in 1736, and gave to St. Bartholomew's Hospital in 1737. For this most generous gift he was elected a Governor of the Hospital. Although Hogarth had already become known to the public as the author of two series of engravings, one "A Harlot's Progress", (1731), and the other "A Rake's Progress" (1733), it was in 1736 that he, as he writes, "entertained some hopes of succeeding in what the puffers in books call the great style of history-painting, so . . . with a smile at my own temerity, commenced history-painting, and on the great staircase at St. Bartholomew's Hospital painted two Scripture stories, the "Pool of Bethesda", and the "Good Samaritan", with figures seven feet high. These I presented to the Charity and thought they might serve as a specimen to show that were there an inclination in England for encouraging historical pictures, such a first essay might prove the painting them more easily attainable than is generally imagined".

Alas!, by the public these paintings did not receive the praise to which they were certainly due, but they have remained with us until the present when they literally see daylight again, although flood-lit, and are now to be appreciated far more than ever before. They are indeed a heritage of which we may be legitimately proud.

Although so many of his other works had been engraved, and many by Hogarth himself, it was not until after his death that these two pictures became so perpetuated.

Here then on the wall of the Great Staircase leading up to the Great Hall have remained these two masterpieces for the past 198 years. At various times it would seem that attempts have been made to "preserve" rather than "restore" them, as is proved by the fact that at least six coats of "opaque" varnish have overlaid the actual paint, the opacity, it may be, due largely to London soot!

The writer can remember these paintings fifty years ago, when they were really "dingy", and they have not been touched for the last forty years, and their appearance has not improved. But last year (1934), owing to the generosity of Lord Bearsted and Lord Duveen, a thorough restoration was undertaken. This was carried out under the able supervision of Sir Alec Martin, the Hon. Secretary of the National Art Collections Fund, and actually accomplished by the Clark family—father, two sons and a nephew.

As can readily be imagined, great courage and superb skill have been needed to carry out the work, but any who viewed the paintings before and after the restoration can concede that both have led to results which are in

A. C. Cooper, photo.

THE GOOD SAMARITAN, AFTER RESTORATION IN 1934

A. C. Cooper, photo.

THE POOL OF BETHESDA, AFTER RESTORATION.

fact marvellous, and do credit to the painstaking labour of the restorers.

Hogarth was ever a depicter of truth, and it was in transferring to canvas humanity as he saw it which makes our two paintings so precious.

Of the two, Hogarth seems to have been prouder of the "Pool of Bethesda", but some consider the actual execution of the "Good Samaritan" the better. Space does not allow of any attempt at a full description of either picture, but some outstanding details may be of interest.

First it should be noticed that beneath the "Good Samaritan" there are two monochromes, the one on the left being that of Rahere asleep and perhaps dreaming of the foundation of the Hospital, and the other on the right of Rahere awake and receiving gifts for the building of the same, while beneath the left side of the "Pool of Bethesda" is one of a patient, possibly the result of a road accident of that day, being carried into the Hospital upon a stretcher borne by two men, and being received by two Brethren of the Hospital for diagnosis and treatment.

The "Good Samaritan" shows graphically the man injured and stripped by the robbers, his left upper limb having received "first aid" for what was probably an ugly wound. But the Samaritan is engaged in pouring in oil and wine, from a flask in which they are mixed presumably, into a right thoracic wound. May the oil have been the anodyne and the wine the antiseptic of that day?

The demeanour of the Levite, still in the offing, is extremely well depicted, his scorn of the actions of the Samaritan being clearly shown.

In the left-hand lower corner of the picture is a white dog, an old English bull-dog, with its ears cropped as was the custom in Hogarth's time, licking wounds upon its left hind leg, received probably in guarding his master from the assaults of the thieves. It is possible, however, that Hogarth introduced this dog having in mind really the dog in the parable of Lazarus and Dives. There is also a dog in the left-hand corner of the "Pool of Bethesda", and this may have been Hogarth's favourite "Trump".

The horse on the right side is evidently an imitation of Van Dyck's impressions of what the appearance of such a beast should be.

In the "Pool of Bethesda" it is quite apparent that in addition to the two main characters of our Lord and the impotent man, Hogarth, in painting some of the "great multitude of impotent folk" waiting for the moving of the waters by the angel hovering overhead, took as his models actual patients whom he had seen in the Hospital itself. When he became a Governor of the Hospital he would have received a "charge" which ran somewhat as follows—"You are to promote the weal and advantage of the poor wounded, sick, maimed, diseased persons harboured in the said Hospital", and he would have remembered with gratification that he had introduced these into his painting the year before.

Sir Norman Moore, in his history of St. Bartholomew's, has alluded to the diseases from which several of the persons in the painting were probably suffering. To show how accurately Hogarth portrayed these it is only necessary to point out the following, reading from right to left: the man with the crutch and showing great emaciation may have had a tuberculous left knee-joint; the harlot Hogarth depicted undoubtedly as suffering from syphilis, but the rash about her knees is characteristic of non-specific psoriasis; the infant is a good example of rickets; the woman behind our Lord has an acute mastitis, for the redness of the skin over the mammary region is now well seen after the restoration; the man next to her has probably a septic wrist-joint, and not gout, as Sir Norman thought; the two females on the left of the picture are typically Hogarthian, and introduced to show the contrast between the fat, highly coloured young girl, and the emaciated, anæmic and chronically-ill middle-aged woman, for it will be noticed that the right forearm of the girl and the left forearm of the woman are bare, and the contrast is great.

Now that this splendid restoration has been accomplished, it is hoped that friends of the Hospital will come and see these historic paintings again, and that many of the general public will make a pilgrimage to view these not the least of the great treasures which our old Hospital possesses.

W. McA. E.

THE ÆTIOLOGY OF MALIGNANT DISEASE.*

IT is customary to conclude a course of lectures on the general pathology of tumours with a discussion of the ætiology of malignant disease, and though we really know nothing about the essential cause of cancer, this practice has much to recommend it, for it helps us to clear our ideas, and to select from among the vast body of facts which have accumulated in recent years those which seem most significant. We may well devote this lecture, then, to

* A lecture given in St. Bartholomew's Hospital, December 7th, 1934.

questions of ætiology, though our survey must necessarily be brief and superficial.

Before going any further I would point out that when we speak of the cause of cancer we make two assumptions, neither of which is necessarily justifiable: we tacitly assume the essential similarity of all the proliferative lesions which exhibit autonomous, continuous and invasive growth; and we take it for granted that all these tumours are the result of the action of a single cause. The first of these assumptions is, I think, more likely to be true than the second, but neither is immune from criticism; and while it is generally assumed, as a basis for investigation, that all tumours are alike in their fundamental characters and in their ætiology, it is possible that in thus simplifying our problem we are really complicating it.

General Non-specific Factors.

In most diseases general non-specific factors play an important part in ætiology, and it is interesting and even essential to consider what bearing such factors may have on the development of malignant disease.

Age.—Age has an important influence, for the majority of tumours occur between the ages of 35 and 65, 50 being the optimum age for women and 55 for men. This age-incidence is what one might expect, for the study of experimental carcinogenesis shows that it takes what corresponds to about 20 years of human life to produce malignant tumours in animals; and in certain occupational cancers occurring in human beings the disease only develops after some 25 years' exposure to the harmful agent. Nevertheless I have seen in children squamous carcinomata which, in older people, would be regarded as the result of chronic irritation, so a lag period is not an essential even in this type of tumour. In fact, malignant disease may occur at any period of life, and the age factor is not an essential one.

Sex.—Differences in the organ incidence of cancer in the sexes may be of significance as indicating the possible influence of such factors as physiological activity and involution, trauma and infection. This is particularly well seen in the mammary cancer, which is so rare in men and so common in women.

Heredity.—There is a widespread belief that the liability to cancer is inherited, and there can be no doubt that by stringent selective breeding stocks of mice can be produced exhibiting a greatly increased tendency to the development of spontaneous cancer. In these cancerous stocks the tumours are usually mammary carcinomata, and it is still doubtful whether the enhanced tendency in such inbred animals renders them liable to cancer in any situation, or whether the mammary gland alone is unduly susceptible. These experimental observations, however, are certainly not applicable to human beings, who fortunately mate in a much more haphazard way. The incidence of cancer in the general population is so high that all of us must have had forbears who died from malignant disease, but it is doubtful if any human being has anything like the concentrated cancerous ancestry which is found necessary for the production of tumour-susceptible mice. In only one condition, the carcinoma associated with polyposis of the intestine, is there clear evidence that human cancer is an inherited disease, and you will be perfectly justified in reassuring such of your patients who may suffer from this distressing phobia.

Civilisation.—From time to time one hears it asserted by those who lean towards the simpler life that cancer is a disease of civilization. Exactly what is meant by this is difficult to say. If by civilization is meant the direct opposite of barbarism or "wildness", the phrase is meaningless, for there can be no possibility of comparing the cancer incidence in civilized and uncivilized communities. The ultimate diagnosis of cancer rests on a histological basis, its presumptive diagnosis on skilful clinical and post-mortem examinations. The uncivilized are usually outside the scope of these procedures, and even if by chance the presence or absence of malignant disease can be established in any particular barbarian, this means nothing in the absence of numerical data of the total population and age distribution of large numbers of barbarians, together with controlled statistics of the causes of death among them. The same applies to animals. We know that cancer occurs in domestic animals, and statistics are available of its incidence in animals bred in captivity, but it is impossible to say what proportion, if any, of the total population of, say, lions dies from cancer. If, on the other hand, by civilization is meant the mode of life peculiar to particular communities of individuals, then it may be pointed out that there exist at present many civilizations, and there have existed in the past very many more, all differing profoundly from one another. While, therefore, there is no general factor which we can call civilization, there are factors in different civilizations which undoubtedly predispose to cancer. The simple native of Kashmir, for example, does not suffer from mule-spinner's cancer, but then neither does the cotton operative of Lancashire develop cancer of the anterior abdominal wall, for the Kangri does not enter into his scheme of life. Two alleged concomitants of civilization—auto-intoxication due to intestinal stasis, and an improper dietary—have been particularly blamed of recent years for the supposed increase of malignant disease among our population,

but it is difficult to see with what justification. A glance through the pages of Pepys's diary reveals the fact that constipation was as common three hundred years ago as it is to-day; and unless the vast sums of money spent every year in advertising aperient and purgative medicines are entirely wasted, it would seem just as logical to argue that cancer is due to intestinal unrest, for it is difficult to imagine the modern civilized intestine remaining static for any length of time.

So far as one can see, the influence of food as such in the development of cancer is negligible, though the temperature at which it is served and the condiments and artificial stimulants which sometimes accompany it may possibly not be without effect. Cancer occurs in races of mankind and in animals differing so widely from one another in their diet that any food factor common to them all can hardly have escaped notice. There is certainly no evidence that either an excess or a deficiency of vitamins has any action on the growth of the transplanted neoplasm in animals; and though it has been suggested that a deficiency of, especially, vitamin A may be followed by epithelial hyperplasias, such reactions are not recognized as proceeding to malignancy.

We may take it, then, that it has not been proved that civilization has any influence on the origin of cancer. While it is not possible to make any comparison between the cancer incidence in civilized and uncivilized peoples, malignant growths have been found in civilized and savage races all the world over, in races living under the most diverse conditions of climate, habit, diet and so forth. And the zoological distribution of cancer is just as wide.

Injury and irritation.—Chronic irritation is a frequent forerunner of cancer and is undoubtedly of ætiological significance, but we do not know exactly how it acts. In man such a considerable variety of chemical and physical irritants are recognized as possessing carcinogenic possibilities that their action can scarcely be specific. Time is the only factor common to them all, for nearly always there is a history of exposure for years before the actual malignant manifestation appears. Apparently authentic instances of the development of a malignant growth following a single trauma occasionally occur, and these must surely have some significance. For example, it is well known that cutaneous cancer may follow the exposure over several years to radiant heat and also to tar; but one or two cases have been reported where a single exposure to a combination of both these factors—a single splash of hot tar—has been rapidly followed by cancer of the area affected. Rather more common are the examples of the development of an osteogenic sarcoma at the site of a fracture. In some of these cases, no doubt, the tumour preceded the fracture, but on the other hand there are in the literature apparently true examples of traumatic neoplasms. I am thinking of the case of a schoolboy whose tibia was broken across the middle of the shaft at football; X-rays showed a perfectly normal bone and the fracture healed in the usual way, but some months later the leg had to be amputated for an undoubted osteosarcoma of the healed fracture site. Unfortunately the experimental investigation of irritation cancer does not throw much light on this phenomenon, for it has been found extremely difficult so to vary the conditions of the experiment as to produce malignant disease by a single injury.

The study of experimental carcinogenesis has, however, emphasized one or two points of primary importance. In animals the time factor applies just as in man, and mice must be tarred for what corresponds roughly to 20 years of a human life before they develop their tumours. But a closer analysis of the process has revealed a very interesting point, namely, that it is not necessary to apply the irritant during the whole of the preparatory period. If, for example, in a batch of mice, tar is applied for three or four months and then withheld, tumours finally develop in the same proportion of animals and at the same time as in control batches in which the tarring is continued till the tumours actually appear. The application of this to human pathology is pretty obvious: we may have to look back for years for the cause of the cancer of middle age. I have recently seen an illuminating example of the same kind of thing in an industry in which large amounts of dust are generated. Here some 10 or 12 men, about 1% of the total number employed, have in the last five or six years developed intranasal cancer—a very rare form of growth. All these men had been employed since pre-war days, and though the atmospheric conditions in the works are now quite good, it is probable that thirty years ago when no proper precautions were taken they were pretty bad. There can be little doubt that these were irritation cancers, initiated years ago, but only revealed after the usual lag interval, during the later part of which the causative factor was no longer present.

Another important point brought out in the experimental work is that there appears to be a certain range of intensity of irritation above and below which cancer does not develop. If animals are not tarred sufficiently, tumours do not result; on the other hand, if the tar is applied at too frequent intervals ulcerative and destructive rather than formative lesions occur.

Another point, a minor one, but having some application to human pathology, is this: when mice are

tarred, actual cancer formation is often preceded by a stage of epithelial hyperplasia. If tarring is now stopped the lesion may progress to malignancy, or it may entirely heal, but we cannot tell by histological examination which will happen; and so I think it behoves us to exercise caution before we glibly talk of precancerous lesions.

Many other facts have been brought out in the study of human and animal irritation cancer. I have only touched the fringe of the subject, and it is clear that any claims to the demonstration of a specific cause must square with them before it can be accepted.

The specific factor. We now come to the consideration of the more specific factors, and here we are on much less certain ground. There are two main schools of thought. One holds that cancer is intrinsic in origin, and depends upon some variation from the normal in the cell itself, due to a complete change of state or function, to a developmental error or to some change in environment. According to the other view cancer is the result of some influence entering the body from the outside, and it is tacitly assumed that this influence is a living parasite.

The intrinsic point of view has from time to time been crystallized in the form of cancer theories, but this kind of thing has rather outlived its usefulness. When we come down to hard facts most of these theories beg the question. For example, we are all agreed that many tumours arise in embryonic rests, but what is known as the Cohnheim theory does not explain why such rests should suddenly exhibit malignant neoplastic properties after years of quiescence. Again, in the Habit of Growth theory enunciated by Adami we are up against the same difficulty: when exactly does an irritative hyperplasia become a precancerous one, and why? And attempts to delve more deeply into the matter are no more satisfactory, for to ascribe cancer to a somatic cell mutation means nothing in the absence of any explanation as to why the genes go gay.

All these theories are based on a limited outlook, and most of them date back to the pre-experimental era; I do not think there is any real need for you to worry about them, but at the same time you might study them sufficiently to satisfy yourselves that they really are out of date.

There is, however, another aspect of the intrinsic theory which merits the closest consideration. The demonstration that certain carcinogenic substances are also œstrogenic, and the recognition of their chemical affinity with sterols occurring naturally in the body, seems to me to open up tremendous possibilities. It would simplify matters considerably if it could be shown that we elaborate in our bodies our own carcinogenic substances, but it is, of course, much too early to suggest anything of the kind.

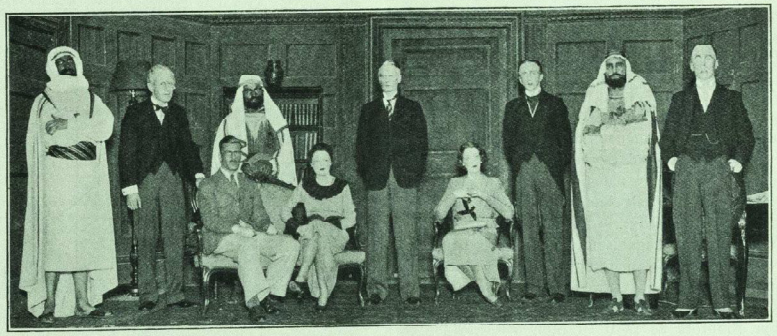
The extrinsic theory.—I have suggested to you in previous lectures that there is some superficial resemblance between malignant growths and certain inflammatory processes. The resemblance will not bear very close scrutiny, but upon it is based the belief, held chiefly by bacteriologists and surgeons, that cancer is due to a microbe. Up to a few years ago instructed opinion would have nothing to do with the microbic theory of cancer, and with very good reason. There is nothing in the natural history of malignant disease to suggest that it is microbic in origin; it is not propagated from one person to another; and structurally a malignant growth differs notably from an inflammatory process. Further, every attempt to demonstrate the constant association of a specific micro-organism with cancer has failed.

The intensive study by Gye and others during the last twelve years of the filterable tumours of birds, which were originally described by Peyton Rous, has, however, opened up the whole question afresh. I have already touched briefly on this matter and we cannot go into it in greater detail now, but you will realize that the upholders of the virus theory of cancer have a very long way to go before they can be said to have proved their point. Up to the present it has not been found possible to demonstrate in epithelial tumours the virus or filterable agent which exists in avian sarcomata; and until the carcinomata of mammals can be brought into line with the sarcomata of birds, the virus theory must remain only a theory. It is true, of course, that certain epithelial hyperplasias in mammals can be shown to be infective in origin, but such lesions can by no means be described as autonomous neoplasms. A link between the two conditions, however, is apparently provided in the papillomatosis of the cottontail rabbit studied by Shope and, more recently, by Peyton Rous and Beard. Here, again, we have what promises to be an extremely hopeful line of investigation, and further work in this direction will be scrutinized with the greatest interest. But even if filterable agents can be shown to play the same part in the growth of the mammalian epithelial tumours as they do in avian sarcomata, it can scarcely be claimed that the solution of the problem has been reached. Nowadays we are all aware that infection means a good deal more than the mere juxtaposition of a parasite and a host. We cannot claim that our knowledge of the simplest infective process is exhaustive, and if a parasite were universally accepted to-morrow as the cause of cancer, we should still be as far as ever from understanding the cancer process. E. H. KETTLE.

"THE NELSON TOUCH."

THE cleaning of the frescoes on the staircase leading to the Great Hall had drawn our attention more forcibly than usual this January to the scene of the Amateur Dramatic Club's activities, and the arrangements that had been made to lighten the staircase proved most effective in exhibiting the works of Hogarth to the crowds who visited "The Nelson Touch" between January 15th and 18th.

We approached the Hall, then, in a mood of admiration, and the excellence of the evening's entertainment was destined to satisfy completely even the most ardent of critics. It is true that the play itself was not one of great literary merit; it is true, too, that once again the Society had elected to present a curtain-raiser, which seemed superfluous; but the unusually high standard of the caste and the brilliance of more than one individual performance more than made up for any shortcomings and combined to make the performance one that must rank high among the achievements of the Dramatic Society. Great credit, then, is due to the producer, Stephen Hadfield, for the excellence of the evening's entertainment and the smoothness with which it was carried out. A word must be added, also, of "the make-up", which was unusually important and really very skilfully done.



London Press Photos.

There came first "The Baker's Dozen", by H. H. Munro, enacted on the deck of a steamer, and representing the meeting of Major Richard Dumbarton and the object of his youthful affections—now a middle-aged widow with no less than eight children—and their unsuccessful attempt to persuade the one-child Mrs. Paly-Paget to take one. Pat Hewlings, as the Major, was admirably suited to the part and played it very well; so, too, did Baynes as Mrs. Paly-Paget, who was dressed as expected of a middle-aged lady on a sea-trip. Clifford Newbold, however, as the widow, adopted quite another style, and appeared in a Marina hat, which might have become a young lady twenty-five years her junior at a fashionable tea-party in Mayfair. It was surely too good to be ruined by the breezes of the sea, even on the head of a *veuve joyeuse* as forceful as Mrs. Carewe.

An interval followed, in which, as in the intervals between the acts of the play, Kenneth Latter and Ronald Gibson provided light entertainment in the form of duets on two pianos. If the Society is as lucky in future in this respect, they will have something upon which to congratulate themselves most heartily.

So to "The Nelson Touch", which opens in a room in the residence of the Earl of Duncaster, Secretary of State for the Middle East, with his butler Philpotts arranging for the "scallywag brother", Richard Fayre, who has suddenly reappeared from Arabia, to make himself presentable before the Earl and Countess appear. This is made easy by the arrival that day of two new suits for the Earl, in one of which the young man nonchalantly appears and proceeds to take an interest in the political situation in Arabia, under discussion by the Prime Minister, Earl Duncaster and Lord Granton, the oil magnate. The second act, in the same setting, represents the impersonation of the Secretary of State by the young man, who knows so much about the Arab chiefs with whom he is conversing; and in the third act, where his triumph is complete and the Arabs are repelled, he attains his object—the hand of Jan etta Norton—and the crowd are left to ascribe the credit of the negotiations to the Secretary of State, who marches out on to the balcony with Abdulla—"for they are shouting for us"—to acknowledge their congratulations.

It is difficult in such an excellent caste to single out individuals for especial mention, but Beryl Gilbert as the Countess of Duncaster delighted us all the time she was on the stage, and, with Diana Norman, supplied the counterpart for the lighter moments of Richard Fayre, portrayed by Anthony Hinds Howell. He certainly had a great deal to do and did it very well, and the contrast was just right between his serious moments with the Arab chiefs and the lighter and more flippant occasions, when he was concealing his line of action from lovers old and new. However, he convinced us in the end that he was worthy of his ambition, and Diana Norman made us think so too, after she had appeared earlier on to be less enthusiastic than even the author could have intended.

The credit of Hinds Howell's performance is closely linked with the excellence of Trevor Roberts's presentation of Philpotts. He had obviously put a great deal into the part, and remembered all the time he was on the stage exactly what an old servant could and should do. "Hearts of Oak," sung by the two of them, was very good indeed, and it was difficult to realize that Philpotts in real life was not the age he seemed on the stage. We look forward to seeing him again, as also Donald Crowther—a new name on the programme. He took the part of the Arab chief, and was well supported by Peter Dawnay and Trevor Baynes. Their costumes and make-up were magnificent, and they lived up to them with an admirable portrayal of the Oriental calm and immobility characteristic of their country, so "beautiful and savage and free".

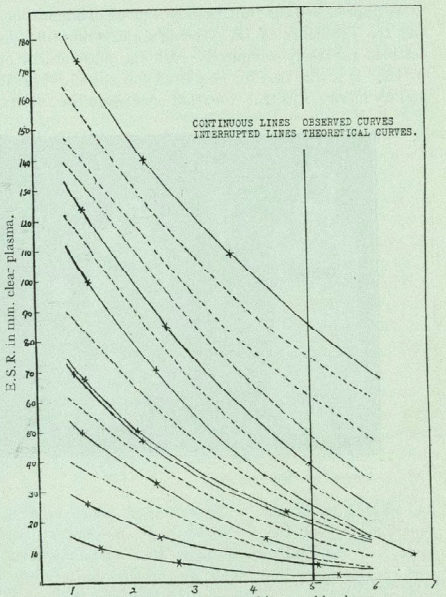
Arthur Ambrose as Lord Granton was inclined to over-act, but Eric Jewesbury in a part which at first sight seemed strange, with the memory of his performance as Blanquet in "Bird in Hand" fresh in mind, demonstrated his ability in quite another direction. Though perhaps he did not assert himself enough in the first act, he achieved a great deal in the last, and the "blind eye" was most convincing. Last of all, and most important, comes the name of Roger Gilbert, who—it is sad to relate—is unlikely to appear again in one of these productions. We have had numerous delightful demonstrations in the past of his unusual ability, and it is a great pity we shall not have another. Of all his performances, however, none can have been better than this as the Secretary of State. His voice and his manner were superb: his "Ah! Seaton, it is I" on the telephone was a pleasure in itself, and the complacent smile with which he accepted the congratulations due to his brother were as realistic and true to the part as the way in which he maintained in his family life the dignity of his official position.

CLINICAL METHODS.

THE ERYTHROCYTE SEDIMENTATION RATE.

Before describing the technique, interpretation and clinical application of the erythrocyte sedimentation rate (E.S.R.), brief mention must be made of certain established facts regarding it.

Firstly, if the blood of healthy adults is prevented from clotting by some suitable anti-coagulant and placed in a tube held vertically, then the red cells will settle towards the bottom of the tube at a slow and relatively constant rate, which is slightly faster in women than in men.



RELATIONSHIP BETWEEN RED CELL-COUNT AND ERYTHROCYTE SEDIMENTATION RATE.

Secondly, the rate of fall is increased in certain diseases, notably those of an inflammatory nature such as rheumatic fever, pneumonia and pulmonary tuberculosis and also in neoplastic conditions.

Further, it must be realized that this test is in no sense specific or diagnostic, but it is an expression of activity of a disease process in which tissue destruction is probably the chief responsible factor.

The E.S.R. is also influenced by certain outside factors, of which the nature and amount of the anti-coagulant, the room temperature and the blood-count are, for practical purposes, the most important.

Technique.—The technique most generally employed is that described by Westergren. A glass tube of uniform calibre, graduated in millimetres from above downwards from 0 to 200, is used in conjunction with a special stand designed to hold five or more tubes vertically. The anti-coagulant consists of a 3·7% solution of sodium citrate, 0·4 c.c. of which is introduced into a glass syringe of 2 c.c. capacity. Blood is drawn into the citrate solution from the median cubital vein, undue stasis being avoided, until the total volume of combined blood and citrate is 2 c.c. The contents of the syringe are then emptied into a clean, dry test-tube, and thoroughly mixed by being sucked ten times up and down the sedimentation tube, which is finally filled up to the 0 mark and placed in the stand.

The height in millimetres of the column of clear plasma is read at the end of one hour and constitutes the E.S.R.

The upper limit of normal for one-hour readings by this technique may be taken as 8 mm., although rather lower figures are usually obtained in men.

In the interpretation of results the number of red cells per cubic millimetre of the blood tested should be taken into consideration, and this constitutes one of the chief difficulties of the test. Probably the most simple method of overcoming it is to correct all results to 5 million red cells per cubic millimetre, which can be done by the author's series of curves correcting E.S.R. and red cell-count.

The test finds its principal clinical application in diseases such as pulmonary tuberculosis, rheumatic fever and various forms of arthritis, in all of which the question of activity of the disease process is one of paramount importance in prognosis and treatment. It is probably true to say that, in any of these conditions, a normal E.S.R. indicates quiescence, while, in the absence of any other pathological condition, an increased rate denotes activity of the disease process.

W. G. O.

TONSILLECTOMY UNDER LOCAL ANÆSTHESIA.

Tonsillectomy may be performed simply, painlessly and quickly under local anæsthesia. The following brief description is merely intended to outline a simple and satisfactory technique for those unacquainted with the method.

PREMEDICATION.

The patient is given morphia gr. ¼ half an hour before operation. As the patient's co-operation is necessary it is essential that he should not be unduly sleepy, therefore nembutal or hyoscine are inadvisable.

ANÆSTHESIA.

The fauces, palate, pharynx and back of the tongue are lightly sprayed with 10% cocaine and then carefully painted with a 20% solution. Care is taken to paint the under-surface of the tongue; this prevents discomfort when the patient is holding his tongue down with a spatula. The anterior part of the dorsum must not be cocainised, otherwise the patient is unaware of the position of the spatula and will constantly allow his tongue to roam. Special care must be exercised during cocainisation, and the minimum used to anæsthetise the fauces and pharynx. If too much is used it may trickle down into the hypopharynx and "block" the superior laryngeal nerves, which lie just beneath the mucosa in the anterior part of the pyriform fossæ, and thus cause anæsthesia of the upper part of the larynx and facilitate aspiration of blood and infected material.

The pillars of the fauces are then infiltrated with novocaine 1% with adrenalin 1/250,000. A Labat syringe with a fine needle 6 in. long is used. The needle is inserted through the anterior pillar at the lower pole of the tonsil and the lower half of the pillar infiltrated, and then it is inclined medially and 2 c.c. injected into the attachment of the lower pole to the tongue. The needle is then passed laterally, and the loose tissues deep to the tonsil infiltrated with 2–3 c.c. of the solution. If the needle is in the right layer the tonsil becomes more prominent as injection proceeds; if the point is in the tonsil itself novocaine will be seen trickling out of the crypts. The needle must then be withdrawn and passed more laterally. The second point of injection is in the groove between the anterior pillar and palate on a level with the last upper molar. The upper half of the pillar is infiltrated, and then the needle is inclined upwards and slightly outwards and 2 c.c. injected into the tissues around the upper pole. Injection of the posterior pillar is unnecessary if the retro-tonsillar tissues are adequately infiltrated. The patient is now given a rest for five minutes while anæsthesia becomes complete.

OPERATION.

The patient sits comfortably in a chair opposite the operator, who is also seated. A nurse stands behind the patient and steadies his head. The tongue is depressed by an ordinary spatula, which the patient holds himself. The dissection is carried out in the ordinary way, taking special care to avoid any pulling. As a rule the operation may be completed comfortably in two minutes.

AFTER-TREATMENT.

Nothing must be given by mouth for two hours or so, until anæsthesia has worn off, and then a little cold water may be sucked from a swab, if this is satisfactory a little water may be taken from a teaspoon, and if it is swallowed without difficulty the ordinary post-operative treatment can be continued with safety.

COMPLICATIONS.

1. *Pulmonary.*

Pulmonary complications are undoubtedly more common with local than general anæsthesia. Attention has already been drawn to the risks of aspiration of blood, etc., if the laryngeal mucosa is anæsthetized by too free use of cocaine.

2. *Hæmorrhage.*

Reactionary hæmorrhage may occur when the vasoconstrictor action of the novocaine and adrenalin passes off, as in any operation under local anæsthesia if careful attention is not paid to bleeding points.

3. *Infection.*

Excessive sloughing is sometimes seen. This can be avoided by using the minimum quantity of novocaine. There is no necessity to indulge in wide infiltration of the palate and pharyngeal wall. A recent article states that 30–40 c.c. of 1% novocaine are required to produce satisfactory anæsthesia. We have found 10 c.c. adequate, and hope with increasing experience to use considerably less.

CONCLUSION.

The advantage of operation under local anæsthesia is that the after-pain is considerably less than after general anæsthesia; all sisters who have looked after both will vouch for this. The chief disadvantage is the limited application. Local anæsthesia is unsuitable for remains and for very fibrotic tonsils where there are extensive adhesions obliterating the retro-tonsillar space.

A. M. B.

PRESENT CONCEPTIONS OF THE ÆTIOLOGY OF RHEUMATIC FEVER

IN 1906 Sir William Church (1), writing on rheumatic fever, stated that "It is now very generally admitted that rheumatic fever belongs to the class of acute infective disease, although opinions still differ with regard to the specific organism by which it is produced".

It may be said that this statement is as true to-day as when it was first made, although considerable knowledge upon the pathology and ætiology of the disease has been accumulated, especially within recent years. Thus there has grown up a conception of the disease as one with a microscopical pathology peculiar to itself—Aschoff (2), Coombs (3), Swift (4)—and with a localization in the joints, heart and subcutaneous tissue, which has done much to help in the differentiation of acute rheumatism from other conditions. This paper briefly sets out the most important advances in the knowledge of the ætiology of the disease, but to appreciate the significance of these it is necessary to review former ideas.

The first view of rheumatic fever from the ætiological standpoint was that it represented a generalized infection by a specific micro-organism. An anaerobic bacillus was brought forward as the cause of the disease in 1891 by Achalme (5), and later by Thiroloix (6), but this was identified in 1900 by Hewlett (7) as *B. enteritidis sporogenes*, and no serious claim on behalf of this organism has been made of recent years. In 1900 Poynton and Paine (8) described the isolation from the blood, the pericardium and throat of cases of acute rheumatism of a streptococcus which they claimed to be the specific causal agent of the disease. Their claims, which were upheld by Beattie and Walker (9), for the specificity of the organism they had isolated were based upon its characteristic cultural reactions, and on the experimental production by it in rabbits of lesions such as arthritis, pericarditis and endocarditis. It is sufficient to state that this micro-organism is no longer held to be the ætiological agent in acute rheumatism, Poynton himself being compelled to confess (1924 (10)) that he did not think that the presence of his streptococcus formed a complete explanation. The reason for the overthrow of this organism as the specific cause was the general inability of competent observers to repeat the isolation of a similar organism, the recognition that the organism in question was none other than the enterococcus, *Streptococcus fæcalis*, and that the lesions produced in rabbits were not analogous to those of acute rheumatism, but were of a pyæmic nature, and could be produced by any organism of the group of *Streptococcus viridans* (Horder (11)).

The theory of generalized infection was revived by Small (12) in 1927, this time with a non-hæmolytic streptococcus, but with no more evidence in support for his organism than in the case of the coccus of Poynton and Paine.

The next theory was that put forward by Birkhaug (13), who in 1927 suggested that the disease was an intoxication caused by a non-hæmolytic streptococcus located in the throat (from which it could be cultured), and producing an exotoxin. This would make the disease analogous to scarlet fever, but with a non-hæmolytic streptococcus instead of an hæmolytic streptococcus. Doubt was later thrown on this conception of the toxicity of the organism, and Birkhaug later suggested (1929 (14)) that the organism stood in relation to rheumatic fever as an agent which produced substances to which the patient became hypersensitive.

This leads to the next view of rheumatic fever as a disease due to "allergic hypersensitivity" to an organism or its products. This view was elaborated chiefly by Swift (4) on the resemblance of the arthritis of acute rheumatism to that seen in serum sickness (clinically, pathologically and sometimes in response to salicylates (15)), on the basis of analogy with tuberculosis, where sensitization of the host to the products of the tubercle bacillus is believed to play some part in the disease picture, and on the demonstration of a sensitivity of the patient's skin to streptococcal extracts. Swift found the *Streptococcus viridans* to be the chief associate of rheumatic fever, but to reconcile his results with those of previous observers, suggested that there was an hypersensitivity to a wide range of streptococci rather than to one particular group (Swift, Derick and Hitchcock (16)). However, in 1926 there had come the first report of the association of a different type of streptococcus with acute rheumatism, namely the Hæmolytic Streptococcus. This organism is differentiated from the non-hæmolytic and "green" streptococci by the production of a soluble substance which is capable of hæmolysing the red blood-cells of many animal species (streptolysin—McLeod (17)). Thus Andrewes, Derick and Swift (18) noted the occasional occurrence of hæmolytic streptococci in the throat during the throat infection which frequently precedes the attack of acute rheumatism. In 1931 Alvin F. Coburn's (19) work on the infective factor in acute rheumatism appeared. This work showed:

(i) A similar geographical and seasonal distribution between hæmolytic streptococcal infection and acute rheumatism.

(ii) A relationship between activity of the rheumatic process and an infection of the upper respiratory passages.

(iii) That of all the organisms isolated from the throat by aërobic culture, the one whose presence was associated with periods of active rheumatism and which disappeared during inactivity was the hæmolytic streptococcus. Studies of individual cases and of institutional epidemics seemed to indicate a direct correlation between a hæmolytic streptococcal infection of the throat and an attack or recrudescence of active rheumatism. It was observed that a time-interval averaging 10 days usually existed between the sore throat and the period of active rheumatism, and that when the latter phenomena had appeared, hæmolytic streptococci had frequently disappeared from the throat.

(iv) Because it was not possible to demonstrate hæmolytic streptococci in the lesions of the heart, joints or in the blood-stream, Coburn postulated a sensitivity to the organisms in the throat, or rather to their products, and supported this contention by the demonstration of sensitivity of the skin to an extract of ground-up hæmolytic streptococci in a high percentage of rheumatic cases.

Coburn's work was carried out on a very large scale, involving the examination of the throat flora in several groups of individuals, and it is apparent to anyone who studies his work that he has built up a strong body of evidence for associating hæmolytic streptococcal infection with rheumatic fever. Evidence has not been lacking to support some of Coburn's observations.

Firstly, tonsillitis has been known to be associated with acute rheumatism ever since the early observations of Haig-Brown (20) on an epidemic of tonsillitis in Charterhouse School, in which certain cases developed manifestations of acute rheumatism with arthritis and carditis (1884). In 1930 Glover (21) in the Milroy Lectures drew an analogy between cerebro-spinal fever and acute rheumatism on the grounds that a wave of tonsillitis usually preceded the occurrence of cases of acute rheumatism in institutions, in a similar manner to the way in which a rise in the carrier-rate of meningococci preceded an outbreak of cerebro-spinal fever. He postulated therefore a droplet infection by a specific organism of low-grade infectivity. Later Glover and Griffiths (1931 (22)) recorded outbreaks of acute rheumatism in schools following epidemics of hæmolytic streptococcal tonsillitis. In 1932 Bradley (23) described a similar epidemic in a school in which two different serological types of hæmolytic streptococci occurred in the throat prior to attacks of acute rheumatism. Schlesinger (24) had described in 1930 how rheumatic relapses in convalescent children were often preceded by a naso-pharyngeal infection occurring 10–21 days beforehand, and Collis and Sheldon (1932 (25)) demonstrated the occurrence of hæmolytic streptococci in the throat during this febrile precursor to rheumatic activity, while the presence of other organisms such as pneumococci was unassociated with relapse. Similarly, Paul and Salinger (26) have drawn attention to the connection between upper respiratory tract infection and active rheumatism in a study of rheumatic families. The most recent observations bearing on this point are those of Gibson and Thomson (1933 (27)) who found no difference in the frequency of occurrence of hæmolytic streptococci in the throat of rheumatic patients and of a control group, and of Weinstein and Styron (1934 (28)), who also found no difference in the frequency of occurrence of hæmolytic streptococci in the throat of rheumatic cases, but who found that of 37 patients suffering from rheumatism who had recrudescences under observation, no less than 62% had hæmolytic streptococci in the throat during the three weeks prior to the relapse, thus confirming Coburn's main contention.

Secondly, other work has been published approaching the problem from a different angle than that of the direct isolation of the hæmolytic streptococcus from the patient himself. This has been the demonstration of a change in the rheumatic patient's blood which is indicative of hæmolytic streptococcal infection. Thus precipitins to streptococcal extracts have been demonstrated in the blood prior to an acute relapse (Schlesinger and Signy (29)). Also Todd (30), and recently Myers and Keefer (31), have described the high titre of anti-streptolysin (antibody neutralizing hæmolysin produced by the hæmolytic streptococcus) in the blood of cases of acute rheumatism. Patients not suffering from infection by the hæmolytic streptococcus did not show such a high titre; those with hæmolytic streptococcal infection showed high titres. Further, Todd showed that the titre rose with activity of the rheumatic process and fell during convalescence. Finally Hadfield (32) has described a resistance on the part of the blood-fibrin in cases of acute rheumatism to lysis by the principle formed in cultures of hæmolytic streptococci. This resistance is considered by Tillett and Garner (33) to indicate recent hæmolytic streptococcal infection.

Attempts, however, to confirm Coburn's second contention, namely, the existence of a state of sensitivity to the products of the hæmolytic streptococci in rheumatic fever, have met with less success. Thus Collis (25), and Collis, Sheldon and Gray Hill (34) found no greater incidence in the number of positive reactions to the intradermal injection of hæmolytic streptococcal extract (variously termed "nucleoprotein" and "endotoxin") in rheumatic cases than in a control group, though there was a higher incidence of strongly positive reactions in the rheumatic group. Gibson and Thomson (27) came to a similar conclusion (1933).

DISCUSSION.

When an attempt is made to summarize the work of recent years on the ætiology of rheumatic fever, it is seen that the emphasis at the present time is upon the hæmolytic streptococcus. All the evidence seems to agree that while there may be no real increase in the infestation of the throat by these organisms in rheumatic cases, yet whereas an infection of the throat by a hæmolytic streptococcus in a non-rheumatic subject is not followed by the manifestations of acute rheumatism, a similar infection in a rheumatic subject *may* be followed by a recrudescence of active rheumatism. On the other hand, the question as to whether an attack or relapse of rheumatism can occur in the absence of demonstrable hæmolytic streptococcal infection has not yet been satisfactorily answered. The problem is best seen in its relation to a particular case, and the following case illustrates the difficulties that are to be encountered:

J. D—, æt. 10, was first seen at the age of 8, when he gave a history of attacks of rheumatic fever when aged 4 and 7, and on examination was found to be undersized, while his heart was normal

in size, but had a systolic murmur at the apex. He remained well, though complaining of pains from time to time until May, 1933 (æt. 9), when he had a sore throat from which hæmolytic streptococci were cultured in large numbers. A fortnight later he had no sore throat, hæmolytic streptococci were no longer obtainable from his throat, and apart from occasional pains in the legs and epistaxis on one occasion he was quite well. However, three weeks from the time that hæmolytic streptococci were found in his throat, he was admitted to the Children's Ward suffering from an acute rheumatic relapse with swollen knees, and a dilated heart in which signs of mitral stenosis were to be found for the first time. Cultures from his throat on several occasions yielded Streptococcus viridans, staphylococci, and no hæmolytic streptococci were ever obtained.

This attack quickly quietened down, and he was discharged with very little signs to show for his illness, his heart being normal in size, with, however, a systolic and occasionally a mid-diastolic murmur to be heard at the apex.

The boy now remained well for over 12 months, until November, 1934, when he was admitted to the ward in a further acute relapse, this time with pericarditis and arthritis. Throat swabs had been taken 27 days previously, and had shown no hæmolytic organisms but merely Streptococcus viridans. Further, he had not had any symptoms of any upper respiratory infection, the rheumatism coming on very acutely. The throat during the first few days after admission was repeatedly negative for hæmolytic streptococci. But when his plasma was examined for the presence of resistance on the part of the fibrin to the lysis induced by a culture of hæmolytic streptococci, it was found that lysis was delayed for some 5 hours, and was not complete after 24 hours' incubation, the normal control fibrin being dissolved within 10 minutes. As it was not known whether this was a newly acquired property of his fibrin, it was not possible to dogmatize about its significance, but it probably indicated a recent infection with the hæmolytic streptococcus.

This boy illustrates very well the essential problem concerning the significance of hæmolytic streptococci in acute rheumatism. In his first relapse he had a clearly demonstrable preceding streptococcal infection of the throat. Yet in a relapse of equal severity he had no directly demonstrable infection, either preceding or accompanying the rheumatism, due to hæmolytic streptococci. Evidence of a somewhat circumstantial nature suggested that such an infection was a possibility. Yet it cannot be denied that the second relapse might have been entirely unrelated to streptococcal infection, the evidence being insufficient for a judgment to be passed in either direction.

For the purpose of argument let it be granted that in every case of acute rheumatism there is, or has been, an infection by the hæmolytic streptococcus, what interpretation can then be placed on the lesions of this disease? There is no evidence of any widespread invasion of the body tissues by this organism. Blood cultures and joint fluid cultures do not yield the hæmolytic streptococcus. In fact the most careful work on this line gives a growth after some days of a *Streptococcus viridans* (Cecil, Nicholls and Stainsby (1929 (35)). Secondly, there is no basis for the consideration of the disease as an intoxication from exotoxin secreted by the hæmolytic streptococci in the throat. Thirdly, there is the allergic hypothesis, and so far the evidence seems to point away from this conception (the very high percentage of positive skin reactions to the hæmolytic streptococcus in scarlet fever convalescents (90%) which have been found by McGibbon (36) should be compared with the low figure for the occurrence of rheumatic manifestations following this disease (4%—Schlesinger (24)).

Two recent theories must be mentioned here; the first is that of Reinhardt and Mettier (37), who claim that a combination of vitamin C deficiency and focal hæmolytic streptococcal infection in the guinea-pig produces lesions in the heart analogous to those of acute rheumatism. While the lesions they figure are not conclusive evidence, without confirmation, that the experimental disease they have produced is analogous with acute rheumatism, yet their general conception of the combination of two factors—one in the host and one from without in the form of a micro-organism—appeals to many who regard the allergic theory as inadequate. The question of vitamin C deficiency as a factor in acute rheumatism meets with criticism on the basis of Newman's (38) careful work on the occurrence of acute rheumatism among the inhabitants of the Fountain Hospital for mental deficients. Here the diet of the institution was inadequate and cases suggesting vitamin C deficiency occurred, while the attack-rate of scarlet fever was 21%, yet acute rheumatism only caused manifestations in 0·5% of the population.

The second is that which Gibson and Thomson (27) express when they state their belief that acute rheumatism may be due to some infective agent not yet identified, whose entry into the body is facilitated by infection with the hæmolytic streptococcus. Such a belief would conflict with the known activity of the hæmolytic streptococcus as a secondary invader, for the streptococcal infection seems definitely to precede the rheumatism.

To return to the question of the *rôle* of the hæmolytic streptococcus, analogy may be drawn with scarlet fever. Some years ago the hæmolytic streptococcus was known to occur in the throat in scarlet fever, yet it was very generally rejected as the causal agent of the disease and an hypothetical virus was postulated as the real invader. To-day there are few sceptics to the view that scarlet fever is due solely to the hæmolytic streptococcus acting as a local invader of the throat with general toxæmia. The conception of toxigenic strains and of the existence of circulating antitoxin in the serum of some individuals (Dick-negative) has done much to explain the difference between simple streptococcal tonsillitis and scarlet fever (Glover and Griffiths (22)). That our knowledge of the hæmolytic streptococci is still rudimentary is obvious when the problem of hæmorrhagic nephritis is considered. It is therefore possible that with increase in our knowledge of these organisms much that is at present obscure in relation to rheumatic fever will be explainable.

To conclude this paper with the trite remark that much has been accomplished yet still more remains to be done to elucidate the problem of the ætiology of rheumatic fever would be redundant, and it is better to leave the reader to form his own conclusions; yet if through the pages of this brief review the complexity of the problem has become evident, the writing of this article will not have been in vain.

I am indebted to Dr. Charles F. Harris for permission to publish the case-report.

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C. H. STUART-HARRIS.

"THE LIFE AND WORKS OF CHARLES BARRETT LOCKWOOD, 1856–1914."

(Continued.)

V. THE SURGEON.

"Our art is not better learned than by its exercise and use."—*Sydenham.*

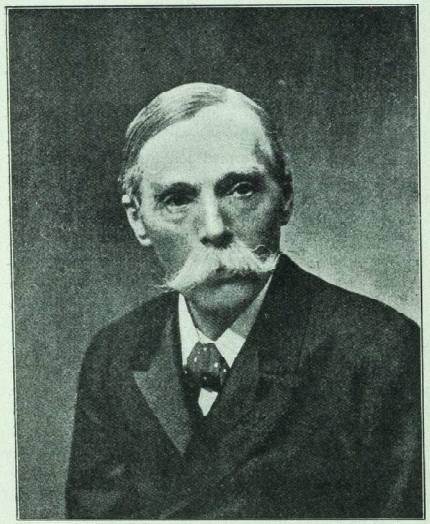
In 1891 Sir William Savory retired from the staff of the Hospital, and in June of the following year C. B. Lockwood was appointed assistant surgeon to Butlin. And so the pendulum swung across. The last stronghold of the pre-antiseptic era had been superseded, and the young surgeon who had been added to the staff brought with him a new outlook and new methods which he introduced with all thoroughness, and in time influenced others to copy.

For although antiseptic surgery was said to be practised at Bart.'s when Lockwood arrived on the staff, what in fact was performed fell far short of aseptic ideals, and it was due to Lockwood, with Butlin, more than to any others that the real meaning of asepsis came to be pressed home. Lockwood was one of the first to grasp the full meaning of sterility in operations, and his work at bacteriology had given him an understanding of infection which most of his colleagues at that time lacked. He realized that, in doing an operation, a surgeon should deal with the wound as though he were performing a delicate bacteriological experiment.

The senior surgeons on the staff of the Hospital at this time were Messrs. Thomas Smith, Willett, Langton, Marsh and Butlin. There was still only one theatre (the old Theatre A) between them, and the old black frock-coats for operating still hung in the cupboard there. Often the room was so thick with mist from the carbolic acid spray that it was impossible to see across it. Smith and Willett were both strenuous in their efforts to improve matters, and sincerely believed that they were employing something of Lister's technique. But ignorance of the fundamentals of clean surgery prevented them attaining their end. The new technique was as yet only dimly revealed to them, and when Thomas Smith put his needle in his mouth, and sucked the end of the string before threading it, nobody believed that Lister minded that sort of thing very much. And Langton, although he paid lip-service to antisepsis, and scrupulously cleansed his hands before an operation, would be observed from time to time to pass his fingers absent-mindedly through his hair. Sometimes he would produce a trocar and cannula from his waistcoat pocket and plunge it straight into a hydrocele, and it never occurred to him, or to many of his colleagues who behaved similarly, that antiseptic surgery demanded no

less than a complete revolution of surgical outlook and organization.

Butlin understood the subject far better than most of them, and he had in addition a great pathological knowledge. As his assistant surgeon, Lockwood was able to use new methods of procedure at operations, and together they introduced into the Hospital a new standard of surgical cleanliness, based on a full understanding of the channels of infection. The Butlin-Lockwood combination gained a name for themselves as the great "Aseptic Firm", and their operation



SIR HENRY BUTLIN.

wounds certainly surpassed all others in cleanliness and rapidity in healing. Lockwood remained with Butlin until he was appointed full surgeon in 1903, on the death of Walsham.

Henry Butlin played so important a part in Lockwood's career that it is worth while pausing a moment to take a glance at him. He was essentially a cultured man with a wide knowledge of literature and architecture. He spoke Italian perfectly, and spent most of his holidays travelling in France, Italy and Spain. A great lover of horses, he was fond of riding and driving, and used to drive up to the Hospital in a carriage and pair. Lockwood first encountered him in his student days in the Museum, and writing of him afterwards he said, "I can well remember his rather slender figure leaning over the specimen cases in that rather gloomy place. He always looked so youthful, not much older than his pupils. He had a keen and intelligent face; hair dark and worn rather long; brow spacious and white; dark and clear eyes which looked at you steadily; the mouth firm with a strong chin; the head carried well; and all the movements betokening an alert intelligence. Altogether it must have been clear even to the least intelligent that he was a man beyond the ordinary."

Lockwood was happy in finding in his senior surgeon a man who was ready to advance and improve the standard of asepsis in surgery by every possible means, and he began to give demonstrations in the wards, and on Saturday afternoons in the operating theatre, dealing with the problems of asepsis. Notes of these demonstrations were published in the *St. Bartholomew's Hospital Journal* and afterwards collected to form his well-known book on *Aseptic Surgery*.

In using the term "asepsis", Lockwood did not imply a method in which the use of antiseptics was excluded. He took pains to make clear that he applied the term to the end in view and not to the means by which it was attained. There was only one kind of asepsis to his thinking—that in which bacteria were absent; and any endeavour to limit the use of the term "aseptic" to a method which happened to rely solely upon the use of heat seemed to him doomed to end in inconsistency. Personally he employed the mixed method, "but with an abiding faith in the efficacy of heat, and a profound scepticism as to the power of chemicals".

He was probably the first surgeon at the Hospital to give scrupulous attention to the cleanliness of his hands and the skin of the patient. Where previously it had been the custom of the surgeon merely to rinse his hands in water, and perhaps an antiseptic, before an operation, Lockwood instituted a rigorous routine of preparation. First, he prepared himself for disinfection, scrubbing both hands and forearms with soap and hot water (at 105° F.) for three minutes by the clock. Next he soaked them in strong disinfectant for two minutes, and finally rinsed them in a weaker solution. At first he had tried carbolic acid and perchloride of mercury to disinfect his hands, but came to regard then as unsatisfactory not only from their chemical action, but because of the roughness and soreness of the skin which they produced. In consequence he came regularly to use a solution of biniodide of mercury in methylated spirit. A strength of 1 part in 500 was employed for the first washing and of 1 in 2000 to 4000 for rinsing before and during the operation. The skin of the patient was prepared in a similar manner, usually after a hot bath, and with the additional

application of ether, turpentine or benzene after the scrubbing, in order to extract grease. When the skin had been disinfected it was kept aseptic until the operation by a covering of 5% carbolic gauze which had been soaked in biniodide lotion for at least twelve hours.

Lockwood paid very great attention to the care of his hands and always kept his nails clipped close to the skin. After he introduced the biniodide solution it was adopted by nearly all the surgical staff of the Great Northern and of St. Bartholomew's Hospitals, where it popularly went by the name of "Lockwood's Juice".

He was one of the first surgeons at Bart.'s to surround the site of operation with properly sterilized towels, which were prepared by boiling and soaking in carbolic lotion, 1 in 40. He or his assistant used to take them out of the lotion, wring out the excess, and straightway apply them to the patient. His instruments were sterilized in boiling water for a quarter of an hour, and then put in a basin of 2 to 2½% carbolic lotion. Marine sponges, which he liked to use, were usually prepared by the sulphurous acid method, and he had little doubt of its efficacy.

As regards his own costume, in the early days he simply took off his coat, rolled up his shirt sleeves, and put on an apron or towel, more for his own cleanliness than that of the patient. As the apron was not sterilized he had never to touch it with his hands, nor allow it to come into contact with the wound. It was not long before special sterilized aprons were introduced, and these were followed by white jackets and short-sleeved gowns. The theatre staff were all made to wear sterilized overalls, and eventually goloshes and caps were introduced. Lockwood himself at first refused ever to wear a cap, which he thought unnecessary, his hair being close-cropped. He used to say in reference to another surgeon who had a beard, "When —— puts his beard in a bag, I will put on a cap".

Lockwood was the first to wear gloves for operating at Bart.'s at the beginning of the present century. They were made of cotton and sterilized by boiling. He soon gave them up because he found that they seriously diminished his sense of touch. Rubber gloves he gave a fair trial, but on account of their poor quality in the early days he found it practically impossible to complete an operation without tearing or puncturing them. Although he never made it a practice to wear gloves himself, he insisted on his theatre staff wearing them, because he would not rely on the completeness of their "scrubbing-up". He was quick to realize the danger of coughing or talking over the patient, and a garrulous assistant was particularly objectionable to him. He came to employ a mask soon after its original introduction at Charing Cross in 1900.

Many of the original difficulties were overcome when large sterilizers were introduced into the Hospital, and when the elements of aseptic principles had been impressed upon people's minds. This, however, was a difficult process, and it had to be impressed on workers in the theatre that their hands were not properly aseptic if they touched their faces, or failed to remove rings from their fingers; that the fact of an instrument being new from the maker was no guarantee of its sterility, nor even of its cleanliness; that neither the operator nor any of his immediate assistants should "assist in moving the patient or in lighting the gas", and that an instrument which fell on the floor was not again rendered sterile by dipping it for a second in weak antiseptic lotion.

But Lockwood did not stop at showing people what aseptic principles involved; he tested them to see how efficiently they were carrying them out. On the basis that the end of aseptic surgery was the absence of bacteria, he had at once at his command a simple test of success or failure, and one that was easy to apply. His ideal was that all the sponges, towels, materials, instruments, skin of the hands, skin of the patient, and the wound itself should all be sterile when tested with culture media. Consequently, he made it his regular custom to have a rack of broth-tubes brought to the theatre and, before he began to operate, snippings of skin from around the nails of his own hands and those of his assistants were put into separate culture-tubes. Small pieces of the patient's skin, fragments of towel, sponge, catgut and anything else that was intended to be sterile were also put into separate tubes and taken away to be incubated. The results were exhibited the next day, and when the house surgeon, dressers and nurses knew to what a stringent test their efficiency was likely to be put at any moment, it is not surprising that aseptic technique was soon carried out with scrupulous care. Tests were sometimes repeated after the operation to see how well asepsis had been maintained.

The results of these experiments varied a good deal, but on the whole they showed a steady improvement in aseptic methods. Thus, at first, bacteria grew from the skin of the hands on every occasion; then the incidence of sepsis was 1 in 10, then 1 in 15, and then 1 in 37, and by 1908, 1 in a series of 66. During this improvement the methods of testing remained the same. The hands of the house surgeon in 1900 were "septic" once out of 24 tests made before operations and 3 times out of 12 tests made after operations. Lockwood prepared his own hands so carefully that it was quite exceptional for any organisms to be grown from them. Mr. J. E. H. Roberts, who, as Pathology Clerk, had to take a snip of skin from Lockwood's hands as a weekly routine for

three months, says that he never once grew any organisms from him, though he frequently did from other people.

This system used to be criticized by some people, who believed that a large drop of antiseptic often went into the broth with the piece of towel or catgut, and so vitiated the result, or on the grounds that because a minute portion of skin was sterile, it did not necessarily imply that the whole of the adjacent skin was similarly sterile. Such objections no doubt carried a certain amount of weight, but the fact remained that by his system Lockwood impressed upon all who worked with him the real meaning of asepsis in surgery, and by steady effort increased the efficiency with which it was practised. It is true that Lockwood made no distinction between pathogenic and non-pathogenic organisms in the test which he applied, but when he began his work bacteriology was only in its childhood, and complete absence of all organisms was the ideal that he set himself to attain.

The idea of air-infection was predominant at the time, and when the operation had been completed Lockwood used to put a layer of silver foil directly over the wound. The silver foil was kept in book form and leaves torn out as required. On top of it he put either cyanide gauze or plain sterile gauze, and wool. A speciality of his was a large Listerian over-dressing consisting of waterproof jaconet and eight layers of gauze, and this he continued to use for many years. It had to be specially made in the ward for each patient, and was sewn on immediately the patient returned from the theatre. Its primary object was to exclude air from the wound, and it was left on for several days.

REFERENCES.

(6) *Journal of Anatomy and Physiology*, 1885, xx. p. 1.
(7) With H. D. Rolleston, *ibid.*, 1891, xxvi, p. 130.
(8) *Lancet*, February 9th, 1884.

E. C. O. JEWESBURY.

(To be continued.)

STUDENTS' UNION.

HOCKEY.

First Round of the Inter-Hospital Cup.

ST. BARTHOLOMEW'S HOSPITAL *v.* WESTMINSTER HOSPITAL.

Played on Thursday, January 24th, at Burntwood Lane. Won, 6–0.

After a delayed start the match was played in a fine rain, and on a ground which soon became very sticky. Westminster were quicker on the ball, and made some dangerous forward movements, but without scoring. During the first half the game was fairly even, but on the whole Bart.'s just had the advantage, and were one goal up at half-time.

In the second half Bart.'s forwards improved considerably, but although they scored five more goals, they missed too many chances. The game was not so one-sided as it might appear from the score, Westminster defending well, and being stopped from scoring on more than one occasion only by the good saving and kicking of Mullan in goal.

Bart.'s were not playing up to their usual standard in this match, but it is evident that if they were to become a little quicker on the ball generally, they would stand a much greater chance of winning the Cup. Goals were scored by Blackburn (2), Sharpe (2), Heyland and Hill.

Team.—J. F. Mullan (*goal*); W. A. Oliver, A. D. Messent (*backs*); C. Perkins, J. R. Winter, A. H. Masina (*halves*); P. G. Hill, R. Heyland, A. E. Sharpe, G. Blackburn, J. M. Lockett (*forwards*).

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* OLD ALLEYNIANS.

Played at Winchmore Hill on Saturday, January 26th, and won by 2 goals (10 pts.) to *nil*.

Their forwards went off with a rush and kept us penned in our "25" for some time. Kingdon relieved the situation with a fine break-through, and it looked as if he would score, but he was tackled just in time. The O.As. came very near scoring, being brought down but a few yards from the line on many occasions. An unexpected try came from Youngman, who took the defence completely by surprise. Morison converted.

At the beginning of the second half the O.A. forwards were playing well together, and kept rushing the ball down to our line, but Morison was very safe. Towards the end of the game—and everyone was pleased when the end came, as the game was played in a snowstorm—Armstrong ran well and passed to Newbold, who scored for Morison to convert.

The conditions for play were terrible and Bart.'s did well to win. Their defence was a very pleasing feature of the game.

ST. BARTHOLOMEW'S HOSPITAL *v.* O.M. TAYLORS.

Played at Winchmore Hill on Saturday, February 2nd, and won by 3 goals (15 pts.) to 1 goal and 1 dropped goal (9 pts.).

The play opened rather scrappily with the O.M.Ts. doing most of the pressing. A fine kick by Morison brought play into the other half, and after some loose play a scrum was formed on the O.M.Ts.' "25" line. Bart.'s heeled and the ball was passed to Blusger, who burst through the centre and sent Nel in to score between the posts, Morison converting. Bart.'s were on the offensive continually now, and just before half-time a clever interpassing movement between Nel and Youngman resulted in the latter going hard for the line to score a very good try. Morison converted.

In the second half the O.M.Ts. came very near scoring, Turnbull being particularly unlucky. From a line-out, Heck, their scrum-half, received the ball and ran clean through to score between the posts. The kick was converted. Play became very keen and both lines were constantly in danger. Bart.'s scored next from a fast follow up by Nel, after a break through and punt ahead by Blusger. Just before the end Spragg dropped a goal from 40 yards out.

Bart.'s played very well together as a team, the scrummaging perhaps being their weak point. Morison was in superb form, and Miller gave an excellent service from the scrum. Newbold and Burrow were prominent in the pack.

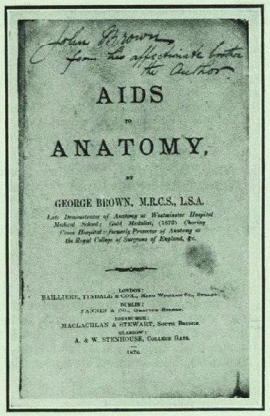
Team.—C. R. Morison (*back*); J. G. Nel, I. N. Blusger, P. L. Armstrong, J. G. Youngman (*three-quarters*); J. R. Kingdon, J. E. Miller (*halves*); E. M. Darmady, K. D. Moynagh, P. D. Swinstead, R. Mundy, W. M. Capper, J. D. Wilson, J. A. V. Nicoll, J. C. Newbold (*forwards*).

REVIEWS.

STUDENTS' AIDS SERIES.

This series of books, which dates back to 1876 when the first book, *Aids to Anatomy*, was published, has just been modernized in its outward appearance by the provision of an attractive blue jacket or dust-cover, and the publishers have made arrangements with booksellers in all university towns to exhibit the *complete series* in special bookshelves provided by the publishers. In the past it has not always been possible to find any place where the whole of the Students' Aids Series was available (there have been in all fifty titles issued in this Series), but now it will be possible to go to Messrs. H. K. Lewis, or Foyle's, or Baillière, Tindall & Cox's own shop, and there take down from the shelves any one of the current volumes.

There is a book to cover every subject in which the student—and the examiner—is so deeply interested, and some on subjects in which he has only a partial or passing interest. There are three "premedical" Aids, *Biology*, *Botany* and *Zoology*, and another trilogy in *Aids to Neurology*, *Psychiatry*, and *Psychology*, all of which have a very wide appeal. Then there are several books like *Aids to Dispensing* and *Aids to Pharmaceutical Latin*, which are useful little books for any medical man to have in his library.



The title-page of a copy of the first AID.

It is an excellent idea of the publishers to bring the Students' Aids Series before us in its entirety through the medium of the bookshops, and we congratulate them on the dust-covers.

SOME THOUGHTS OF A DOCTOR. By FREDERICK PARKES WEBER, M.D., F.R.C.P. (London: H. K. Lewis & Co., Ltd., 1935.) 8vo. Pp. 183.

Dr. Parkes Weber is so well known as a physician, a numismatist and a classical scholar that we welcome gladly this volume of essays, which he has entitled *Some Thoughts of a Doctor*. It begins with a pleasant foreword by Sir Walter Langdon Brown, and ends with a note of personal pessimism which will, we hope, be falsified in the event. A witty preface by the author introduces a series of delightful essays *de omnibus rebus et quibusdam aliis*. Some have already appeared in the *St. Bartholomew's Hospital Reports*, the *Practitioner* and the *Medical Press and Circular*, but each has been amended, polished and brought up to date. There are several articles on eugenics, a sensible one on fasting, an amusing one on cancer, and others on such controversial topics as the rights of nations and a general medical service.

Dr. Parkes Weber shows himself to be a determined opponent of Freud, whose teaching he attacks, sometimes seriously and at other times in a satiric vein. Dreams interest him; he gives an intelligent account of their causation, and suggests an excellent recipe in the form of a prescription for securing a really good nightmare, with a ghost thrown in. He maintains that it would be well for physicians and psychiatrists occasionally to have a consultation with "a professor of morality"—a neutral term for the clergy.

As an example of his special and extensive knowledge in connection with art in relation to death, he gives an interesting account and explanation of the Death Mask stamp. This was the Serbian jubilee stamp issued in 1904 on the accession of King Peter after the political murder of King Alexander and Queen Draga. The stamp bears the heads of King Peter and his ancestor "Black George", and was engraved by L. E. Mouchon, the well-known Parisian engraver. At first sight nothing unusual is noticeable, but turn it upside down and there appears the gashed and ghastly features of the murdered king. The stamp was immediately withdrawn. Dr. Parkes Weber believes that the death mask was entirely accidental, though there are still some who are superstitious enough to believe that it foretold the tragedy of 1934, when the King of Yugoslavia was murdered at Marseilles.

The book is excellent reading. It is a testimony to the extensive knowledge of the author, and is well deserving of thought.

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£	s.	d.	*		†
Staff	12,727	15	10	(72)		
Demonstrators	1,721	11	0	(69)		
Students	862	3	3	(294)		
Old Bart.'s men:						
‡Bedfordshire	25	3	6	(7)	.	(26)
Berkshire	123	3	0	(16)	.	(37)
‡Buckinghamshire	76	19	0	(14)	.	(29)
‡Cambridgeshire	193	16	0	(18)	.	(42)
‡Cheshire	6	16	6	(3)	.	(26)
‡Cornwall	31	11	0	(8)	.	(36)
Cumberland	5	0	0	(1)	.	(6)
Derbyshire	19	14	0	(4)	.	(17)
‡Devonshire	560	17	0	(53)	.	(98)
‡Dorset	52	1	0	(14)	.	(30)
‡Durham	17	7	0	(4)	.	(11)
Essex	249	19	6	(19)	.	(69)
‡Gloucestershire	229	19	6	(24)	.	(52)
Hampshire	448	16	0	(47)	.	(134)
‡Herefordshire	17	12	0	(4)	.	(10)
Hertfordshire	84	11	0	(16)	.	(73)
Huntingdonshire						(1)
Isle of Wight	186	13	0	(13)	.	(25)
‡Kent	378	18	0	(70)	.	(146)
‡Lancashire	91	4	6	(12)	.	(80)
Leicestershire	136	15	0	(7)	.	(28)
‡Lincolnshire	58	17	0	(17)	.	(27)
Middlesex	385	6	0	(21)	.	(68)
‡Norfolk	173	0	6	(21)	.	(60)
‡Northamptonshire	59	4	0	(5)	.	(17)
†Northumberland	101	1	0	(2)	.	(11)
†Nottinghamshire	19	19	0	(3)	.	(28)
†Oxfordshire	104	3	0	(21)	.	(26)
Rutland						(2)
Shropshire	35	9	0	(8)	.	(22)
‡Somersetshire	1,180	3	0	(28)	.	(43)
Staffordshire	193	17	0	(5)	.	(37)
‡Suffolk	324	4	0	(25)	.	(46)
Surrey	473	3	6	(55)	.	(180)
Sussex	410	1	6	(59)	.	(174)
Warwickshire	184	7	6	(20)	.	(56)
Westmorland	2	10	0	(1)	.	(5)
‡Wiltshire	110	11	0	(12)	.	(26)
‡Worcestershire	158	19	6	(24)	.	(24)
‡Yorkshire	342	16	6	(25)	.	(101)
Wales	61	9	0	(16)	.	(150)
London	2,927	1	8	(194)	.	(971)
Channel Islands	20	0	0	(2)	.	(9)
Scotland	15	5	0	(5)		
Abroad	114	1	0	(13)		
South Africa	362	15	6	(19)		
Canada	114	3	6	(8)		
East Africa	87	12	0	(10)		
West Africa	146	10	0	(3)		
India	203	2	0	(12)		
Ireland	25	4	0	(4)		
North Africa	1	0	0	(1)		
North Borneo	5	5	0	(1)		
Australia	122	2	0	(6)		
China	52	8	4	(9)		
Siam	10	0	0	(1)		
France	50	0	0	(1)		
British West Indies	50	8	0	(5)		
Straits Settlements	7	1	0	(3)		
New Zealand	6	1	0	(3)		
Services	631	17	6	(44)		
Others	33,287	1	11	(344)		
Lord Mayor's Appeal	17,934	2	0			
Funds of College	8,000	0	0			
Value of Building	20,000	0	0			
	£107,090	10	0			

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County. ‡ Counties with Secretaries.

EXAMINATIONS, ETC.

University of Oxford.

The following Degree has been conferred:

B.M.—Brodribb, H. S.

University of Cambridge.

Second Examination for Medical and Surgical Degrees, Michaelmas, 1934.

Part II.—Clutton-Brock, J., Dalliwall, K. H. S., Gregory, J. C.

Third Examination for Medical and Surgical Degrees, Michaelmas, 1934.

Part I.—Bailey, H. S., Blackburn, G., Braithwaite, F., Cookson, J. S., Drake, E. P. H., Masterman, E. B. Z., Paterson, J. F., Patterson, J. H., Saunders, S. B. H., Webb, J. G., Williams, E. G. K.

Part II.—Dale, R. H., Fraser, A. C., Haynes, W. S., Kettlewell, H. B. D., Livingstone, F. D. M., Lumsden, K., Martin-Jones, J. D., Masina, F. H., Pope, A. R., Sen, S. K., Thorne Thorne, B., Tooth, G. C., Warren, W.

The following degrees have been conferred:

M.D.—Barnsley, A.
M.B., B.Chir.—Benison, R. L., Ghey, P. H. R., Hall-Smith, C. S., Helme, A. C. de B., Mears, A. R. R.
B.Chir.—Hindley, G. T., Richards, W. F.

University of London.

First Examination for Medical Degrees, December, 1934.

Pass.—Akeroyd, G. A. S., Anthony, K. H., Bassett, T. H., Dintcliffe, C. J., Bowen, R. A., Carroll, C. R. K., Elder, P. M., Evans, E. G., Evans, T. A., Garden, J. F. G., Gimson, L. V., House, R. A., Kelsey, D. N., Khan, H. H., McFarlane, M., Morgenstein, A., Mullan, J. P., O'Neill, B. C. H., Pettit, D. R. L., Pezeshgi, H., Rochford, J. D., Silcock, A. R., Slowe, J. J., Smith, B. J. D., Snelling, M. R. J., Williamson, D. A. J.

Royal College of Physicians.

The following have been admitted **Members**:

Lescher, F. G., Roberts, L. O.

Royal College of Surgeons.

The Diploma of **Fellow** has been conferred on the following:

Chaudhuri, B., Du Toit, G. C. T., Goode, A. F., Hardman, J., Langston, H. H., McGrath, W. S., Macnab, G. H., Misra, S. C., Nagendran, R., Nicholson, J. C., Pacey, H. K., Radcliffe, F., Rameshwer, S., Rowlands, E. A., Sanyal, P. C., Scholefield, J., Turnbull, H. I., Williams, H. M.

The following were successful at the Examination for the **Primary Fellowship**:

Acharya, B. S. S., Birdsall, S. E., Blackburn, G., Flavell, G., Hugh, H. C., Johnson, R. T.

L.M.S.S.A.

Final Examination, December, 1934.

Forensic Medicine.—Palmer, T. I.

CHANGES OF ADDRESS.

BROWNE, Surg.-Comdr. E. MOXON, R.N., Royal Marine Barracks, Eastney, Portsmouth.
CAPENER, N. L., 37, Southernhay West, Exeter, Devon.
CAPPS, F. C. W., 16, Park Square East, N.W. 1. (Tel. Welbeck 7507—unchanged.)
CORFE, F. R., Terrace House, Crown Street, Brentwood, Essex. (Tel. Brentwood 231.)
DAVIES, D. L. L., Connaught Hospital, Orford Road, Walthamstow, E. 17.
INGLEBY-MACKENZIE, Surg.-Cmdr. K. A., R.N., H.M.S. "Resolution", Mediterranean Fleet, c/o G.P.O., London.
MANSELL, Major R. A., R.A.M.C., Paradise Cottage, Gibraltar.
NUNN, I. A., The Grange, Hadley Green, Barnet. (Tel. Barnet 0672.)
PAYNE, R. T., 114, Harley Street, W. 1. (Tel. Welbeck 2157.)
RADCLIFFE, F., 79, Montague Street, Kettering, Northants.
SEWELL, Lt.-Col. R. B. S., I.M.S., 18, Barrow Road, Cambridge.
SPENCE, A. W., 107, Harley Street, W. 1. (Tel. Welbeck 6232.)
STRUGNELL, Surg.-Cmdr. L. F., R.N., Royal Naval Barracks, Chatham, Kent.
TAYLOR, G. C., 39, Grosvenor Road, Caversham, Reading, Berkshire.

APPOINTMENTS.

FRANCIS, A. E., M.B., B.S.(Lond.), appointed Resident Medical Officer to the Tadworth Court Branch of the Hospital for Sick Children.
NICHOLSON, B. C., M.B., B.Ch.(Cantab.), D.P.H.(Lond.), appointed Medical Registrar to the National Temperance Hospital.

BIRTHS.

CRABTREE.—On January 24th, 1935, to Gwen, wife of J. B. Crabtree, F.R.C.S.Eng., Wentworth House, Ilfracombe—a daughter.
PRICE.—On January 19th, 1935, at Bangalore, S. India, to Daphne (*née* Stevens), wife of Lieut.-Col. R. B. Price, R.A.M.C.—a son.
SEDDON.—On January 21st, 1935, to Mary and Herbert Seddon, of Moor House, Stanmore, Middlesex—a daughter (Sarah Ellen).

MARRIAGES.

CROSSE—DODWELL.—On December 22nd, 1934, at St. James's Church, Goff's Oak, John Henry Joseph, only son of the Rev. C. H. Crosse, to Olive, only daughter of the late Walter Dodwell.
JACKSON—MCGUFFIE.—On January 3rd, 1935, at St. Andrew's Church, Ham, John Molineux Jackson, F.R.C.S.E., to Margaret McGuffie.
REID—PHILLIPS.—On January 11th, 1935, at Charlton Marshall, Blandford, Dorset, Reginald Douglass Reid, of the West African Medical Service, son of the late Rev. William Douglass Reid, of Beverley, to Margaret Eleanor Phillips, younger daughter of the Rev. Frank Benêt and Mrs. Phillips, of Charlton Marshall.

DEATHS.

BROOK.—On January 14th, 1935, at Eastgate, Lincoln, William Henry Breffit Brook, M.D., F.R.C.S., J.P., aged 70.
PAGDEN.—On January 1st, 1935, at 6, Queen's Gate, Plymouth, Trayton Charles Pagden, formerly of Horley, Surrey, medical practitioner, aged 73.
STEVENS.—On January 23rd, 1935, at Longville, Pittville Circus Road, Cheltenham, Alfred Felix Stevens, M.D., formerly of "The Hawthorns", Stamford Hill, London, aged 84.
THOMPSON.—On January 9th, 1935, at the English Hospital, Nice, Dr. George Hobson Thompson, late of Buxton, aged 78.
WALDO.—On January 25th, 1935, at 19, Pembroke Road, Clifton, Bristol, Henry Waldo, M.D., aged 88.
WILLIAMSON.—On February 4th, 1935, at The Homestead, Eaton, Norwich, Hugh White Williamson, M.A., M.R.C.S., L.R.C.P., of 33, Westbourne Terrace, W. 2, aged 28.
WREFORD.—On January 1st, 1935, at 42, Southernhay West, Exeter, Dr. Heyman Wreford, formerly of The Firs, Denmark Road, Exeter, aged 84.
ZEROLO.—On February 3rd, 1935, at Santa Cruz, Teneriffe, Mercedes Zerolo (*née* Davidson), wife of Dr. Zerolo.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C. 1. Telephone: National 4444.*

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 6.] MARCH 1ST, 1935. PRICE NINEPENCE.

CALENDAR.

Fri., Mar. 1.—Lord Horder and Sir Charles Gordon-Watson on duty. Medicine: Clinical Lecture by Dr. Graham.
Sat., ,, 2.—Rugby Match *v.* Moseley. Away. Association Match *v.* Old Malvernians. Home.
Mon., ,, 4.—Special Subjects: Lecture by Mr. Bedford Russell. Semi-Final Inter-Hospitals Hockey Cup. Bart.'s *v.* Thomas's. Away.
Tues., ,, 5.—Dr. Hinds Howell and Mr. Wilson on duty.
Wed., ,, 6.—Surgery: Clinical Lecture by Mr. Roberts.
Fri., ,, 8.—Dr. Gow and Mr. Girling Ball on duty. Medicine: Clinical Lecture by Lord Horder.
Sat., ,, 9.—Rugby Match *v.* Exeter. Away. Association Match *v.* Old Wykehamists. Home. Hockey Match *v.* Reading University. Away.
Mon., ,, 11.—Special Subjects: Lecture by Mr. Scott.
Tues., ,, 12.—Dr. Graham and Mr. Roberts on duty.
Fri., ,, 15.—Prof. Witts and Prof. Gask on duty.
Sat., ,, 16.—Rugby Match *v.* London Irish. Home. Association Match *v.* London Welsh. Away.
Tues., ,, 19.—Lord Horder and Sir Charles Gordon Watson on duty.
Last day for receiving matter for the April issue of the Journal.
Fri., ,, 22. Dr. Hinds Howell and Mr. Wilson on duty.
Sat., ,, 23. Association Match *v.* Southgate Wanderers. Away.
Tues., ,, 26.—Dr. Gow and Mr. Girling Ball on duty.
Fri., ,, 29.—Dr. Graham and Mr. Roberts on duty.
Sat., ,, 30.—Rugby Match *v.* Torquay. Away. Association Match *v.* Old Carthusians. Home.

EDITORIAL.

RIDDLES and rarities have always fascinated mankind. The commonplace, however important it may be, can never compete with them in commanding attention. In few instances is this so true as it is in medical research, for by discovery and experiment a certain standard of success is created and accepted, and the work is then focussed on more interesting and less irksome problems. In his thirst for exploration and conquest, the worker tends to neglect those aspects which are deemed so ordinary, and yet which so seriously affect the people. Suddenly attention is drawn to the unsatisfactory state of affairs and a call for revival is made. The recent interest that has been aroused in both the medical and the lay press in the poor results of the treatment of fractures is a good example of this fact.

The methods and principles of treatment date from the dawn of medicine and the ages have wrought little change. The skeleton of the Neanderthal man shows a tracture of the left ulna; effective splints have been found in Egypt of a period, the Fifth Dynasty, at least five thousand years old; and the Ebers Papyrus, fifteen centuries before Christ, contains evidence of an extensive knowledge of successful treatment. Little advance has been made, but the Great War brought a revival and the influence of Sir Robert Jones produced a highly trained organization, reducing the period and extent of the disability to a minimum. That the effects of this revival have largely disappeared is shown by the figures in the Report of the B.M.A. Committee on Fractures published last month.

The fault lies largely in a lack of organization, and the comparison of the results of cases from the few highly organized clinics with those treated in a more or less haphazard manner reveals a state of affairs that must cause concern to the whole profession. In 276 cases treated by the latter, there was permanent disability in 37% as compared to 1% in an organized clinic, and a total summated period of incapacity of 13,206 weeks, compared to 4440 weeks. The loss shows a wastage of 168 working years in these few cases, of over £13,000 in weekly compensation payments, and of about £22,000 in wages. The whole of this disparity can be attributed to the lack of organization. The essentials given in the Report are summed up under four headings: segregation of cases, continuity of treatment, after-care and adequate "follow-up" measures, and unity of control.

In this Hospital these principles are followed in the main, and are referred to by the Committee as representative of one type of organized service. Each of the surgical units holds a Fracture Clinic once a week in the Surgery. This is conducted by the Chief Assistant,

and is attended by the dressers and, occasionally, by the house surgeon. The original injury is treated by the Casualty House Surgeon or by the House Surgeon on duty, and is then passed on to the Clinic. Cases which have been admitted to the general wards are also passed on to the care of the Clinic.

The Report recommends the formation of a specialized service under the control of one surgeon, with the help of such surgeons as are interested in the Clinic. Special accommodation should include X-ray theatre, a plaster and splint room, and a record room for the Almoner, as well as the usual examination room. After the preliminary treatment the patient attends a daily clinic until a satisfactory primary result is assured, and then weekly until discharged, to be watched by an effective "follow-up" service.

The suggestions deserve very careful consideration, and opportunities for experiment will be forthcoming with the changes that will follow the removal of the Medical School to Charterhouse Square.

* * *

The Dean has sent us the following interesting letter received by him, and we hope that its example may be followed by many:

February 9th, 1935.

MY DEAR GIRLING BALL (or should I not address you officially as Mr. DEAN?),

It is with the greatest satisfaction that I have this day signed the power of attorney asking my stockbrokers to transfer at their earliest opportunity the £5000 Consols into the H Act of the Medical College in the Bank of England Books. I feel this is but a poor return for all the benefits I received in having been a student for my whole course of training to pass the Qualifying Examinations at the time I was in the School. That was from October, 1870, to September, 1876. And in addition the immense advantage it was to have been in constant touch (when in practice in South Kensington) with the various members of the staff at St. Bartholomew's, such as Sir James Paget, followed by Sir Thomas Smith, up to the more recent times when Sir Anthony Bowlby, Sir D'Arcy Power and your present surgical senior, namely Sir Holburt Waring, were always at my command for help by consultation. If I could only persuade all past students who have reached the ripe age of 75 years or more to be bold and daring as I have, by sacrificing a comparatively small amount of capital from their savings in obtaining an annuity, and thus setting free quite large sums of capital which could not be better used than in building up the new school of the Hospital which is in progress, and must ultimately be of greater repute than ever it was even in the past! Again my best wishes for the successful progress of the Medical College of St. Bartholomew's Hospital in the City of London.

Yours most sincerely,

"AN OLD BART.'S MAN."

[J. K. B.]

* * *

Alterations have been commenced on the site of the new School. The Chemistry and Physics Laboratories are being adapted, and a new laboratory for 120 students is being built. The main building is altered to accommodate the Physiology Department and a new single-story structure is being erected. It is hoped that these will be ready for the Autumn Term. The Headmaster's house is to be converted to accommodate the Anatomy Department at a cost of £25,000, and a Resident Block will then be built.

* * *

The following gentlemen have been nominated to House Appointments from May 1st, 1935:

Junior House Physicians—	
Lord Horder	C. A. Hinds Howell.
Prof. L. J. Witts	D. C. Reavell.
Dr. C. M. Hinds Howell	B. Thorne Thorne.
Dr. A. E. Gow	M. A. Danino.
Dr. G. Graham	H. S. Brodribb.
Junior House Surgeons—	
Prof. G. E. Gask	F. E. Wheeler.
Sir Charles Gordon Watson	J. G. Youngman.
Mr. Harold Wilson	E. W. Bintcliffe.
Mr. W. Girling Ball	R. H. Dale.
Mr. J. E. H. Roberts	E. B. Z. Masterman.
Intern Midwifery Assistant (Resident)	S. J. Hadfield.
Intern Midwifery Assistant (Non-Resident)	R. J. C. Sutton.
Extern Midwifery Assistants	A. R. Pope.* / D. MacCarthy.†
H.S. to Throat and Ear Department	C. W. John.
Junior H.S. to Throat and Ear Department	I. R. Hill.* / A. H. Pirie.†
H.S. to Ophthalmic Department	C. H. Bateman.
H.S. to Skin and Venereal Departments (Non-Resident)	B. M. Merriman.* / A. R. Pope.†
H.S. to Orthopædic Department	A. C. Kanaar.
H.P. to Children's Department	J. Smart.
Senior Resident Anæsthetist	B. Rait-Smith.‡
Junior Resident Anæsthetists	J. H. West. / G. Blackburn.
Non-Resident Anæsthetist	F. H. Masina.
Casually House Physicians	R. M. Noordin.* / J. H. L. Conway-Hughes.† / G. L. Bohn.†
Casually House Surgeons	H. M. McGladdery.* / F. G. Ward.†

* 3 months, May. † 3 months, August. ‡ 1 year. Others for 6 months.

* * *

Sir Holburt Waring, receiving the baronetcy conferred on him in the New Year's Honours, chose the title "of St. Bartholomew's", on account of his long association with this Hospital. This is the first occasion on which such a title has been used in connection with the Hospital.

* * *

Personalities. No. 1.

SURROLBUT.

"What's become," he asks, "of Waring?"
[You recall how Browning starts]
We can answer, greatly daring,—
He's become the Bart. of Bart.'s.*

* King's, Guy's and M.C.C., please copy.

* * *

OUR ENLIGHTENED STORY-TELLERS.

"As he was thinking, his hands were running lightly over Milburn's leg, registering the fractures, the damaged ligaments, the bruises, the internal bleeding. It was a compound fracture of the tibia and fibia, with a minor splintering of the periosteum, that small and vulnerable knob on the outside of the ankle.

"James pressed down two broad spatulate thumbs on the periosteum, and noted, half with dismay and half with delight, the pleasure which he got from Milburn's answering groan. . . ."

From an evening press short story.

Sir Walter Langdon Brown lectured on "Art and Fashion in Medicine" in the Great Hall of the British Medical Association on Tuesday, March 12th, at 8 p.m.

* * *

Lieut.-Col. J. M. Weddell, R.A.M.C., has been appointed Honorary Surgeon to the King and is promoted to the rank of Brevet Colonel.

OBITUARY.

HUGH WHITE WILLIAMSON.

THE death of Hugh Williamson occurred on February 4th at the early age of 28. This fatal result of a brief influenzal illness came as a sudden shock to his many friends and caused general regret.

He was educated at Norwich Grammar School and Trinity College, Cambridge, taking the B.A. degree in 1927. He came to St. Bartholomew's for his clinical training in the latter year, and qualified M.R.C.S.Eng., L.R.C.P.Lond. in 1930.

Following a short period as Casualty House Physician, he was appointed House Physician to Lord Horder in 1931, and at the conclusion of this, became a Junior Demonstrator of Pathology—the post he was holding at the time of his death.

In addition, he was Medical Registrar at the Hospital for Epilepsy and Paralysis, Maida Vale. Having decided, whilst in the Pathological Department, to take up clinical pathology as a career, he had recently been elected Pathologist to the Institute of Medical Psychology.

He took Part II of the Cambridge Final M.B. examination last year, and also proceeded to the M.A. degree.

Possessed of a singularly generous and likeable personality, Williamson will be sadly missed by all his colleagues; to be brought into close contact with him was to develop a genuine affection. Being a gifted tennis player, he had represented the Hospital in the VI whilst a student; he was also a very useful bat at cricket and a keen and competent performer with the gun at game shooting; a day spent in the country with him at the latter sport brings back happy memories to many of his friends.

His premature death and the termination of a promising career are greatly regretted, and deep sympathy will be felt for his wife and relatives in their bereavement.

A memorial service was held in the Hospital Chapel of St. Bartholomew's-the-Less on February 7th.

H. F. B.

THE ELECTROCARDIOGRAPH: ITS USE IN MEDICAL PRACTICE.

"THAT electric currents are generated in the heart at each contraction of this organ was demonstrated in the middle of the nineteenth century. The currents are small, yet modern instruments are sufficiently sensitive to record them with facility. It is unnecessary that the heart should be exposed; the currents will deflect a suitable galvanometer when the latter is connected to the limbs of the human subject. It is the study of the direction, time-relation and magnitude of these currents which constitutes modern electrocardiography."

The record of the string galvanometer consists of a series of deflections or waves produced photographically by the up-and-down movement of the shadow of the string of the instrument. The normal electrocardiograph consists of a series of deflections, some of which are rapid and of short duration, while others are slow and of longer duration. They have been named in a purely empirical fashion P Q R S T.

The electrocardiograph in man consists of an auricular complex followed by a ventricular complex. The auricular complex constitutes an upward deflection termed the P wave, which is associated with auricular systole. The ventricular complex is composed of four deflections, the Q, R, S and T waves, and is associated with the ventricular systole. Three leads are in general use. In lead I the right arm and left leg are connected to the galvanometer string, in lead II the right arm and left leg, and in lead III the left arm and left leg are connected.

Of all the instrumental methods which have been introduced at various times in connection with the study of the heart and circulation, the electrocardiograph has proved the most valuable, as it is an instrument which gives a graphic record of the functioning of the heart-muscle at any special time, and it enables the actual working of the myocardium to be studied under physiological and pathological conditions.

It is the purpose of this article to discuss some of the points arising in the diagnosis and treatment of cardio-vascular disease that the electrocardiograph may be expected to explain or to help in elucidating.

THE DIFFERENTIATION OF THE ARRHYTHMIAS.

In the differentiation of the various types of cardiac arrhythmia or irregularity the electrocardiograph is of particular value. With clinical experience we are able to distinguish many of such disorders from each other without instrumental aid, but few men are able to master the differential diagnosis of such conditions who

have not themselves either employed some galvanic method of recording the heart-beat, or at least frequently compared the clinical signs elicited at out-patients and at the bedside with graphic records. Moreover, the

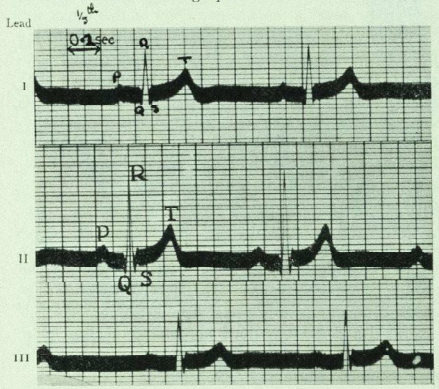


FIG. 1.—PHYSIOLOGICAL ELECTROCARDIOGRAPH.* (i) Rate 60 per minute. (ii) Rhythm normal, regular, impulse originating in sinus node. (iii) Length of PR interval normal (less than 0·18 sec.). (iv) Deviation of electrical axis, none. (v) Form of P wave, QRS complex and T wave normal in size, shape and position.

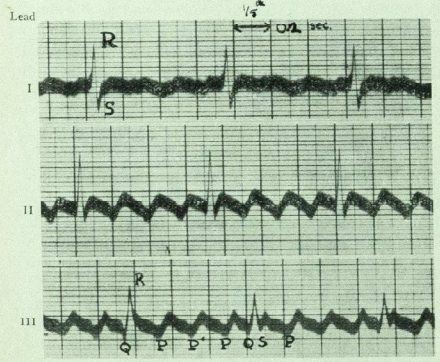


FIG. 2.—AURICULAR FLUTTER. (4 : 1 ratio.) Auricular rate 360 per minute. Ventricular rate 90 per minute. Rhythm regular, no left axis deviation. P wave is inverted. Record from a man, æt. 50, suffering from lobar pneumonia.

recognition of auricular flutter and the differentiation of auricular fibrillation from multiple systoles, of auricular from ventricular paroxysmal tachycardia, or of regularly occurring extra systoles from partial heart-block, are often difficult, if not impossible, without the aid of an electrocardiograph or polygraph.

Again, in paroxysmal tachycardia, a single record taken during the attack, although recording an abnormal rhythm, may not always show the site of origin. In such circumstances, comparison of the electrocardiograph taken during the attack with one taken after the attack has ceased, may localize the site and mechanism of the paroxysmal attack.

THE DETECTION OF MYOCARDIAL DAMAGE.

The electrocardiograph may be of help in the detection of myocardial disease, particularly in those cases where physical examination elicits no abnormal physical signs. A physician does not need an electrocardiograph to tell him that there is something wrong with the heart-muscle when clinically he has found that the heart is markedly enlarged, or when he finds his patient confined to bed with marked congestive heart failure. There are many instances, however, where symptoms such as shortness of breath on exertion, nocturnal breathlessness, palpitation, rapid heart action, or pain in the chest which is not typically anginal in character, suggest that the cardio-vascular system, and in particular the heart, is the site of the trouble, but where clinical, and possibly, in addition, radiographic examination of the heart reveals nothing abnormal or nothing more than a questionable enlargement or some slight modification of the heart-sounds.

It is a sound general principle that one should not ascribe such symptoms to organic heart disease unless it can be demonstrated that the heart is abnormal. Failure to follow this principle is likely to result in the diagnosis of heart disease when the real cause of the trouble is a primary or secondary anæmia, a pulmonary lesion, neuro-circulatory asthenia, or a psychoneurosis.

The presence of an abnormal electrocardiogram, whatever the nature of the abnormality, increases the probability that the symptoms may be attributable to myocardial disease. It also suggests the necessity for further and detailed clinical investigation, a radiogram of the chest and a full blood-count. In fact, in consulting work, the examination of the cardio-vascular system cannot be considered as complete unless, in addition to a careful clinical examination, a fluoroscopic examination of the heart and great vessels and an electrocardiographic examination are made.

INDICATIONS FOR REST OR CONVALESCENCE.

In the course of an attack of rheumatic fever or chorea, and less often in the course of, or during convalescence from, some other acute febrile illness, such as diphtheria, scarlet fever, or pneumonia, the electrocardiograph may show evidence of transient or persistent myocardial involvement, and thus indicate the necessity for continued rest or more careful or protracted convalescence in cases where other signs to suggest that the disease has attacked the heart are lacking. In rheumatic fever, transient auriculo-ventricular block, as shown by prolongation of the PR interval (when PR is greater than 0·2 seconds), is the most common abnormality that we recognize. Two years ago, under the care of Sir Perceival Hartley in Sol Memorial was a man suffering from lobar pneumonia.

* In this and the subsequent tracings the time interval is 0·2 sec., not 0·1 sec. as marked.

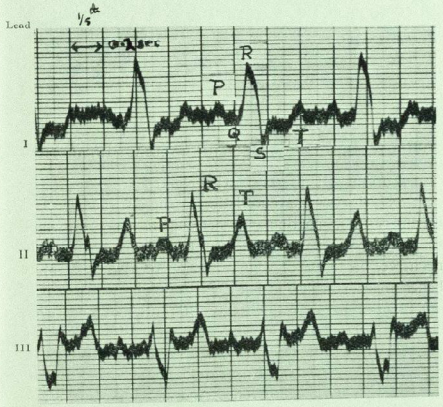


FIG. 3.—INTRAVENTRICULAR BLOCK. Right branch bundle block, old terminology. Left branch bundle block, new terminology. Rate, 84 per minute, regular sinus rhythm. PR interval not prolonged. QRS complexes wide, notched and directed upwards in leads I and II, downwards in III. T wave in opposite direction to preceding QRS complex in leads I and III. Record from a man, æt. 60, with symptoms of fatigue and shortness of breath, but no abnormal physical signs.

During its course he suddenly developed a tachycardia with an apical and pulse-rate of 180 per minute. An electrocardiogram taken at that time showed that the tachycardia was due to a 2 : 1 auricular flutter. It helped to explain the reason and the mechanism of a rapid heart-rate present in a patient in whom the other signs of severe toxæmia which are usually indicative of a bad prognosis were absent. After some hours the attack ceased and a normal rhythm was again recorded on the electrocardiograph.

THE DIAGNOSIS OF MYOCARDIAL DAMAGE.

Middle-aged people frequently come to hospital with symptoms of increasing fatigue and shortness of breath on exertion, in whom there is no clinical evidence of cardiac enlargement, the blood-pressure is within normal limits or perhaps somewhat low, and the heart-sounds are modified or distant. The electrocardiograph quite frequently will show in such patients evidence of intra-ventricular block with a right or left branch lesion, and thus indicate the presence of myocardial damage. In patients suffering from high blood-pressure evidence to suggest myocardial damage may sometimes be elicited by the electrocardiograph before definite myocardial symptoms or physical signs develop. Such changes are of value in helping to decide whether the elevation of blood-pressure has been present for some time and is likely to be of serious significance, or if it is of recent origin and, possibly, transient. They may be of help also in assessing the risk of submitting such patients to surgical treatment, such as prostatectomy.

Electrocardiographs, if taken at intervals of six months or a year, may help to show if the myocardial damage remains constant or is progressive. In some patients the writer has been able in the course of four or five years by the taking of serial electrocardiograms to show progressive changes. For example, the picture of left axis deviation and vertical T waves is followed by inversion of the T wave of the first lead, and later the picture typical of intra-ventricular or so-called right branch bundle block (old terminology) may develop.

ASSESSMENT OF MYOCARDIAL FUNCTION.

It must be realized that the electrocardiograph only affords evidence of the heart-function at the time of examination. In patients in whom one suspects the presence of myocardial damage, but who present physiological electrocardiograms, it is of value to exercise them by making them climb the stairs or walk round the Square. Evidence of transient myocardial fatigue may sometimes be shown by records taken immediately after the exercise.

Occasionally, it is also possible to elicit at will the picture of intra-ventricular block by exercising a patient who at rest presented a normal tracing. Also, it is possible sometimes by the inhalation of amyl nitrite to revert to normal the electrocardiograph of certain patients who persistently show inverted T waves. The electrocardiograph gives some indication of the functional efficiency of the myocardium. Over-exertion in an inefficient cardio-vascular system may produce myocardial ischæmia, which may portray itself in certain electrocardiographic changes. It is probable that by inhaling amyl nitrite the coronary circulation is improved and transient myocardial ischæmia relieved.

In patients suffering from angina pectoris abnormal

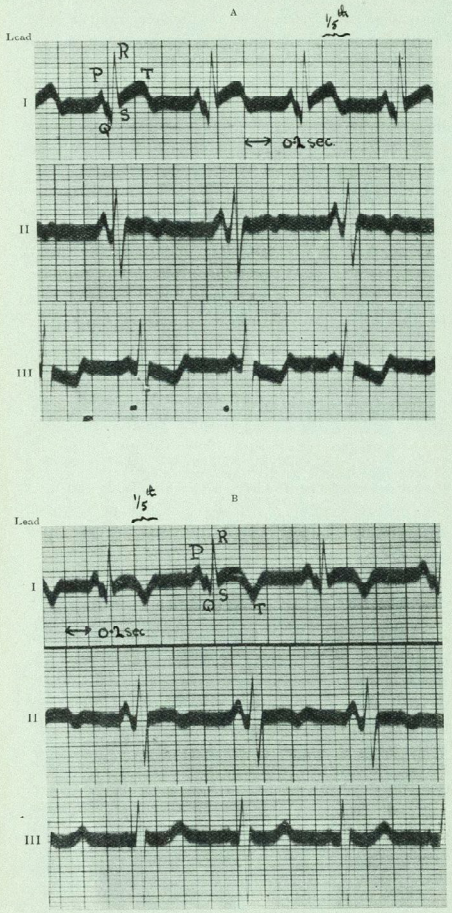


FIG. 4.—CORONARY THROMBOSIS. Showing deviation of the RT segment from the iso-electric plane (Pardee's sign) occurring shortly after the onset of a coronary thrombosis. This change is followed by inversion of T wave in lead I, and to a lesser extent in lead II. (Coronary I type.) Record A was taken 48 hours after an attack of coronary thrombosis in a man, æt. 58. It shows a peculiar ST segment (Pardee sign) in lead I, and biphasic T wave in leads II and III. Record B was taken three days later. The main QRS deflection in lead I is upright. T wave is biphasic in II, and vertical in III, the convexity of the deviation upwards, and the T wave is sharply inverted.

changes in the electrocardiograph tend to increase the possibility that the clinical diagnosis is correct. Transient electrocardiographic changes, such as intra-ventricular block or inversion of the T wave in lead I may occur during the anginal attack, suggesting by their presence additional evidence that the pain is of cardiac origin and associated probably with transient myocardial ischæmia. A physiological curve, however, does not negative a diagnosis of angina pectoris. In some two-thirds of the cases of angina of effort that we have seen no electrocardiographic changes have been recorded. In the other third, however, changes such as inversion of the T wave in lead I, prolongation of the QRS complex suggesting intra-ventricular block, alteration in the Q wave, in particular a deep Q wave in lead III, are present and suggest evidence of myocardial damage.

THE ELECTROCARDIOGRAPH IN CARDIAC INFARCTION.

In coronary thrombosis the electrocardiograph frequently shows characteristic changes. An electrocardiograph is particularly helpful in cases in which the physical examination of the heart is entirely negative, particularly when a period of a week or more has elapsed since the onset of the attack. Also, it is of value in cases in which the differential diagnosis lies between cardiac infarction and acute cholecystitis, perforated peptic ulcer, or a basal or diaphragmatic pleurisy. The electrocardiographic changes may persist for years after the occurrence of myocardial infarction, and there are many cases in which the diagnosis cannot be made without the aid of the electrocardiograph. Occasionally, the electrocardiograph may furnish the only available evidence that an infarction has taken place. On the other hand, a normal tracing cannot be used as a basis for excluding cardiac infarction when clinical and other evidence suggest its occurrence. Some of the more distinctive electrocardiographic changes that occur in coronary occlusion are transient, and pass through more or less definite cycles. Frequent or serial tracings are, therefore, useful in judging the progress of the condition and deciding the method of treatment. Common immediate changes which may occur are alterations in the ST segment (a peculiar "humping" of this segment being known as Pardee sign), transient auricular flutter or fibrillation, or transient intra-ventricular block followed by T-wave changes. Inversion of the T wave may occur in the first and second, or second and third leads, and help to locate the site of the infarction and differentiate right and left coronary artery occlusion. The recognition of these changes is of particular value in patients who have previously shown physiological electrocardiographs.

THE CONTROL OF DRUGS IN THERAPY.

The administration of digitalis in many cases, in particular when the drug is given rapidly or to the limit of tolerance, may be controlled by frequent electrocardiographic examinations. Digitalis is a cardiac poison, and the clinical symptoms of overdose sometimes are lacking or do not attract attention. Variations in the form of the ventricular complexes, a peculiar form of T-wave inversion in the three leads, may occur, and when associated with ventricular tachycardia or auriculo-ventricular dissociation, may be seen in association with the clinical picture of nausea and vomiting, or even at times be the first indication of digitalis overdose.

In the modern treatment of auricular flutter or fibrillation with massive doses of quinidine, the use of the electrocardiograph is almost essential to follow the changes of rhythm, and regulate the dose of the drug.

DIAGNOSIS IN CONGENITAL AND OTHER FORMS OF HEART DISEASE.

The electrocardiograph is occasionally of value in the diagnosis of certain valve lesions, in detecting advanced mitral stenosis, or in the differentiation of pulmonary stenosis from other congenital malformations and from aortic stenosis. Right axis deviation is commonly associated with pulmonary stenosis, and left axis deviation with aortic stenosis. The diagnosis of dextrocardia may be confirmed or, as in my experience, occasionally made with the aid of the electrocardiograph.

We do not as yet understand the significance of high and low voltage curves. In general, in young persons with marked cardiac enlargement due to congenital malformation of the heart or associated with rheumatic aortic incompetence, high-voltage curves are common and tend to suggest that the heart-muscle is in good condition. Low-voltage electrocardiograms in patients with congestive failure and cardiac enlargement are as a rule associated with a poor prognosis. The presence of low-voltage curves is significant in myxœdema, and with the application of intensive thyroid treatment one may watch them return gradually to normal.

ÆTIOLOGICAL DIAGNOSIS.

The electrocardiograph does not help in making an ætiological diagnosis. The significance of certain electrocardiographic changes is different in the various ætiological groups. For example, intra-ventricular block is not uncommon; the prognosis in the individual patient is dependent on the underlying ætiological condition. In a group of 100 cases of intra-ventricular block studied by the writer, the worst prognosis was found to be in those patients who suffered from syphilitic and thyrotoxic heart disease, all of whom died within two years. The next bad prognosis was in the rheumatic group; all of these patients suffered from advanced mitral stenosis, but many of them are still alive five years after investigation. The best prognosis was in those who suffered from cardio-vascular degeneration. Many of these cases are still alive, and two who had been known to have right branch bundle block for ten years prior to the investigation came to see the writer recently.

SUMMARY.

In conclusion, the electrocardiograph can differentiate the arrhythmias; it can detect myocardial damage, sometimes when all other methods have failed; it helps in following the course of certain processes, and may give indications for continued rest or convalescence; it may help in the diagnosis of congenital and other forms of heart disease; but in itself it cannot be used to exclude the presence of organic heart disease.

FRANCIS BACH.

THE VILLAGE POLICEMAN.

I HAD just returned home after a long round. The number of patients I had visited had not been themselves enough to occupy the whole morning. But a round on a warm day in June, which took you down to the mouth of the river, across the mud-flats where the flowering cotton-grass bent before the sea-breeze, all this with the crying of lapwings and the whistling of red-shanks tended to slow progress. But in such a case and on such a day why hurry, with no rival doctor within miles and miles? My last visit of all had been to Mrs. Dwiggins in the village. She had become during my two years of practice at Bewley a regular and a profitable patient. "Asthma", in inverted commas, was my diagnosis of her chest complaint, and under my care and treatment she had grown, day by day, no worse. After putting the car into the garage I went to the dispensary to mix the medicines for the patients I had seen that morning.

Scarcely had the cork been rammed home into the last bottle—for Mrs. Dwiggins—and just as I was writing the label there was a smart tap on the door.

"Come in," I cried, and slowly, but majestically, there entered the tall, uniformed figure of Sergeant

Kitcher, the village policeman. Strictly speaking his title of "Sergeant" was a euphemism, a tactful compliment paid him by the villagers. Officially he was only Constable, was born to be a constable and a policeman who by no possibility whatever could rise to any rank above that of village constable. He was a type of policeman common before the War, but one which has since then been ousted by the suave, polished young men of the old public school-boy type, who to-day constitute the force. Fortunately crime, even the most petty, was all but unknown to Dewley, which was as well, since Kitcher was one of the most obtuse, dull-brained and muddle-headed of men.

"Well, Sergeant", I cheerfully inquired, as I put the final dab of sealing-wax to Mrs. Dwiggins's bottle of medicine, "what's the trouble this time? A licence I suppose; dog, car, driving, gun or what?" The Sergeant drew himself up, saluted, pulled down his tunic, coughed, looked all round, closed the door, and then said in a mysterious voice: "I am making certain inquiries relating to a matter appertaining to an object which has been found." "What exactly do you mean, Sergeant," I replied. "What is it you have found?" "It wasn't me found the object, Sir, but a certain party found it, or at least reported finding it, and after consideration and taking into account the place where it was found, I decided to come straight to you, Doctor, to ask if it was yours." "Thanks", I answered, "very good of you indeed, and what is the object?" "It ain't customary in the force, Sir," said the cautious constable, "to name an object found under such circumstances, and I must ask you to tell me if you have lost anything." No, I could not remember having lost anything lately and told him so. "Come now, please Doctor," the policeman urged, evidently disappointed, "can't you bring to mind something belonging to you which you have lost?" This form of question and answer reminded me of that fireside game where the inquirer, in reply to questions, is allowed to answer only the two words "Yes" or "No" "Now, then, Sergeant", said I, becoming at last a little weary of all this mystification, "out with it, and tell me what it is that has been found and then I can tell you at once if it belongs to me or not." But the policeman was not going to be hurried, nor yet browbeaten. Rules are rules, regulations regulations, and in the force the rule is that the loser has got to say what he has lost, and not the policeman what has been found. And doubtless a very wise precaution, too. Suppose, for example, a policeman went up to a man and asked, "Have you by any chance lost a brown leather wallet containing four one pound notes and one ten shilling one"? The man, if not as honest as he should be, might reply, "Yes, I have—thank you very much; wherever did you find it—here's half a crown for your trouble; good morning."

Sergeant Kitcher was taking no such risks. He knew himself to be too old and too crafty a bird to be caught by my chaff. But I was in a hurry to go to lunch, and anyway the business had dragged on too long; so rather irritably I said, "You might just as well tell me what it is you've found, and then I can tell you if it's mine or not". With evident reluctance and misgivings the policeman agreed for once to break the rules, and from his coat-tail pocket brought forth, after a good deal of fumbling, my stethoscope, which he now confessed had been picked up just inside my own garden gate. I would have taken it then and there, but before parting with it the Sergeant insisted I should first declare it to be my own property. At last I got cross. After scrutinizing the stethoscope I told the Sergeant that, after all, I could not positively swear it was mine. It was my turn now to act with caution. I said that I thought now it was not my stethoscope, although it looked so like mine at first. Perhaps, I suggested, it belonged to one of the other doctors, Dr. Bairn, at Hythe, or Dr. Maturin or Dr. Statham, at Lymington, or Dr. Hutchinson, at Fawley, and I advised him to lose no time at all in restoring it to the rightful owner, for more than likely some patient's life depended on it. These words of mine began to have, I could see, an effect on the slowly working mind of the village policeman. He found himself now in a bit of a fix. Obviously a strange medical instrument found lying in the carriageway of the only doctor within miles could scarcely belong to any other practitioner. However, feeling that by now the affair had lasted quite long enough and that it was up to me to end it, I proposed that the stethoscope should remain in my care, but promised to give it back if any other doctor claimed it. With a sigh of relief the Sergeant handed it over to me and wished me good-day. "By the way, Sergeant," I called out as he left, "it's a hot and thirsty day, why not go round to the back door and ask Annie for a glass of beer."

PHILIP GOSSE.

CLINICAL METHODS.

A NOTE ON THE CONTROL OF PERNICIOUS ANÆMIA WITH INTRAMUSCULAR LIVER THERAPY.

The modern treatment of pernicious anæmia consists largely of maintaining an adequate supply of the essential hæmopoietic substance which the body can no longer manufacture for itself. There is no attempt to attack the underlying pathological processes in the stomach which give rise to this deficiency. All too little is known of this initial change, but the end-result is irreversible. Consequently replacement of this deficiency must continue for the rest of the patient's life. This fact must constantly be borne in mind, and treatment must be arranged so that the life of such individuals can be made as normal as possible. The object of this note is to show one of the ways in which this can be done with comparatively little inconvenience to the patient.

There are now many reliable extracts of liver on the market, some more concentrated than others, and until some chemical method of estimating the content of the hæmopoietic principle in these extracts is available, it is only possible to test their potency by clinical trials. The initial quantity from which the extraction is made does not necessarily bear any relation to the potency of the final product, nor does there seem to be good evidence that aqueous extraction is inferior to any other process. In view of these difficulties, it seems desirable that each clinician should choose a reliable preparation and use it always, so that he may know what to expect from any given dose.

In the following scheme of treatment, no attempt will be made to deal with any factors in the treatment, other than maintaining indefinitely an adequate supply of hæmopoietic substances. The preparation used is a concentrated aqueous extract of liver prepared for intramuscular injections. It is known as *Pernæmon Forte*.

The initial dose will depend on the condition of the patient at the time when treatment is begun. If the blood-count has fallen very low and the red blood-cells are under 1,000,000 per c.mm., an initial dose of 10 c.c. of pernæmon forte should be given intramuscularly. If the red blood-cells are between 1,000,000 and 3,000,000 per c.mm. then 8 c.c. would be sufficient, and above this level 5 c.c. will be adequate. There is no harm in giving larger quantities, but there is no known advantage in so doing and naturally it raises the cost of treatment. During the first few weeks after this injection there will be a progressive rise of hæmoglobin and red cells, and at the end of four weeks, the blood-count will usually reach a normal level of approximately 100% Hb. and 5,000,000 red cells. A further injection of 5 c.c. of pernæmon forte should then be given. It is advisable to do blood-counts at intervals of two weeks following this injection until there is a slight fall in the blood level. Another injection of 5 c.c. should then be given. By repeating this procedure several times the interval between the injections necessary to keep the blood-count at a normal level can be established for each patient. This interval in my cases has never been less than four weeks, and is often 8 to 10 weeks. In one case it has been found to be 12 weeks. This interval, however, varies with every case and also in the same case from time to time. It seems as if the disease runs its natural course with relapse and remission in spite of liver therapy. If it be not possible to have frequent blood-counts, then injections of 5 c.c. of pernæmon forte should be given every four weeks. If this be done it is fairly certain that the blood-count will be kept at a normal level, but it is undesirable for patients to go longer than three months without a blood-count, as intercurrent diseases may impair the response to liver therapy, and it is impossible to gauge the patient's condition accurately by clinical observation alone.

E. F. S.

TECHNIQUE OF LOCAL ANÆSTHESIA IN THE TREATMENT OF FRACTURES.

It is often not only convenient for the surgeon but also pleasanter for the patient to have a local instead of a general anæsthetic for the reduction of a fracture. The technique is not difficult, and in suitable cases the degree of anæsthesia and the relaxation of muscles are excellent. The local anæsthetic solution is injected into the hæmatoma which surrounds every fracture, so that the best results are obtained in recent fractures—within three days of the injury—and usually the greater the displacement of the fragments the better is the anæsthesia obtained. It is advisable to have a fairly strong solution of novocain—2% is usually used. The addition of adrenalin is neither necessary, nor does it appear to improve the degree of anæsthesia obtained.

The skin over the site of the fracture is cleaned with ether-soap and surgical spirit. With the finest hypodermic needle a few drops of the novocain solution are injected, raising a weal. A somewhat larger and longer needle mounted on a 20 c.c. syringe is then passed through the weal and down to the site of the fracture. From a study of the skiagrams a site for the entrance of the needle should be chosen so that, if possible, the needle point goes between the fragments. In many cases it can be felt to impinge against a rough fractured surface. The piston of the syringe is now withdrawn, to determine whether the needle point is in the hæmatoma. If it is, blood will probably flow back into the syringe. If no blood appears, inject 3 or 4 c.c. of novocain and again withdraw the piston, as sometimes the novocain, mixing with the blood, allows it to come back. It is important that the novocain should be injected into the hæmatoma, as it is only by so doing that good anæsthesia of the whole fracture is obtained. The quantity of novocain solution necessary varies from about 20 c.c. to about 50 c.c. according to the particular fracture. It is advisable to wait for about ten minutes after the injection before manipulating the fracture. In the case of fractures of the radius and ulna or tibia and fibula it is, of course, necessary to inject both bones. In a Pott's fracture two points of injection are usually necessary: from one on the inner side the fracture of the internal malleolus is first injected; without withdrawing, the needle is then passed deeper and novocain injected into the ankle-joint; from a second point, the fracture of the fibula must be injected on the outer side. The reduction and splinting of fractures is the same with local as with general anæsthesia. Local holds an advantage over general anæsthesia, however, in that immediately after reduction, while the surgeon holds the fragments in position the patient may co-operate, and with active movements of the joint demonstrate that reduction is complete.

Local anæsthesia is also of great help in fracture work in applying skeletal traction. Any form of traction, pin or wire, may be passed through a bone under local anæsthesia. Again, a 2% novocain solution is used. The skin and subcutaneous tissues are infiltrated with novocain at the desired site, e.g. os calcis, tuberosity of the tibia, olecranon process of ulna. The needle is then passed down to the bone, and while pressed against it 2–3 c.c. of solution are injected so that the periosteum is anæsthetized. This procedure must also be repeated on the opposite side of the limb at the point of exit of the traction pin. If the periosteum is anæsthetized on each side of the bone, no pain is felt by the patient as the pin goes through the bone.

J. P. H.

A NEW CLINICAL TEST FOR BILIRUBIN IN URINE.

A simple qualitative test has been worked out in Dr. G. A. Harrison's laboratory. It consists in the oxidation by Fouchet's reagent of bilirubin adsorbed on a barium precipitate, and is performed as follows: A test-tube is half-filled with urine (about 10 ml.) and half the volume of 10% barium chloride solution is added. The contents are mixed and filtered. After the fluid has passed through, the paper is spread on another dry piece of filter-paper and 1 or 2 drops of Fouchet's reagent are added to the precipitate. A green (biliverdin) or blue (cholecyanin) colour indicates bilirubin.

Fouchet's reagent consists of:

Trichloracetic acid 25 grm.
Distilled water 100 ml.
10% ferric chloride 10 ml.

The test is very delicate; it is much more sensitive than either Gmelin's nitric acid test, or the iodine ring test; at the same time it is not too sensitive; normal urines are clearly negative, and urobilin does not give a false positive reaction; the minimum amount of bilirubin detectable is 0·003–0·008 mgrm. per 100 ml. of urine. For further details see the *Biochemical Journal*, 1934, xxviii, p. 2056.

E. G. G.

"THE LIFE AND WORKS OF CHARLES BARRETT LOCKWOOD, 1856–1914."

(Continued.)

In the theatre Lockwood spared neither himself nor his assistants. As one of his house surgeons says: "He set the standard and you followed unquestioningly. He had never known what it was to spare himself, and you could hardly be expected to hesitate when he led the way; your own hands might be raw to the bone

through scrubbing and antiseptic applications in your patients' interests, but your duty to a patient under your care was too sacred a trust for your own precious skin to be thought about."

He hated inefficiency over any detail. If, during an operation, the nurse handed him a new set of instruments, he always asked, "When were these sterilized?" If the answer was "To-day", he used them, but if it was "Yesterday", he would throw them across the theatre in disgust. Scalpels had to be properly sharp or else they were dashed scornfully to the floor, one after the other. If the bowl of antiseptic was not changed quickly enough he would overturn it out of sheer impatience, and many a nurse was rendered completely incapable of doing anything right for the rest of the afternoon by reason of his rudeness and the caustic complaints that he would make. Sometimes, when he was very tired, he would say personal things that he regretted, and then he would tell the sister afterwards not to pay any attention to what he said, as it was not really meant.

He had a rooted conviction, either assumed or real, that no assistant was ever satisfactory. Thus, as one of them says, "Nobody could hold a stomach for him in a gastro-enterostomy operation; nobody could push up a kidney; nobody ever sponged quickly enough; nobody ever got his hands out of the way; nobody ever lifted a patient properly".

A caustic wit sometimes displayed itself in his comments in the theatre. "You may lift the patient by the hair, by the eyelashes, by the pressure-forceps, but never, oh, never, by the pelvis," he would say. And, once to a nurse who was slow: "I want a basin—to-day, not to-morrow. Yes, for this operation. Now, where is it?" "Here, behind you, sir," came a harassed voice. "Good heavens, does the woman think I'm a damned lobster to see at the back of my head!" he thundered.

Those who meekly submitted to Lockwood's tyranny seemed to make his anger worse, but it pleased him when anybody stood up to him. He had a habit, when dressers made mistakes, of asking them sarcastically where they were educated. One day the answer was, "Only Oxford, sir". Lockwood referred to an Oxford education in contemptuous terms. Whereupon the dresser left the theatre, took off his gown and appeared in the gallery. Lockwood liked him ever after.

Another occasion when Lockwood got as good as he gave was when Sister Coburn came to the theatre with a septic case. He shouted for another bowl of biniodide, and when it was not immediately changed seized it and deliberately upset it down her apron. "Don't you know what you ought to do here?" he cried. "Yes," she said firmly, "I know I ought always to bring a mackintosh and umbrella to your theatre."

There are some who regard Lockwood's behaviour in the theatre as quite unforgivable, while others attribute his rudeness entirely to the strain of his work and the bad state of his health. There is no doubt that a crowded gallery excited him to greater violence, but at the same time he wore himself out with his work to such an extent that his nerves became badly frayed.

The poor condition of the operating theatres aggravated him, and it was not until he had already been an assistant surgeon for some time that a second theatre, called the New Theatre (now used for ophthalmic work), was constructed. This he always used in preference to the Old Theatre (which had been built as far back as 1791 for Abernethy), and he was most particular, amongst other things, about the temperature at which it was kept. In the winter he would not operate if it was below 60 degrees, while in summer the room had to be kept cool by large blocks of ice standing in a bath. Later, in 1905, two somewhat more modern theatres were added to the Great Hall block.

No operation was too big for him, and nothing daunted his determination. "Remember," he would say, "that when once the removal of a tumour has been begun, it is safer to go on than to turn back. This is pre-eminently a moment when the qualities of a surgeon are revealed." At one memorable operation lasting, it is said, for over five hours, all three large serous cavities of the body—peritoneal, pleural and pericardial—were opened together.

Bold as was his operative technique, it was essentially safe and somewhat slow, for he had no sympathy for what he would call "heroic surgery—practised on heroes". Judgment and knowledge were qualities which he regarded as of more value to a surgeon than mere operative dexterity. And in his own case it was rare for his judgment to be at fault.

Desault has said that "the simplicity of an operation is the measure of its perfection", and this was the keynote of Lockwood's technique. His instruments were few and simple, and he cultivated a plain exactitude of method, quickly recognizing that multiplicity and diversity of materials only multiplied the chances of infection. Every unnecessary pair of hands had to be eliminated.

Mr. Harmer tells me that Lockwood was the neatest man at "sewing-up" that he has ever seen. He nearly always used continuous suture, and especially insisted on its not being drawn too tightly.

As a result of operating Lockwood used to become so easily tired that he would never do more than three major operations in one afternoon. He perspired profusely, and at all times when possible he sat to operate. Often he was in considerable pain from neuritis, but his north-country grit never deserted him.

"Courage is the thing," Barrie has said. "All goes if courage goes" (9). And though the strain of a heavy afternoon in the theatre left Lockwood not merely exhausted, but actually prostrated, he was never known to give up an operation. "Either I or this patient gets carried out of the theatre," he would say, "but this operation shall get finished."

* * *

One of the many innovations introduced into the theatre by Lockwood was the practice of having portions of tumours immediately sectioned with a freezing microtome and stained with methylene-blue for examination. The whole process took only five minutes, and appealed to his scientific mind, for often he found that tumours which appeared by their naked-eye characters to be innocent proved in fact to be malignant when the sections were seen. Thus the patient was saved a double operation, and in any case, as he put it, an early biopsy was preferable to a late necropsy. He came to use the method frequently when dealing with doubtful tumours of the breast, and though sections never seemed to him to be cut nearly quickly enough, nor stained well enough, he encouraged others to adopt his plan.

It might be thought that so fiery and irritable a character would be something of a trial to his house surgeons, but on the contrary, it is they, and all who knew him well, who are the first to express their devotion to him. He imposed a great deal of responsibility on them, but he was always prepared to back them up. The attitude of many is summed up in a remark which one of them was overheard to make, "I would rather be cursed by Lockwood than praised by ——", and this particular house surgeon had received a more than ordinary share of buffetings. But it was the man who showed unpardonable ignorance, the man who deserted his patient when it was his duty to be there, the man who tried to cover his faults by words—such was the type to whom Lockwood was really merciless. "If you met him with the tale of a catastrophe which could be attributed to your lack of experience he would never censure: 'I will never blame you so long as you do your best'; or again, in even kinder vein and putting his hand on your shoulder, 'My dear boy, I began surgery myself once'."

To patients he was an impressive figure, and they trusted him implicitly, understanding rightly that their interests were what mattered most to him. He always observed the most scrupulous etiquette when at the bedside, even of a miserable infant a couple of feet long; and to his patients, unless they were inordinately stupid in answering his questions, his usually caustic tongue was never employed. He understood full well the truth that "a sick man has no reserve of strength to battle with a porcupine, and a doctor who has any spikes about his manner can never do the best for him" (10). Lockwood knew that patients were apprehensive, and, in making his examination, his own experience of bodily pain led him to employ a touch which was infinitely gentle. "The human being fears death above all things," he used to tell his dressers: "after death he fears pain, and after pain, parting with his possessions."

One of his nurses tells me that she remembers seeing him particularly kind and charming to really ill people, and that there was one such old woman, who must have tried his patience a good deal, as she quoted Scripture at him, verse after verse. Perhaps Lockwood was amused at this, since he himself frequently introduced Biblical references on his rounds.

His memory for old patients and their case-histories as well as for their occupations and personal characteristics was remarkable. Once in "President" he looked at a patient and immediately said to her: "You were in this Hospital four years ago with gastric ulcer, in No. 6 bed in the front ward of Lucas; you are a dairymaid, and your mistress's name is Mrs. Pentwhistle." In the face of this the patient was mildly surprised that he was not aware that she had since changed her job.

As a diagnostician he was both rapid and accurate, frequently avoiding pitfalls, into which others fell, by reason of an acute logical mind; his prognostic powers were also well known. Hippocrates said that "the cure will be best performed by one who knows beforehand what will happen in diseases", and this fact accounted for a good many of Lockwood's remarkable results. Even his Sister in Kenton Ward often expressed her astonishment: "Whether it's because he knows more than anybody else, or whether it's because things happen simply because he wishes them to happen, he is always right."

Not a great believer in drugs, he particularly objected to the use of morphia post-operatively, especially in abdominal cases. He also had a rooted dislike to having to deal with fractures.

"What should you do when you get a case of fractured femur in private?" he would ask his dressers on a ward round. Various suggestions would be made. Some would plate the bone, some would use external splinting, Thomas's splints and Balkan frames being unknown then, the results of fractured femurs were predominantly bad. None of the replies satisfied him. "Operation," he said, "would be followed by sepsis, and

sequestrum formation. External splinting would probably result in deformity, mal-union and incurable foot-drop." At last, with a wry smile, he would give the right answer: "What you do is to send it at once to the old Scotch doctor, your rival, round the corner. He is an expert in these things! You may think that bones are filled with good red marrow; nothing of the sort; they are filled with black ingratitude, which comes out of them when they are broken."

The famous epigram about the fracture is attributed originally to someone else, but it was certainly Lockwood who originated the warning that, if compelled to treat a fracture—"When called, refuse to go until you have joined the Medical Defence Union and filed your bankruptcy petition". It was he, too, who was amongst the first to insist upon the importance of having X-ray photographs taken of fractures, and the first X-ray viewing box to be seen in a Bart.'s ward was the one which he had placed in Kenton.

Throughout his surgical career he was ever alive to new methods of investigation and treatment, and, combined with his great gift for logical and lucid reasoning, this contributed much to his success as a surgeon. An article published in the *Clinical Journal* in 1912 under the title of "With Mr. Lockwood in the Wards of St. Bartholomew's Hospital" gives an illuminating account of an interview between Lockwood and the mother of a patient who was about to have an operation for hæmorrhoids. It illustrates both these qualities well:

"She asked first, Would he not have spasmodic contractions after the operation? No; the sphincter will be put at rest. Second, Would not the pain be dreadful? No; a morphia suppository will be introduced into the rectum. Third, Would he not suffer from wind? No; a tube will be left in the rectum to let it out. Fourth, Would not those silk ligatures have to be pulled away? No; catgut will be used; there will be no ligatures to come away. Fifth, But the pain will be dreadful when the bowels act? No; cocaine will be applied. Sixth, Then why did I not have all these things myself? Because your operation was performed many years ago."

Often his reasoning was based on a worldly and common-sense understanding of men and affairs rather than on strictly medical considerations. For example, he foretold on one occasion, before operating for appendicitis:

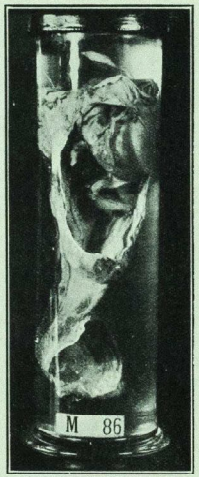
"(*a*) That the patient would take the anæsthetic badly.

"(*b*) That Mr. Gill would scarcely be able to overcome the rigidity of the abdominal muscles.

"(*c*) That the appendix would be adherent and most difficult to extract. And—

"(*d*) That the subsequent illness would be most severe."

All of these forecasts came true. "But (he said) note the kind of reasoning upon which they were based. Medicine and surgery had little to do with them. The man was a car driver—well, there is a car at nearly every public-house; beer and anæsthetics do not go well together. Next, a car driver has to have strong muscles, and strong muscles are difficult to relax with anæsthetics. Then, a rough working man is careless about illnesses, and would ignore even severe attacks



SPECIMEN TO ILLUSTRATE CONGENITAL INGUINAL HERNIA, PRESENTED TO THE HOSPITAL PATHOLOGICAL MUSEUM BY C. B. LOCKWOOD IN 1888.
(Reproduced by kind permission of Mr. R. T. Payne.)

of appendicitis until absolutely compelled to go to bed. Is it necessary to point out how all these and other considerations would affect the operation and subsequent prognosis?" (11)

The progressiveness of Lockwood's mind was nowhere better demonstrated than in his appreciation and encouragement of the new methods of clinical pathology which he saw being elaborated and put to practical use during his time. "Science knows, Art does" goes the saying, and anything which could enable him to base his art on more exact scientific principles was to Lockwood a step towards a more certain form of surgery. He was amongst those who gave early trials to vaccine-therapy; he gained good results with auto-inoculation in the treatment of staphylococcal abscesses, and he

saved more than one life by the prompt administration of anti-streptococcal serum.

He insisted upon the importance of accurate knowledge, and when he was shown a certain child with inflammation and suppuration of its scalp, he was not content merely to be told that it had "cellulitis of the scalp". Nor did "vulvitis" satisfy him as a diagnosis of the condition of another child. In both cases he demanded a pathological report, and in each instance diphtheria bacilli were found. Both children were thereupon treated with therapeutic serum and made a good recovery.

Lockwood was one of those who never regarded any case as hopeless. Often his intervention would be successful, and he explained to a friend one day about a laparotomy he had performed on a patient who was very bad with peritonitis with effusion. She was obviously extremely ill, and it seemed hopeless. "But," he said with a grimly humorous look upon his face, "I did not think she should go before her Maker with a bellyful of pus, so I operated, and she recovered."

An operation which brought him some fame at the time was one which he performed in 1897 on the late Mr. Ernest Hart (for many years Editor of the *British Medical Journal*). Hart had developed diabetic gangrene of the right foot, and his condition had become serious. Several surgeons refused to touch him, but Lockwood took his courage in his hands and amputated the leg. In those days primary healing in such a case was rare, but with Lockwood's skilful management the leg healed well. "There is such a thing as being too much afraid of your adversary," he would say. "Some most forbidding cases give good results."

Lockwood was essentially a general surgeon, but with the improved methods of surgery which he helped to introduce he was to the fore in abdominal work. With Sir Frederick Treves he was a pioneer in the surgical treatment of appendicitis. He also did much work on hernia and carcinoma of the breast. At the Royal College of Surgeons of England he was called upon to deliver the Hunterian Lectures upon four occasions. His subjects were as follows:

1887. "The Development and Transition of the Testicles, Normal and Abnormal."
1888. "The Early Development of the Pericardium, Diaphragm and Great Veins."
1889. "The Morbid Anatomy, Pathology and Treatment of Hernia."
1895. "Traumatic Infection."

They give a good idea of his earlier interests. In 1908 he was elected to the Council of the College, and retained office until the time of his death. A great frequenter of the medical societies, he held important positions in many of them. He delivered the Lettsomian Lectures before the Medical Society of London in 1904, choosing as his subject "Aseptic Surgery in Theory and Practice". He became President of the Society in 1908, and in his Presidential Address spoke with wise foresight on "The Stress and Strain of Modern Surgery".

He also became President of the Harveian Society, was a Fellow of the Royal Society of Medicine, and a Member of the British Medical Association.

Despite the heavy demands on his time as a surgeon he continued to take a very active part in the proceedings of the societies to which he belonged, and he was, in addition, a prolific writer of short works. Of all his publications, probably his *Clinical Lectures and Addresses on Surgery* was the most widely read; it is a fascinating reproduction of the penetrating and colloquial style of his teaching.

With the ever-increasing burden of his private work and the steady decline in his health, Lockwood found himself unfit to carry on his arduous hospital duties to their full term. He resigned from the active staff in 1912, at the age of 56, and was appointed a Consulting Surgeon and a Governor of the Hospital.

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E. C. O. JEWESBURY.

(To be continued.)

AN UNUSUAL CASE OF DIABETIC COMA.

CASES of diabetic coma in which no acetone bodies are found in the urine are rare, and the reasons for this absence of acetone bodies have not yet been clearly established. The following case is of interest because, in addition to the urine being found free of acetone bodies, certain changes were observed in the cerebro-spinal fluid of a nature which has not been previously recorded in a case of this kind.

G. B—, æt. 13, schoolgirl, was admitted to St. Bartholomew's Hospital on October 18th, 1934. The history was that the first onset of acute diabetes had occurred two years previously and the patient had been warded in the Hospital for Sick Children. She was there for five weeks, was stabilized on insulin 15 + 12 units, and did quite well for two years.

Two weeks before her admission to this Hospital the patient began to lose her appetite and large amounts of sugar were found in the urine. She grew irritable and complained of thirst. Two days before admission she began to vomit and was passing very little urine. The patient felt drowsy and cold. Her parents gave her the usual dose of insulin. The next day the patient's condition showed no improvement. She was sent to the Hospital for Sick Children, given 40 units of insulin and transferred (as she was too old for admission at Great Ormond Street) to this Hospital.

On admission the patient was very drowsy, but could be roused on strong stimulation. She was throwing her limbs about in bed and acetone could be smelt in her breath. Her temperature was 97·2°, and her pulse 144. The blood-pressure was 70/40 Hg. Knee-jerks and ankle jerks were not obtained.

Her urine showed a trace of sugar, a faint trace of acetone and large quantities of albumen. The blood-sugar was 310 mgrm. of sugar per 100 c.c. blood. 25 grm. of glucose were given and the patient put on an excess of fluids.

Next morning the girl was less drowsy and was given 60 grm. of lactose followed by 20 units of insulin. The blood-sugar and the blood-urea were both 177 mgrm. The blood-pressure was now 116/90 Hg. and knee-jerks and ankle-jerks could be obtained. Sugar was found in the urine, but no trace of acetone by the Rothera nitro-prusside test was found in this or any subsequent specimen. Centrifuged deposit of the urine showed many granular and hyaline casts.

Lumbar puncture showed a pressure of 240 mm. cerebro-spinal fluid. 30 c.c. of yellowish cerebro-spinal fluid were withdrawn. The report on this was as follows:

Slightly brown, non-turbid fluid; no clot.
Albumen: 84 mgrm. %.
Globulin: +.
Sugar (Fehling's), slight reduction.
Cells: Red blood-cells about 4258 per c.mm.; white blood-cells 16 per c.mm.

A further lumbar puncture was done the next day, but no change was observed. The patient was now out of coma, but it was noticed that the fifth toe of the right foot showed a blackened area.

Three days after admission the patient was much brighter, the blood-sugar was 230 mgrm., but the area of gangrene of the toe showed a slight increase.

The patient continued to make good progress. Two weeks after admission the gangrenous area began to shrink. A report on a centrifugal deposit of urine showed less than 3 casts per two thirds field. The urine, however, was not yet sugar-free.

Dr. Graham (1) has described a similar case in a boy, æt. 16. The hyperglycæmia, however, was much more severe, being 760 mgrm.; the urine showed a negative Rothera. It is interesting to note that on the fifth day of the disease the urine showed a positive Rothera, whereas in the present case this test has always been negative except for a faint positive on the day of admission.

Dr. A. C. Begg (2) divides cases of diabetic coma into two groups: (1) Patients with acidosis. These can usually be treated successfully with insulin. (2) Cases where there is no acidosis. The blood-urea is high and there is little urine which contains no acetone. The prognosis is grave. Of eight cases of this type treated by Begg, seven died of anuria. He suggests that the symptoms are due to some defective action of the kidney, and that cases of this kind should be classified as "anuric diabetic coma".

W. W. Payne and E. P. Poulton (3) describe a series of 11 cases of diabetic coma. One of the cases (No. 8 in the series) showed no acetone or sugar in the urine. This case is interesting in the present connection because a lumbar puncture was done, and the report on the cerebro-spinal fluid was as follows:

Sugar: Nil.
Acetone: Strong positive by Rothera test.
Urea: 0·15%.
Cells: Nil.
Protein: ·05%.

The authors suggest that all cases of diabetic coma have renal insufficiency in varying degrees. They also put forward the suggestion that all Begg's cases were acetonæmic, but that the kidneys failed to excrete acetone bodies.

K. E. Appel and D. A. Cooper (4) describe five cases of diabetic acidosis with a low carbon dioxide content of the blood-plasma and a negative reaction of the urine in the ferric chloride test. In all these cases there were increased blood-ketones. The authors suggest that these cases show a temporary renal impairment caused by dehydration.

It seems clear that the case described above belongs to that group in which diabetic coma is brought about by increased blood-ketones with an accompanying kidney lesion severe enough to prevent the excretion of acetone bodies. The gangrene is rare in a patient of this age, but it has been observed in even younger patients. There appears to be no obvious explanation for the changes observed in the cerebro-spinal fluid.

I have to thank Dr. A. E. Gow for permission to publish this case.

REFERENCES.

(1) *St. Bartholomew's Hospital Reports* for 1929.
(2) *Lancet*, 1925, ii, p. 69.
(3) *Ibid.*, 1925, ii, p. 638.
(4) *Amer. Journ. Med. Sci.*, 1927, clxxiii, p. 201.

A. BARLOW.

OUR LIBRARY.

(Continued.)

The fittings and furnishing of the Library have undergone changes since 1880. Gas has given place to electricity, and the brackets on the pillars of the alcoves, which added to the sombreness of the subdued lighting, have disappeared. Replaced, too, are the radiators, with their massive coverings making up in appearance what they lacked in warmth. A covering of linoleum over the bare floor and, later still, the addition of carpets, have mitigated the sound of footsteps, which at one time was incessant.

The allocation of the alcoves for the books remains unaltered although, naturally, there is some overflowing. Medicine and Surgery were each allotted two alcoves and, with superb impartiality, the allied sciences were each allotted one, with one for general literature. There was also one alcove for the books written by St. Bartholomew's men. Surely modesty could go no further. Already the *Athenæ* section has burst its bounds, and would have done so long since had every *alumnus* who had crystallized in a book the knowledge he had gained within its walls had deposited a copy in this shrine of his *alma mater*.

Viewing the *Athenæ* section from a purely chronological standpoint, it is disappointing to observe that there are so few books of a comparatively early period, and fewer still first editions.

The reprinted *Treatises of Fistula in Ano, Hæmorrhoids, and Clysters* by John Arderne, the fourteenth-century surgeon, find a place in this collection because they were edited, with introduction and notes, by Sir D'Arcy Power. The reprint was published in 1910.

The first book we have in order of publication by a St. Bartholomew's man is Timothy Bright's Abridgement of Foxe's Book of *Acts and Monumentes of the Church*, which was published in 1589. There is also a reprint of the same author's *Characterie: an arte of shorte, swifte and secrete Writing by Character*, which was made in 1888 in celebration of the tercentenary of the publication of the original. The original, dated 1588, is extremely rare, and as the reprint was limited to one hundred copies, this also cannot be common. Bright was the third physician to be appointed after the re-foundation of the Hospital. He resigned in 1590, abandoned medicine and assumed Holy orders. He wrote several other books but these are not in the Library. Bright is accredited by many with the invention of modern shorthand.

Bright's *Abridgement*, however, was not the first book to be published by a St. Bartholomew's man after the re-foundation. This honour belongs to Thomas Vicary's *Anatomie*. Vicary's book is of interest because it is said to be the first book on anatomy written in English, but it is of still greater interest because of the mystery attaching to it.

Those who are acquainted with the history of the Hospital will recall that in 1537, the year following the passing of the Act for the dissolution of the Monasteries, its property was confiscated. The obvious effect of the dissolution was to throw on the streets all those sick and distressed persons who had hitherto relied upon the benefactions of the monasteries. This state of affairs led the Mayor, Aldermen and Commonalty of the City of London to petition the king that certain institutions, of which St. Bartholomew's was one, should be handed over to them. It was not, however, until 1544 that Henry VIII granted letters patent for the re-constitution of St. Bartholomew's under the control of a master, a vice-master, a curate, a hospitaller and a visitor of the prisoners in Newgate. This constitution did not prove satisfactory, and in 1546 St. Bartholomew's was handed over to the City of London with certain endowments. A new constitution was drawn up and is fully set out in *The Orders and Ordinances for the Better Government of the Hospitall of Bartholomew the lesse*, mentioned previously. Under this constitution the Hospital was to be administered by Governors who were to have under them various officers, amongst whom, "as in a kinde by themselves", were three chirurgeons. In 1548 Vicary, who was Surgeon to the King and Master of the Company of Barber Surgeons, was appointed a Governor, and soon after became resident, although there is some doubt as to whether he really practised as a surgeon in the Hospital. The three surgeons, who would appear to have been appointed in 1549, were, however, placed under his direction.

The *Anatomie* is said to have been first published in 1548, but no copy of this edition has actually been traced. There seems little doubt, however, that an edition was published in Vicary's lifetime. He died in 1561 or 1562.

In 1577 it was reprinted, and issued by William Clowes, Wil. Beton, Richard Story and Edward Bayley, the then surgeons of the Hospital. The book is described as "A profitable Treatise of the Anatomie of mans body: Compyled by that excellent Chirurgion, M. Thomas Vicary, Esquire, Serjaunt Chirurgion to king Henry the eyght, to king Edward the vi, to Queene Mary and to our most gracious Soveraigne Lady Queene Elizabeth, and also cheefe Chirurgion of S. Bartholomewes Hospital". Several other editions of the work subsequently appeared.

The work was unquestionably accepted as having been written by Vicary until Dr. J. F. Payne (*Brit. Med. Journ.*, 1896, i, p. 200) described a manuscript of the date 1392. This manuscript he showed was a compilation from several authors, but chiefly from Lanfrank and de Mondeville. He further pointed out, and it must be admitted conclusively, that Vicary's *Anatomie* bore so great a resemblance to the manuscript as to make it certain that, though abridged and altered slightly, it was still a transcript. It is also agre d that the anatomy portrayed the state of knowledge which prevailed in the fourteenth century, and did not take into account the great advances made in the science during the sixteenth century. It is therefore all the more strange that it should have been published at a time when the works of Vesalius, Mondini and Germinus were already in circulation.

Sir Norman Moore (*Lancet*, 1906, ii, p. 1325) emphasizes the great difficulty of isolating the original remarks of the writer from quotations of other writers in medical manuscripts of the Middle Ages. What, therefore, nowadays might lead to a charge of plagiarism would appear to have been quite excusable in earlier times. Certainly Vicary's eminence in his profession was more

than sufficient to ensure him a niche in the Temple of Fame without the somewhat uncertain aid of authorship.

Sir D'Arcy Power (*Selected Writings*, 1877–1930) discusses the points raised by Dr. Payne, and makes deductions which considerably modify his conclusions.

There are three copies in black letter of Vicary's *Anatomie* in the Library. Unfortunately they are all in some stage of imperfection. The most perfect is the 1641 edition, which has been rebound in calf. The edges are only slightly trimmed and the headlines are not cut into. The second is obviously the same edition, but the frontispiece, title-page, dedicatory epistle, prefaces to the reader and to "his Brethren, practising Chyrurgerie" and the table of contents are all missing. The binding of this copy has been extensively repaired. The third copy is bound up with Agrippa's *Vanitie of Sciences* and Almenar's *Treatise of the French Pocks*. All the pages which are missing in the second copy are missing in this also, as are several pages at the end. This, however, would appear to be an earlier edition than the others.

Both the *Vanitie of Sciences* and the *Treatise of the French Pocks* are imperfect, and the repairs to some of the pages affect the text. The great interest to us of this latter volume, which has only recently come into our possession, lies in the fact that Almenar's Treatise is obviously part of William Clowes's *A Prooved Practise for all young Chirurgians*. As mentioned above, Clowes was one of the surgeons responsible for issuing the 1577 edition of Vicary's *Anatomie*, and he was one of the first regular surgeons of the Hospital appointed after the re-foundation. He is usually referred to as William Clowes the elder, to distinguish him from his son William Clowes the younger, who was also a surgeon. It is a matter of great regret that none of Clowes's books are in the Library. It is little short of sacrilege, as well as a commercial folly, that Almenar's treatise should have been extracted, for it seems fairly certain that it formed part of the 1588 edition of *A Prooved Practise*. The actual pages in our possession are numbered 97 to 130.

The *Dictionary of National Biography* states that Almenar's treatise was a fresh edition of Clowes's *De Morbo Gallico*, and the date of *A Prooved Practise* is given as 1591. Sir Norman Moore in the *History of St. Bartholomew's Hospital* gives a list of Clowes's works in which *Translation of Almenar* appears. He also gives 1591 as the date of *A Prooved Practice*.

In the preface of the 1588 edition Clowes says: "Hereto is adjoyned a Treatise of the French or Spanish Pockes, written by John Almenar, a Spanish Physician, which treatise was delivered me by a good friend and well willer unto all the young practizers in Chirurgery for whose sake he translated the same out of Latine into English and required me to publish it forthwith." This makes it quite clear that it was not translated by Clowes. Astruc says that the original was the first book on syphilis written in the Spanish language.

Another edition of *A Prooved Practice* was published in 1591. Sir D'Arcy Power describes the 1588 edition in No. 3 of his series, *Epoch-making Books in British Surgery*, which is in the Library.

A. H. COUGHTREY.

(To be continued.)

STUDENTS' UNION.

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* GUY'S HOSPITAL.

(From *The Morning Post*, by kind permission.)

In a first round match of the Hospitals Cup, St. Bartholomew's beat Guy's by a dropped goal and a try (7 points) to a try (3 points), after leading by 7 points to *nil* at half-time.

They owed their success to the vigorous determination and inexhaustible stamina of the forwards (who were without W. M. Capper), and the remarkable tackling of the whole side.

The Guy's outsides are a formidable combination, but they were never given a chance to settle down and play their natural game. The opposition went off at a cracking pace, bumped everyone down with whole-hearted thoroughness, and stayed the long course with undiminished fury, to the huge delight of a multitude of supporters endowed with grand lungs and, again, inexhaustible stamina, before whose "B-A-R-T-S—Bart.'s," the most craven-hearted would have been stirred to valour.

Guy's Bad Luck.

Guy's were most unlucky in the matter of injuries. Alexander was carried off in great pain before half-time, but courageously came back. Soon after the interval Giesen slipped a cartilage and could take no further part in the game. To a side already bustled completely out of their stride these misfortunes were doubly serious. Hale-Monro, who had been consistently prominent forward, went to full-back and emerged with distinction, Steytler coming up to stand-off half.

For the winners Darmady himself played a fine game, with Newbold the best forward on the field. Wilson was the most indefatigable worrier; Burrow did all sorts of useful things; Mundy . . . but why discriminate in a pack of all the talents? There was cleverness, as well as vigour, suggesting the instruction of some master mind, in a pack whose meeting with the St. Mary's hearties should be a battle in a thousand.

Kingdon, at stand-off, and his two centres set up an impregnable defence with flying tackles and fearless saving, but Nel alone was the serious danger to the opposition line. Even so, without Morison to beat Guy's must have won. His fielding, often at the feet of the Guy's forwards, and kicking placed him high among the full-backs of to-day.

Of the disorganized Guy's outsides, it is a little difficult to speak. Stanyon-Jacques, at scrum-half, took most of the honours; Giesen made one or two typical thrusts; Fichardt, on the left wing, was extremely clever in making the most of his very narrow fairway; but from start to finish there was no combined movement. Forward, Kark and Hopkins did most in the losing battle of true traditional severity.

A Furious Pace.

The very nature of the scoring gives a vivid impression of the mobility and pace of this exciting game, which raged from one end of the field to the other, with Bart.'s always holding a little the upper hand, except during a Guy's rally in the second half.

Nel, the right wing, dropped the goal from 40 yards out after 17 minutes' play. Giesen had cut through, to be tackled by the Bart.'s stand-off, Kingdon. Newbold immediately started a dribble taken on by Burrow, who penetrated far into enemy country with the whole side in full chase. A despairing kick by the defence was caught by Nel moving at top speed far out on the right. Without appearing to steady himself he dropped at goal with a thud that could be heard all over the ground, and the ball soared between the posts.

The try came not long before half-time, when another breakthrough by Giesen again drew prompt reprisal. Guy's should have scored, for Wright, on the wing, was waiting with no one to beat, when a forward up with Giesen threw a wild pass anywhere. Kingdon gathered in the ensuing loose play and punted to the right corner-flag. The ball bounced backwards towards the fast-following Bluseger, who, using his feet to fortune's gift, kicked over the line and beat the full-back for the touch down.

Guy's scored following a period of sustained pressure, which was interrupted by a burst by Darmady and Burrow, and resumed when Alexander went away very fast on the right and kicked across for Kark to lose a lonely duel with Nel. Scrummaging in the left corner followed, and Stanyon-Jacques forced his way over far out.

PETER LAWLESS.

Team.—C. R. Morison (*back*); J. G. Youngman, G. A. Fairlie-Clarke, I. N. Bluseger, J. G. Nel (*three-quarters*); J. R. Kingdon, J. E. Miller (*halves*); E. M. Darmady, K. D. Maynagh, J. A. V. Nicoll, P. W. Swinstead, R. Mundy, J. C. Newbold, K. C. Burrow, J. D. Wilson (*forwards*).

Referee.—J. G. Bott.

ASSOCIATION FOOTBALL CLUB.

2nd Round Inter-Hospitals Cup.

ST. BARTHOLOMEW'S HOSPITAL *v.* UNIVERSITY COLLEGE HOSPITAL.

Played at Perivale on Wednesday, February 20th. Lost, 2—3.

For this game Bart.'s fielded the team which has performed so well this season. The weather was vile, continuous rain and a gale of wind rendering good football an impossibility. This is not offered as an excuse—Bart.'s were beaten by a better team. U.C.H. were much quicker on the ball, and with the Bart.'s defence at sixes and sevens in the first twenty minutes, won the game during this period.

Howell won the toss and chose to play with the wind. U.C.H. scored in the first three minutes. The ball went out to the right wing, Herbert misjudged his tackle, the ball was centred, and the inside left scored easily with McKane out of position. A blow, indeed, but worse was to follow. Within a few minutes a long shot at the Bart.'s goal hit the cross-bar, the ball re-bounded into play and was neatly headed in. Two goals down in ten minutes. From this time on Bart.'s held their own, and perhaps if they had been a little quicker and a little luckier they might have won.

Half-way through the first half Bloom was tripped in the penalty area and Howell scored with an excellent shot from the spot. Soon after Nicholson unaccountably missed an open goal, and U.C.H. went further ahead with a fine shot from the outside right.

Half-time: Bart.'s 1, U.C.H. 3.

The second half was an even struggle, first one side and then the other attacking. Bloom headed a good goal, and Nicholson got the ball into the net, but Bloom was given off-side.

Final score: Bart.'s 2, U.C.H. 3.

Thus Bart.'s hopes of retaining the Cup were dashed.

After that tragic first twenty minutes McKane was splendid, Howell and Cardwell played well, and of the forwards Carey and Brownlees were outstanding.

The players were honoured by the presence of Dr. Hurtley, who braved the weather to watch, what to him and to the players, must have been a very disappointing game.

Team.—T. O. McKane (*goal*); H. Knowles, G. Herbert (*backs*); W. A. Owen, D. R. S. Howell J. L. Cardwell (*halves*); C. Nicholson, P. A. K. Brownlees, N. H. Bloom, C. J. Carey and R. C. Dolly (*forwards*).

Other Results.

Jan. 5: *v.* Old Monovians. Home. Drawn, 3—3.
,, 12: *v.* Gidea Park. Away. Won, 6—3.
,, 19: *v.* Old Bradfieldians. Home. Won, 2—1.
,, 26: *v.* Old Aldenhamians. Home. Won, 4—2.
,, 30: *v.* Balliol College. Away. Won, 4—5.
Feb. 2: *v.* Old Cholmeleians. Home. Lost, 1—4.
,, 9: *v.* Southgate Wan. Away. Drawn, 2—2.
,, 16: *v.* Brighton Old Grammarians. Home. Won, 5—2.

The 2nd XI beat Middlesex Hospital at Wembley in the 2nd Round of the Junior Cup, 6—0. We hope they will retain the Cup. They are due to meet Guy's in the semi-final.

The Club Supper will be held at Pimm's Restaurant, Old Bailey, at 7 p.m. on Wednesday, April 10th. Tickets 3*s* 6*d*.

REVIEWS.

A SYNOPSIS OF REGIONAL ANATOMY. By T. B. JOHNSTON. Third edition. (J. & A. Churchill, Ltd., 1934.) Pp. xxiii + 460. Price 12*s*. 6*d*. net.

Since the publication of the third edition this book has gained an increased popularity among students of anatomy, and also among those about to take an examination in surgery requiring an elementary knowledge of anatomy. But there is a danger in this popularity—that the book will be used to serve a purpose for which it was not intended, *i. e.* for a text-book and not for revision. In the preface to each edition the author draws attention to the object for which it was written—"to assist the average student in his work of revision only." Further, at the beginning of each section emphasis is laid on using the book in conjunction with a "part" either dissected or in the process of being dissected, together with the bones forming the skeleton of the part. When the book is used in this capacity it serves a very useful purpose—that of refreshing the memory of facts which have been gradually accumulated, and, from the student's point of view, enables him to reproduce those facts at an examination. Unfortunately, the use of the book by the student is not thus limited, for it is frequently used as a text-book while dissecting a part for the first time.

The new section on Osteology consists of a *résumé* of the most important features of the various bones: it is clearly arranged, and, provided the student has a good basis of knowledge, would cover most of the questions that he is likely to be asked in a pre-clinical examination in anatomy. The whole section is contained in less than fifty pages, and is a series of statements rather than a description of the bones; thus the account of the vertebræ assumes a knowledge of the component parts of a single vertebra, and limits itself to a method of distinguishing the various segments from one another.

The references to the development of the organs have been increased in number, but remain extremely brief; however, they adequately serve the function intended by the author—that of reminding students of embryological knowledge obtained from previous study of the subject.

Although the book would not be complete without a section on the central nervous system, the greater part of this section cannot be read under the same conditions as the other sections, *i. e.* with a part under dissection to which to refer, for it includes a description of the main tracts and connections of the various nuclei; to produce a section which acts as a complete revision of the central nervous system, including the meninges, the eye and the ear on seventy pages is an impossible task, so that this section is of less value than the others. The revised arrangement of this section in the third edition, however, is an improvement on that in the second.

The type is clearly printed on good paper and errors in the print impossible to find. That the sale of this book will remain very large is almost certain, but it is sincerely hoped that its use will be restricted to revision, particularly to revision before an examination.

A TEXT-BOOK OF GYNÆCOLOGICAL SURGERY. By Sir COMYNS BERKELEY, M.D., F.R.C.S., and VICTOR BONNEY, M.B., F.R.C.S. Third edition. (London: Cassell & Co., Ltd., 1935.) Price 45*s*.

After five years this book has been revised, necessitating a complete set of new illustrations, with numerous additions and the rewriting of practically all the text.

The book is concerned wholly with the operative side of gynæcology, and gives a detailed account of the technique and methods employed by the authors, whose reputations as operative gynæcologists is so great that it is unnecessary to stress the value of the volume further.

There is set forth, in detail, the indications for gynæcological operations, the pre-operative preparation, the operative technique,

the post-operative treatment, and the dangers to be avoided, with the possible complications and their appropriate treatment.

The first five chapters are devoted to general operative considerations, surgical technique, operating theatre and appointments, operations in private houses, and examination and preparation of the patient. In these chapters there is a wealth of information for those who are and hope to be specialists in the subject. There are 847 pages, but only a selection of the possible operations in certain conditions are included as the best methods to adopt in the opinion of the authors. Chapter XVII contains an excellent exposition on abdominal myomectomy, and is preceded by a chapter on the operation for carcinoma of the cervix, and the Wertheim's hysterectomy only is described. Treatment by radium is only mentioned twice, as a preliminary to operation in carcinoma of the cervix, and as a method of treatment in pregnancy complicated by carcinoma of the cervix.

There is a long section on opening and closing the abdominal cavity, the authors assume that a mid-line subumbilical incision is the correct one and the paramedian incision is dismissed with the statement that some surgeons use it apparently under the impression that the resulting scar is stronger, but there is no ground for such an assumption.

The description of plastic operations on the vagina is easy to understand and beautifully illustrated.

The descriptions in this book are uniformly excellent, and the illustrations and 17 colour plates could not be more clear.

This book should be studied by all who are interested in gynæcological surgery as a speciality or who may be called upon to perform gynæcological operations and yet have not had the opportunity of perfecting their technique by long practice in the gynæcological theatre and wards of a large hospital.

ANÆSTHESIA IN LABOUR. By LLOYD WILLIAMS. (Edward Arnold & Co., 1934.) Price 5s. net.

We must congratulate Dr. Lloyd Williams on a thorough record of the various methods of premedication and anæsthesia used in labour. If we dare be critical of so concise a little book, we would suggest that the practitioner and the student both need a definite suggestion as to which method is recommended for general use. So completely are the various techniques dealt with that the reader is left rather uncertain as to which to use. If Dr. Lloyd Williams had given a lead from her evidently considerable experience, and had indicated what she considered the best all-round method, this useful book would have become super-excellent. We also feel that she has been rather hard on McKesson's apparatus, and would suggest that McKesson's ordinary machine is superior for obstetric use to the one recommended for that purpose. In our experience over a considerable number of years, the McKesson has proved a most useful apparatus, for one can give 100 per cent. oxygen with the admixture of CO_2 if required, whereas with his small machine the oxygen content, as pointed out, is only 50 per cent.

Whilst in critical mood, we should also like stressed more strongly the fact that repeated administrations of chloroform over a short period produce chloroform poisoning very readily indeed.

With regard to Cæsarean section, we feel strongly on the subject. Dr. Lloyd Williams states that morphia and hyoscine may be given beforehand. We would go further than this, and say that no premedication of any kind should be given before a Cæsarean section if anxiety for the child is to be avoided.

On the whole, an excellent book, thoroughly to be recommended to both practitioner and anæsthetist.

THREE PHILOSOPHERS (LAVOISIER, PRIESTLEY AND CAVENDISH). By W. R. AYKROYD. (Heinemann.) Price 10s. 6d.

This is a book of more than passing interest; it tells, it is true, of Cavendish, "the wealthy and gifted eccentric"; of Priestley, the religious enthusiast, who had his house burnt for his pains, and of Lavoisier, the tax-collector, the victim of the French Revolution. The story of his death is well and simply told, but the book is more than good biography. The author has chosen his title well; each of these men deserved the name of philosopher, and none more than Lavoisier. He surely approached very near to the Platonic ideal of philosophy, for he conceived of science not as a means of accumulating useless knowledge, but as a practical instrument to be used "to obtain for all social classes pleasure and happiness in greater abundance". The illustrations are excellent, the type is attractive, and the book is a pleasure to read.

SURGERY AND SURGICAL NURSING. By MICHAEL BULMAN, M.D., M.S., F.R.C.S. (Faber & Faber.) Price 10s. 6d.

This book provides nurses with a description of methods, chiefly helpful from a practical standpoint, but at the same time covering the syllabus in surgery and gynæcology of the General Nursing Council. It will be greatly appreciated by those requiring help with state registration problems.

The several conditions dealt with are described in the matter of symptomatology, pathology, diagnosis and treatment, but in places the lack of detail and brief explanation is surprising in a book so advanced. The stress laid on the psychological teaching so essential in the treatment of every case is a welcome feature of the book, which is very well set out and much to be recommended.

THE TREATMENT OF COMMON FEMALE AILMENTS. By FREDERICK JOHN MCCANN. 3rd edition. (London: Edward Arnold & Co.) Price 12s. 6d.

This book was written as a guide to the general practitioner in the treatment of common ailments peculiar to the female sex. The fact that it has reached a third edition is in itself proof that this book has justified the reasons for which it was written.

It is a practical book; all the multitude of gynæcological complaints likely to be encountered are dealt with faithfully, and useful advice is given in all cases. It is fully up to date, due attention being paid to recent work on endocrinology, and new chapters have been written on contraception, fertility and sterility. As this book is written to give advice about cases which often prove the most difficult to treat, it is to be recommended, and will prove of real value to its possessors.

CORRESPONDENCE.

POST-OPERATIVE VOMITING.

To the Editor, 'St. Bartholomew's Hospital Journal'.

DEAR SIR, It would be an obvious and not very profound statement to say that the vast majority of major operations, in this Hospital at any rate, are carried out under gas, oxygen and ether anæsthesia.

Some weeks ago I attended a very excellent lecture on anæsthesia, and the lecturer stated that when a patient had had ether, he liked to see him vomit up the ether-contaminated mucus from his stomach before he left the operating theatre. Speaking from personal experience, the so-called normal vomiting after ether anæsthesia is quite the most unpleasant part of, at any rate, an abdominal operation from the patient's point of view. The idea that the patient usually vomits before he is conscious and remembers nothing about it is untenable, not only from a personal viewpoint, but from the interrogation of a large number of patients.

When an event has occurred for many years, and especially if that event is merely unpleasant and not usually dangerous, the average person is apt to let what has been remain, and had it not been for a by no means vast series of two consecutive cases, this letter would not have been written. In both of these cases the ether was turned off when the surgeon started to sew up the skin. Also in both of these cases the surgeons sewing up the skin were privileged surgical dressers and, not having had much experience, their methods, although excellent, were definitely slow. By the time the bandage had been put on, all traces of ether from the patients' breath had disappeared, and their corneal reflexes had returned. But more important than this, neither patient vomited, and on being asked in the morning what they thought of operations, considered them to be rather an amusing joke (which would be one objection to attempting to prevent ether-vomiting).

Theoretically there are two objections to "blowing out" the ether under gas anæsthesia. First, it is difficult to see how this is going to prevent the stomach mucus from continuing to be ether-laden, to which the only answer is that in the series no patient had gastric discomfort by not vomiting. Secondly, sewing up and bandaging took rather longer than normally, and it is of course important that there should be flaccidity when the muscular layers, etc., are being sewn. With practice, however, and the judicious use of CO_2, could not a great deal of discomfort be avoided?

Yours etc.,

C. R. MORISON.

COLLEGE APPEAL FUND.

SUBSCRIPTIONS TO DATE.

	£	s.	d.	*	†
Staff	12,827	15	10	(72)	
Demonstrators	1,721	11	0	(69)	
Students	881	9	3	(298)	
Old Bart.'s men:					
‡Bedfordshire	25	3	6	(7)	(26)
Berkshire	123	3	0	(16)	(37)
†Buckinghamshire	82	1	0	(15)	(29)
‡Cambridgeshire	193	16	0	(18)	(42)
‡Cheshire	6	16	6	(3)	(26)
‡Cornwall	31	11	0	(8)	(36)
Cumberland	5	0	0	(1)	(6)
Derbyshire	19	14	0	(4)	(17)
‡Devonshire	571	18	0	(53)	(98)
‡Dorset	52	11	6	(14)	(30)
‡Durham	17	7	0	(4)	(11)
Essex	251	0	6	(20)	(69)
‡Gloucestershire	238	7	6	(27)	(52)
Hampshire	436	3	0	(49)	(134)
‡Herefordshire	17	12	0	(4)	(10)
Hertfordshire	85	12	0	(17)	(73)
Huntingdonshire					(1)
Isle of Wight	186	13	0	(13)	(25)
‡Kent	583	0	0	(71)	(146)
‡Lancashire	96	4	6	(13)	(82)
Leicestershire	136	15	0	(7)	(28)
‡Lincolnshire	58	17	0	(17)	(27)
Middlesex	402	18	0	(25)	(68)
‡Norfolk	178	0	6	(21)	(60)
‡Northamptonshire	59	14	6	(6)	(17)
‡Northumberland	101	1	0	(2)	(11)
‡Nottinghamshire	19	19	0	(3)	(28)
‡Oxfordshire	219	3	0	(21)	(26)
Rutland					(2)
Shropshire	36	10	0	(9)	(22)
‡Somersetshire	1,180	3	0	(28)	(43)
Staffordshire	193	17	0	(5)	(37)
‡Suffolk	324	4	0	(25)	(46)
Surrey	475	5	6	(56)	(180)
Sussex	432	3	6	(60)	(174)
Warwickshire	184	7	6	(20)	(56)
Westmorland	2	10	0	(1)	(5)
‡Wiltshire	110	11	0	(12)	(26)
‡**Worcestershire**	158	19	6	(24)	(24)
‡Yorkshire	342	16	6	(25)	(101)
Wales	67	10	0	(18)	(150)
London	7,483	0	8	(197)	(971)
Channel Islands	20	0	0	(2)	(9)
Scotland	15	5	0	(5)	
Abroad	114	1	0	(13)	
South Africa	362	15	6	(19)	
Canada	114	3	6	(8)	
East Africa	87	12	0	(10)	
West Africa	146	10	0	(5)	
India	203	2	0	(12)	
Ireland	25	4	0	(4)	
North Africa	1	0	0	(1)	
North Borneo	5	5	0	(1)	
Australia	122	2	0	(6)	
China	92	8	4	(9)	
Siam	10	0	0	(1)	
France	50	0	0	(1)	
British West Indies	50	8	0	(5)	
Straits Settlements	7	1	0	(3)	
New Zealand	6	1	0	(3)	
Services	642	2	6	(46)	
Others	33,296	6	5	(310)	
Lord Mayor's Appeal	17,990	16	0		
Funds of College	8,000	0	0		
Value of Building	20,000	0	0		
	£111,965	2	6		

* Number of Bart.'s men subscribing. † Number of Bart.'s men in County. ‡ Counties with Secretaries.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ATKINSON, E. MILES, M.D., F.R.C.S. "The Early Diagnosis of Abscess of the Brain." *Clinical Journal*, January, 1935.

BERTWISTLE, A. P., M.B., Ch.B., F.R.C.S.(Edin.). "Juvenile Circumcision." *Lancet*, January 12th, 1935.

BROWN, Sir WALTER LANGDON, M.D., F.R.C.P. "We have reason to Think . . ." *British Medical Journal*, January 5th 1935.

CHANDLER, F. G., M.D., F.R.C.P. "Pleurisy." *British Medical Journal*, December 29th, 1934.

CHOPRA, R. N., M.D., I.M.S. (and GHOSH, S.). "Some Common Indigenous Remedies." *Indian Journal of Medical Research*, October, 1934.

——— (and CHOWHAN, J. S., and DE, N.). "Biological Assay of Digitalis Preparations in the Tropics. Part IV." *Indian Journal of Medical Research*, October, 1934.

——— (and CHOROHAN, J. S., and SARDARI LAL). "Biological Assay of Digitalis Preparations in the Tropics. Part V: Potency of *Lanadigin* (Glucoside of *D. lanata*) and its Relation to the Standard Digitalis Powder (B.P. 1932)." *Indian Journal of Medical Research*, October, 1934.

——— (and GHOSH, S., and DUTT, A.). "Some Inorganic Preparations of Indian Indigenous Medicine. Part I: *Abhra Bhasma*." *Indian Journal of Medical Research*, October, 1934.

ELAM, JOHN, M.R.C.S., L.R.C.P. "Advantages of Nitrous Oxide and Air Analgesia in Midwifery." *British Medical Journal*, December 29th, 1934.

FRASER, FRANCIS R., M.D., F.R.C.P. *See* Gillies and Fraser.

GARROD, LAWRENCE P., M.R.C.P. "Laboratory Testing of Disinfectants." *British Medical Journal*, January 5th, 1935.

GILLIES, Sir HAROLD, F.R.C.S., and FRASER, FRANCIS R., M.D., F.R.C.P. "Treatment of Lymphœdema by Plastic Operation." *British Medical Journal*, January 19th, 1935.

GRAHAM, GEORGE, M.D., F.R.C.P. "Prognosis of Diabetes Mellitus in Adults." *Lancet*, January 19th, 1935.

HAMILL, P., M.D., D.Sc., F.R.C.P. "Favourite Prescriptions. I: The Pharmacopœia of St. Bartholomew's Hospital." *Practitioner*, January, 1935.

HAMMOND, T. E., F.R.C.S. "Protein- and Chemo-therapy in Genito-Urinary Tuberculosis." *Tubercle*, January, 1935.

HARMER, W. DOUGLAS, *M.C.*, F.R.C.S. "Treatment of Malignant Disease in the Upper Jaw." *Lancet*, January 19th, 1935.

NAISH, A. E., F.R.C.P. (H. E. HARDING, D. M., and A. E. N.). "Mixed Tumours of the Brain." *Lancet*, January 12th, 1935.

O'CONNELL, J. E. A., M.B., B.S., F.R.C.S. "Some Observations on the Cerebral Veins." *Brain*, December, 1934.

RAVEN, R. W., F.R.C.S. (and HARE, A. E. C., Ph.D.). *Preliminary Report on Radium Treatment in Cancer of Certain Sites: Appendix to the Fifth Annual Report of the National Radium Commission*. London: H. M. Stationery Office, 1934.

ROLLESTON, Sir HUMPHRY, Bart., G.C.V.O., K.C.B., M.D., F.R.C.P. Address at the Opening of the Radiological Congress and Exhibition. *British Journal of Radiology*, January, 1935.

EXAMINATIONS, ETC.

University of London.

M.D. Examination, December, 1934.

Branch I (Medicine).—Hubble, D. V., Knox, R., Payne, R. T., Seowen, E. F.

Branch III (Psychological Medicine).—Shaw D.

Conjoint Examination Board.

Pre-Medical Examination, January, 1935.

Chemistry.—Silcock, A. R., Thomson, T. G. L.

Biology.—James, C. T. A., Marrett, H. K., Owlett, K., Rochford, J. D.

First Examination, January, 1935.

Anatomy.—Gluckman, J., Hanbury-Webber, R., Harrisson, G. J., Hill, P. G., Knowles, H., Mundy, M. L., Perrott, J.W., Stoker, G. E., Taylor, L. R., Williams, W. R.

Physiology.—Halper, N. H., Hill, P. G., Jackson, K. V., Mundy, M. L., Taylor, L. R., Webb, C., Welply, R.

Pharmacology.—Alexander, L. L., Beizer, L. S., Gardiner, L. E., Gomez, A., Horner, W. M. L., Howell, D. R. S., Mitchell, J. G., Richards, G. A., Schiller, M., Weiner, H., Witt, R. C.

Final Examination, January, 1935.

The following have completed the Examinations for the Diplomas of **M.R.C.S., L.R.C.P.:**

Anderson C., Barber, D. S. D., Blackburn, G., Bohn, G. L., Botha, B. B., Brodribb, H. S., Casson, A. H., De Freitas, A. J. S., Evans, D. M., Hayward, G. W., Hinds Howell, C. A., Houghton, P. W., Hynes, H. T. J., Libertson, W., McGladdery, H. M., Masina, F. H., Nash, D. F. E., Sansom, S. V., Youngman, J. G.

L.M.S.S.A.

Primary Examination, January, 1935.

Anatomy and Physiology.—Berman, B.

Final Examination, January, 1935.

Midwifery.—Palmer, T. I.

CHANGES OF ADDRESS.

BARROW, R. MURRAY, Walton Mount, Stone, Staffs.

BETT, W. R., 630 West 168th Street, New York.

BRINTON, R. D., 37, Argyll Road, Kensington, W. 8. (Tel. Western 3760.)

CHILTON, N., Colne Engaine Rectory, Earl's Colne, Essex.

HUNT, W., 24, Station Road, Carlton, Notts. (Tel. 58198.)

JACKSON, J. M., 1, Petersham Road, Petersham, Surrey.

LANE, C. R. T., 20, Upper Wimpole Street, W. 1. (Tel. Welbeck 3640.)

MILES, A. ASHLEY, 17, Lansdowne Crescent, W. 11. (Tel. Park 4367.)

OLDFIELD, J., 5, Essex Court, Temple, E.C. (Tel. Central 3634.)

APPOINTMENT.

BETT, W. R., M.R.C.S., L.R.C.P., appointed Medical Librarian, Columbia University, in the City of New York.

BIRTHS.

BRADSHAW.—On January 31st, 1935, at Carrick Grange, Sevenoaks, to Peggy, wife of George Bradshaw, F.R.C.S.E.—a daughter.

CLARKE.—On December 16th, 1934, at Pretoria, South Africa, to Phillis, wife of B. Maule Clark—a daughter (Elizabeth Mary).

CULLINAN.—On February 7th, 1935, at The Tower, Hampstead, to Joy, wife of Dr. Edward Cullinan—a son.

DARLEY.—On February 12th, 1935, at Addiscombe, Croydon, to Sibyll, wife of Dr. W. Ward Darley—a son (Anthony Russell).

EDELSTEN.—On January 29th, 1935, at Sutton Scotney, Hants, to Peggy, wife of Dr. Geoffrey Edelsten—a son.

HANCOCK.—On February 13th, 1935, at Fourwinds, Stoke Mandeville, Bucks, to Estelle (*née* Derouet), wife of Dr. F. R. Thompson Hancock—a daughter.

HOBDAY.—On February 13th, 1935, at 32A, Trebovir Road, Earl's Court, to Sczerina Néomi, wife of Dr. F. T. J. Hobday—a son.

POLLARD.—On January 30th, 1935, to Honor, wife of Surgeon Lieutenant-Commander E. B. Pollard, R.N., of Gillingham House, Gillingham—a daughter (stillborn).

WHITING.—On February 23rd, 1935, at Sudbury, Suffolk, to Elwina, wife of Dr. J. S. Whiting—a son.

MARRIAGES.

BROOMHEAD—HOLLIDAY.—On February 8th, 1935, at Brunswick Methodist Church, by the Minister, the Rev. Leslie D. Weatherhead, M.A., assisted by the Rev. J. Chalmers Lyon, of London, Reginald Broomhead, M.B., F.R.C.S., only son of Mr. and Mrs. J. Broomhead, Braeside, Allerton Avenue, Leeds, to Phyllis Lilian Holliday, B.A., B.Chir., younger daughter of Mr. and Mrs. Fredk. Holliday, Forest Hill, Roundhay, Leeds.

BUTCHER—RINALDI.—On February 9th, 1935, at Mariastein, Surgeon-Commander Walter Herbert Butcher, M.D., R.N.V.R., to Marie, elder daughter of A. Rinaldi and of Frau Rinaldi, of Schönenwerd, Soleure.

HARRISON—ROMNEY.—On February 25th, 1935, at Folkestone, Sidney Gilbert Harrison (of the West African Medical Service), son of the late Mr. E. S. Harrison and Mrs. Harrison, to Elsie Ada Romney, daughter of the late Mr. W. Romney and Mrs. Romney, of 5, Wear Bay Crescent, Folkestone.

DEATHS.

FREER.—On February 3rd, 1935, Gerald Dudley Freer, M.B.(Lond.), late of the F.M.S. Medical Service, third son of the late Leacroft Freer, of Pedmore, Worcestershire, aged 67.

HUGHES.—On February 20th, 1935, suddenly, at Roe Street House, Macclesfield, John Brierley Hughes, M.B.E., M.A., M.B.(Cantab.).

WATTS.—On February 1st, 1935, at "The Little House", St. Andrew's Road, Bridport, Harry John Manning Watts, M.R.C.S., L.R.C.P., J.P. (late of Tonbridge), aged 73.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C.* 1.

The Annual Subscription to the Journal is 7s. 6d., including postage. Subscriptions should be sent to the MANAGER, Mr. G. J. WILLANS, M.B.E., B.A., *at the Hospital.*

All Communications, financial or otherwise, relative to Advertisements ONLY should be addressed to ADVERTISEMENT MANAGER, *The Journal Office, St. Bartholomew's Hospital, E.C.* 1. *Telephone: National* 4444.

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XLII.—No. 7.] APRIL 1ST, 1935. PRICE NINEPENCE.

CALENDAR.

Mon., April 1.—Rugby Match *v.* Redruth. Away.
Tues., ,, 2.—Prof. Witts and Prof. Gask on duty.
Rugby Match *v.* Falmouth. Away.
Fri., ,, 5.—Lord Horder and Sir Charles Gordon-Watson on duty.
Sat., ,, 6.—Rugby Match *v.* Old Leysians. Home.
Tues., ,, 9.—Dr. Hinds Howell and Mr. Wilson on duty.
Fri., ,, 12.—Dr. Gow and Mr. Girling Ball on duty.
Sat., ,, 13.—**Rugby Football Club: Seven-a-side Tournament and Dance in Aid of College Appeal.**
Tues., ,, 16.—Dr. Graham and Mr. Roberts on duty.
Fri., ,, 19.—Prof. Witts and Prof. Gask on duty.
Last day for receiving matter for the May issue of the Journal.
Mon., ,, 22.—**Bank Holiday.**
Tues., ,, 23.—Lord Horder and Sir Charles Gordon-Watson on duty.
Rugby Match *v.* Bristol. Away.
Fri., ,, 26.—Dr. Hinds Howell and Mr. Wilson on duty.
Mon., ,, 29.—Special Subjects: Lecture by Dr. Cumberbatch.
Tues., ,, 30.—Dr. Gow and Mr. Girling Ball on duty.

EDITORIAL.

"How can we find? How can we rest? How can
We, being gods, win joy; or peace, being man?"
—RUPERT BROOKE.

IT is a commonplace subject for discussion and debate to contrast the present civilization with that of a former age—its dangers, its advantages, its evils. Is mankind as happy? Is life more dangerous? Has man by invention produced a monster which is about to destroy its Frankenstein, and by the force of blind evolution, like the primeval monsters, will he bring about extinction of his kind? Clamouring for better health and longer life, it seems that he is supplanting Atropos and her instrument of death, and by his "science" producing war, pestilence and sudden death. The Second Horseman is coming into his own, and drives his bloody steed among men "to take peace from the earth and that they should kill one another".

All are loud in their condemnation of the present state of affairs (the ubiquitous *Pro Bono Publico* of the daily press is their spokesman). The pessimist watches with horror the omens for the future, and pours destructive criticism on the efforts that are being made to combat the enemies of peace—in the world, political strife: in the nation, poverty and unemployment; in city and country, death from the headlong fury of man's speed; and, in the individual, the ceaseless, drunken jazz of vile man's din. The more particular the menace, the greater becomes the influence of the physician and the claims for his interest and support. The direct results of the evils are obvious, but their invisible effects tend to undermine the health of all humanity. The active reforms suggested and begun within the last few months bear every promise of fruit, and there is no one that will not encourage every effort which has as its object the peace of the community—in its fullest sense.

* * *

The work in connection with the new Medical School on the Merchant Taylors' site is advancing rapidly. Already the foundations of the new laboratory have been laid, and the existing buildings are as busy as a hive with builders, carpenters and painters.

An antiquarian interest has been taken in the digging for the new block, in view of the connection of the Charterhouse with the old plague pits made during the Black Death of the fourteenth century. Some years ago experimental borings were sunk when the construction of a swimming-bath was proposed, but the discovery of human bones led to the abandonment of the project. The depth reached at present, however, has been insufficient to disturb the rest of the ill-fated citizens, and curiosity has been disappointed.