In the chapter on the stomach and duodenum, it is said that with regard to perforated gastric and duodenal ulcers, cases operated upon within twelve hours of perforation present few "difficulties in the after-treatment"; while in the next section of this chapter it is advised that aperients should not be given until the fourth day at the earliest. It is not clearly stated whether the last remark is intended to refer to all cases of operations on the stomach or duodenum, including those of perforated gastric or duodenal ulcer followed by general peritonitis, or whether it only applies to those in which an aseptic condition of the peritoneum is maintained, such as an ordinary gastro-enterostomy. We also consider that the authors are unduly severe in including their uncomplicated and aseptic appendicectomy patients amongst those who are confined to a diet of water and albumen-water for at least three days after the operation.

Having mentioned the above criticisms, we may say frankly that we have formed a very high opinion of this book. It is one we can confidently recommend to every house-surgeon as a most useful aid to him in his work, and one to which he may turn with every expectation of finding what he wants. Rapid reference is facilitated by means of special type for headings and subheadings and by a carefully compiled index. The book itself is light and easy to read.

Hospital and Teaching Appointments held by - Past Students of the Bospital.

LONDON. LIST NO. 2.

Hospital. Name and Post.	
King Edward Memorial Hosp., Ealing D. Arthur J. G. French Hon. Con. Stag	F.
German Hospital F. P. Weber, Physician. (C. M. Hinds Howell, Physician	vz.
Gt. Northern Central Hospital .) J. Gay French, Aurai and The Surge E. H. Shaw, Pathologist.	roat eon.
Hampstead General and N.W. London Hospital	reon nts. reon nts. Con
Italian Hospital	ian.
Kens. and Fulham Gen. Hosp	п.
Leyton, Walthamstow and Wan- stead General Hospital . C. J. Horner, Medical Officer. Sir W. J. Collins, Con. Surgeon W. McAdam Eccles, Surgeon. H. J. Paterson, Surgeon.	<i>z</i> .
(H. Whale, Throat Surgeon. Memorial Hosp., Mildmay Pk. S. H. Habershon, Con. Physics (To be continued)	ian.
OMISSIONS IN PREVIOUS LIST	
Charing Cross Hospital { J. A. Bloxam, Con. Surgeon. E. B. Waggett, Surgeon, N Throat and Ear Department.	ose,
General Hospital, Tottenham) H. W. Carson, Sen. Surgeon. Royal Free Hospital	t.
Undon School of Medicine for Women M. L. Hepburn, Lect. in Ophth (West London Post-Grad. College { R. W. Lloyd, Sen. Anæstheites. (West London Hospital) { and Lect. on Anæstheites. (N. W. Bourns Administrator	of
Westminster Hospital Anasthetics. F. de Havilland Hall, Con. Phy	ıs.

ERRORS.

North-East London Post-Gradu-ate College (Prince of Wales' F. Trewby Have left the General Hospital, Tottenham)

Examinations and Degrees.

UNIVERSITY OF OXFORD.

October, 1913.

The degree of M.D. was conferred upon L. T. Burra, A. F. S. Sladden

The degree of M.B. was conferred upon G. W. Carte.

UNIVERSITY OF CAMBRIDGE.

October, 1913.

First M.B. Examination.

Part I : Chemistry.—C. M. Billington. Part II: Physics.—C. M. Billington, P. T. Liang. Part III : Biology.—C. M. Billington.

Second M.B. Examination.

Part II (New Regulations) .- A. B. Appleton, E. T. D. Fletcher

. E. Kindersley, H. D. McCall, J. B. McFarland, J. A. B. Snell, C. R. A. Thacker.

D.P.H.

W. J. Cran, W. G. Hamilton, E. C. Williams.

The following degrees have been conferred : M.D.--C. B. Heald, G. W. Twigg. M.B., B.C.--H. J. Couchman, R. Hodson, A. C. Roxburgh, G. A. Smythe.

M.B.-C. C. H. Binns, T. E. Osmond. B.C.-R. S. Morshead

UNIVERSITY OF LONDON.

Third M.B., B.S. Examination for Medical Degrees.

For Internal and External Students.

October, 1913.

Pass List.—A. C. L. O'S. Bilderbeck, A. J. Clarke, J. M. Curé, W. H. Jones, E. N. Snowden, E. W. Whiting, G. Whittington. Supplementary Pass List: Group II.—W. Simpson, F. G. A. Smyth.

UNIVERSITY OF DURHAM.

The following degrees have been conferred :

M.D.-R.C. Tweedy

M.B., B.S.-R. L. Kitching, J. S. Soutter.

CONJOINT EXAMINATION BOARD.

October, 1913.

First Examination.

Chemistry and Physics .- T. C. Higgins, C. G. J. Rayner. Practical Pharmacy .- C. J. L. Blair, J. Macadam.

Second Examination.

Anatomy and Physiology .- V. R. Mirajkar.

Final Examination.

The following have completed the examinations for the Diplomas of M.R.C.S. and L.R.C.P.: E. J. Bradley, H. J. Bower, C. S. Atkin, J. W. Stretton, E. H. P. Brunton, E. E. Mather, G. T. Loughborough, O. G. Maginniss, F. E. S. Willis, C. B. Vakil, H. R. Dive, F. T. Hill.

Primary Fellowship Examination.

A. G. T. Fisher, H. E. Griffiths, H. T. Hunter, R. A. R. Wallace.

Royal Maval Medical Service.

The following appointments have been notified since September 20th, 1913

Fleet-Surgeon H. Spicer to the "Indefatigable," undated. Staff-Surgeon A. Woollcombe to the "Victory," for trials of "Iron

Duke," November 14th, 1913.

Surg. E. Moxon-Browne to the "Triumph," for Hong-Kong

Hospital, to date November 8th, 1913. Acting-Surgeon P. Wallis to the "Victory," additional for Haslar Hospital, to date September 25th, and to "Victory," additional for course of instruction at the Naval Medical School, Greenwich College and R.N. Hospital, Haslar, to date October 20th, 1913.

51

Acting-Surgeons F. Wright and D. Arthur have been confirmed in the rank of Surgeon in H.M. Fleet, with seniority of April 11th, 1913.

October 17th, 1913 .- One of the prizes, for the subjects in which instruction is given at Haslar, was awarded to Acting-Surgeon F. C. Wright, of St. Bartholomew's Hospital. Acting-Surgeon F. C. Wright also received special commendation for being second in the Second Haslar Group, and for the consistently

good work he has done throughout the examinations.

Rew Addresses.

- BATES, T., jun., 44, Foregate Street, Worcester. (Tel. 167.) BOULTON, Major H., I.M.S., Deputy Assistant Director of Medical

- BOULTON, Major H., I.M.S., Deputy Assistant Director of Medical Services for Mobilisation, 7th (Meerut) Division, Meerut, India.
 CANTI, R. G., 63, Palace Court, Bayswater, W. Formerly 24.
 COOK, J. B., Brentford Union Infirmary, Isleworth.
 DALE, C. B., 66, Bristol Road, Birmingham. Formerly 106.
 DUNN, J. C. S., 27, Warwick Road, Upper Clapton, N.E., and 159, Old Street, E.C.
 GLENNE, F. T. Shakersens Hause Heister Association of the second sec
- GLENNY, E. T., Shakespeare House, Hainton Avenue, Grimsby. HILL, R. G., 10, Castle Street, Farnham.

- HILL, K. G., 10, Castle Street, Farnham.
 HORNER, N. G., 48, Philbeach Gardens, Kensington, S.W.
 HOWELL, B. W., Royal National Orthopædic Hospital, Great Portland Street, W.
 HOWELL, C. M. HINDS, 145, Harley Street, W.
 INCHLEY, O., 32, Rustat Road, Cambridge.
 MACKAY, E. C., 29, Warrior Square, St. Leonards-on-Sea.
 MAW, G. O., Coningsby, Shortlands, Kent.
 MORSHEAD, R. S. Evelina Heavital for Children. Southwark Bridge.

- MORSHEAD, R. S., Evelina Hospital for Children, Southwark Bridge Road, S.E.
- NEWMAN, Sir GEORGE, Grims Wood, Harrow Weald, Middlesex.
- O'KINEALY, Lieut.-Col. F., I.M.S., Superintendent's House, Presi-dency General Hospital, Calcutta.
- PRICE, Lieut. R. B., R.A.M.C., McGrigor Barracks, Aldershot,
- FRICE, Electric I., Cavendish Place, Cavendish Square, W.
 Напts.
 Рибн, J. W., 17, Cavendish Place, Cavendish Square, W.
 RANKEN, D., Victoria House, 72, Jesmond Road, Newcastle-on-Tyne. (Tel. 1520 Central.)
 SODEN, W. S.; Metropolitan Hospital, Kingsland Road, N.E.
 Soneren J. S. Metropolitan Hospital, Kingsland Road, N.E.

- Soutter, J. S., Metropolitan Hospital, Kingsland Road, N.E. STANGER, G., Wolverhampton and Staffordshire General Hospital, Wolverhampton.
- STANLEY, E. G., 145, Harley Street, W. STIDSTON, C. A., 14, Waterloo Road, Wolverhampton. Additional address.
- TAYLER, H. P., 13, Higher Broadway, Exmouth. WIGAN, W. C., Luddesdown, Gravesend.

Appointments.

- BOULTON, Major H., I.M.S., M.B., B.C. (Cantab.), M.R.C.S., L.R.C.P., appointed Deputy Assistant Director of Medical Services
- for Mobilisation, 7th (Meerut) Division, sub pro tem. Cooκ, J. B., M.D., Ch.B. (Vict.), D.P.H. (Cantab.), M.R.C.S., L.R.C.P., appointed Medical Superintendent to the Brentford
- Union Infirmary, Isleworth. FEILING, ANTHONY, M.B., M.R.C.P., appointed Assistant Physician
- to the Metropolitan Hospital. HEPBURN, M. L., M.D.(Lond.), F.R.C.S., appointed Ophthalmic Surgeon to the Royal Free Hospital and Lecturer in Ophthal-
- mology to the London School of Medicine for Women. HoweLL, B. W., M.B., B.S.(Lond.), M.R.C.S., L.R.C.P., appointed Senior House Surgeon at the Royal National Orthopædic Hospital,
- Great Portland Street, W. MORSHEAD, R. S., M.B., B.C. (Cantab.), M.R.C.S., L.R.C.P., ap-Mokshead, K. S., M.B., B.C.(Calitato, M.R.C.S., E.R.C.F., appointed House-Dhysician at the Evelina Hospital for Children, Southwark Bridge Road, S.E. NEWTON-DAVIS, Captain C., I.M.S., M.B., B.S.(Lond.), M.R.C.S.,
- L.R.C.P., appointed Specialist in Throats and Ears to the Northern
- Army, India. SODEN, W. S., M.R.C.S., L.R.C.P., appointed House-Physician at the Metropolitan Hospital, Kingsland Road.

SOUTTER, J. S., M.B., B.S.(Durh.), M.R.C.S., L.R.C.P., appointed House-Surgeon at the Metropolitan Hospital, Kingsland Road. STANGER, G., M.B., B.Ch.(Oxford), M.R.C.S., L.R.C.P., appointed House-Surgeon at the Wolverhampton and Staffordshire General

DECEMBER, 1913.

Hospital, Wolverhapton.

Births.

- BOULTON.-At Rockcliff, Mussoorie, on September 30th, 1913, the wife of Major H. Boulton, I.M.S., of a daughter.
- LEGGE.—On the 22nd inst., at 5, Cannon Place, Hampstead, the wife of Thomas M. Legge, M.D., of a son.

LINDSEY.—On November 6th, 1913, at "Beaumont," Irving Road, West Southbourne, Bournemouth, the wife of Mark Lindsey, M.R.C.S., L.R.C.P., of a son.

Marriage.

MACKIE – BALL. – On November 22nd, 1913, at St. Paul's Cathedral, Calcutta, Captain F. Percival Mackie, I.M.S. (formerly K.G.O. Central India Horse), son of the late Rev. John Mackie, Rector of Filton, Glos., and of Mrs. Mackie, Compton Greenfields, to Gladys May, younger daughter of W. J. Ball, Upper Belgrave Road, Cliftore Brittel Clifton, Bristol.

Deaths.

- GODSON.—On November 26th, at 5M, Montagu Mansions, W., Clement Godson, M.D., V.D., of Sharsted Court, Westgate-on-Sea, and late of 82, Brook Street, W., Knight of Grace of the Order of St. John of Jerusalem.
- HUGHES.—On October 19th, 1913, D. W. Hughes, M.R.C.S., L.S.A. of Wyndham, Norfolk.

Acknowledgments.

The Nursing Times, The British Journal of Nursing, The Practitioner, The Narsing Times, the Braish Journal of Narsing, the Fratt-tioner, The Magazine of the London (Royal Free Hospital) School of Medicine for Women, New York State Journal of Medicine, The Student, Guy's Hospital Gazette, St. Mary's Hospital Gazette, Middlesex Hospital Journal, Medical Review, University College Hospital Magazine.

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, Smithfield, E.C.
- The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., at the Hospital.
- All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVER-TISEMENT MANAGER, the Journal Office, St. Bartholo-mew's Hospital, E.C. Telephone : 1436, Holborn.
- A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price IS. post free) from MESSRS. ADLARD AND SON, Bartholomere Close. MESSRS. ADLARD have arranged to do the binding, with cut and sprinkled edges, at a cost of Is. 6d. or carriage paid 2s. 3d.—cover included.



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VOL. XXI.-No. 4.]

JANUARY, 1914.

PRICE SIXPENCE.

St. Bartholomew's Hospital Journal,

JANUARY 1st, 1914.

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

CALENDAR.

Thurs., Jan	1.—Second Examination Conjoint Board begins.			
Fri., "	2Dr. Tooth and Mr. D'Arcy Power on duty.			
Mon., "	5.—Second Examination of the Society of Apothecaries			
	begins.			
Tues., ,,	6Winter Session resumes.			
	Final Examination Conjoint Board (Medicine)			
	begins.			
	Dr. Garrod and Mr. Waring on duty.			
Wed., ,,	7First Examination of the Society of Apothecaries			
	begins.			
Thurs., "	8Final Examination Conjoint Board (Midwifery)			
	begins.			
Fri., ,,	9Final Examination Conjoint Board (Surgery)			
	begins.			
	Dr. Calvert and Mr. McAdam Eccles on duty.			
Tues., ,,	13.—Dr. Morley Fletcher and Mr. Bailey on duty.			
Wed., "	14.—Oxford Lent Term begins.			
Fri., ,,	16.—Dr. Herringham and Sir Anthony Bowlby on duty.			
Tues., ,,	20Dr. Tooth and Mr. D'Arcy Power on duty.			
Fri., "	23Dr. Garrod and Mr. Waring on duty.			
Tues., ,,	27Dr. Calvert and Mr. McAdam Eccles on duty.			
Fri., ,,	30Dr. Morley Fletcher and Mr. Bailey on duty.			

EDITORIAL NOTES.

HE Etherington-Smith Memorial fund is still some \pounds_{30} short of the desired \pounds_{2000} . In our last issue we published a letter from the Dean, appealing for the balance required, but apparently the letter has not been read, or we cannot but think that this small amount would have been forthcoming. We therefore appeal through our editorial column to those students, both past and present, who knew and revered Mr. Etherington-Smith, to do their utmost to make good the amount in question.

In our last issue we called attention to a meeting of students of the University of London which was held with the intention of commending the report of the Royal Commission. That meeting was, as we explained, adjourned. The new meeting was held on December 5th.

No notice of this meeting was sent to the Hospital, and it was only by accident that we heard of it on the morning of the same day.

We suspected that the promoters, in their anxiety to carry their motion, had of malice aforethought attempted to keep in ignorance those whom they suspected of opposition. The time was too short for us to gather our forces together, but we felt that protest was necessary, and that an amendment from the medical students ought to be moved, so, with but one or two supporters, we attended the meeting and entered the lists.

There were probably between 1200 and 1500 students present altogether, and, having secured permission to ascend the platform, we sent forth our protest against the exclusion of the medicals from this so-called *representative meeting*.

The secretary rose, and replied that there were so few medicals present at the last meeting that he did not think it worth while to notify them.

The students present, however, did not swallow this pill, and, on their sporting instincts being appealed to, they passed an amendment on behalf of the medicals to the effect that the report of the Commission, in as far as it concerned medical teaching, was not entirely satisfactory and needed revision.

Had due notice been given we could no doubt have mustered a force sufficient to adjourn the meeting again, and this would have been preferable, because, as we said

last month, such a meeting is entirely premature, considering that the faculties had not sent in their reports.

*

We extend our hearty congratulations to Mr. R. M. Vick and to Mr. K. J. A. Davis, both of whom have taken their M.C. degree at Cambridge. Further, we have to congratulate Mr. Vick on his appointment as Assistant Surgeon to the Metropolitan Hospital.

It is with very much pleasure that we note that Mr. H. E. G. Boyle and Mr. J. F. Trewby have been appointed Anæsthetists to the Hospital after five years' service as assistant anæsthetists. We offer them our heartiest congratulations,

On November 27th at a General Court two new governors were elected : Miss Ada Crosby, daughter of the Lord Mayor, Alderman Sir Thomas Crosby, M.D. Elected in respect of services rendered in connection with the grant of \pounds 500 received from the Executive Committee of "Alexandra Day." Lewis Gladstone Glover, Esq., M.D.Cantab., Ophthalmic House Surgeon in 1894. Elected in respect of a donation of \pounds_{105} from his father, Sir John Glover, J.P.

Owing to the Christmas holiday season we are obliged to go to press early, and can, therefore, give no account of the festivities in the wards. We have no doubt, however, that these will prove as successful and attractive as heretofore, and we shall hope to give some account of them in our next issue.

Upon inquiry of Mr. Edwin J. Layton, Honorary Secretary of the Appeal Committee, as to the present position of the Fund, he informs us that, up to date, 1150 contributors have been good enough to send in subscriptions and donations amounting to $\pounds_{10,450}$. The help of all the present friends of the Hospital and that of new friends is still needed to meet the annual deficiency of income, further to reduce the debt to the bankers, and to make it possible to contemplate the rebuilding of the nurses' home.

The Honorary Secretary would be deeply grateful for any contributions, be they small or large. They should be sent to him addressed : "Honorary Secretary of Appeal Committee, St. Bartholomew's Hospital, E.C."

We have to announce with great regret the death of Sir Trevor Lawrence, which took place on December 22nd. Sir Trevor Lawrence was the son of Sir William Lawrence, F.R.S., surgeon to this Hospital, and first baronet, and was in his eighty-second year. He was treasurer of the Hospital from 1892 to 1904. A more adequate obituary notice will appear in the next number of the JOURNAL.

"SOME BART.'S MEMORIES," 1877-1881.

[JANUARY, 1914

By WALTER H. JESSOP.

Being the Sessional Address delivered to the Abernethian Society on October 3rd, 1913.



R. PRESIDENT, Ladies and Gentlemen,-First of all may I congratulate the President on the honour his fellow-students have conferred upon him and wish him a happy and prosperous year of office. I am sure you will all be delighted to see, after some years' absence, the historic chair of our founder, even though it has been restored almost beyond recognition.

Next may I say that the subject of this address was suggested to me by your most persuasive secretary, Mr. Keynes, and little did I dream how difficult it would be to arrange. As far as possible I wish to restrict the time to my student and house-surgeon days, 1877 to 1881. I have already given you an address on the subject of my thirteen years in the dissecting rooms, which has not yet been published, as the facts dealt with were then of too recent date. More than thirty years, however, have passed since the occurrences I now attempt to chronicle, and I hope that, as when telling tales, which perhaps had better not be told at all, one is often skating on very thin ice, I may not offend anyone's susceptibilities. In a grand, ancient and venerated hospital as St. Bartholomew's, tradition and memories must necessarily play a great part.

> " Hic schola magna sedet medicinæ, cujus in omnes Pervenit terras fama, et ubique sonat,"

to quote the words of the Poet Laureate in his classic 'Carmen Elegiacum de Nosocomio Sancti Bartolomei Londinensi,' from which the other Latin quotations mentioned here are taken.

To-night it would ill become me not to say a few words of our great founder, John Abernethy.

"Mens et Abernethi docta, jocosa, sagax."

Pupil of Percival Pott, he carried on the principles of surgery enunciated by his master, who was the first surgeon of his day and a scientific writer compared by some to Celsus.

The following interesting lines I found about Pott in an old book of 1825: "His life was a national blessing, his death a national loss; he enlarged the bounds of art, human malady shrunk before him; he was eyes to the blind, and feet to the lame. . . ."

Abernethy was so celebrated as a lecturer and attracted such a large class in Bartholomew Close that the Governors of this Hospital built him a Lecture Theatre, probably on part of the site of this theatre. His lectures, delivered sitting in the famous chair, were distinguished by clearness and impressiveness of delivery, at times accompanied by a

peculiarly descriptive play of the facial muscles. There are many tales extant of him and I mention two in Mr. Luther Holden's own words:

"Can I ever forget the old theatre in which our great Founder, Abernethy, delivered his famous lectures, and the rickety old armchair from which he gave the most famous of them all? Would you care to hear the substance of it? Don't be alarmed ; it consisted of only four words. Abernethy came at 7 p.m. to give the surgical lecture, and, as usual, the theatre was crammed. 'Johnny,' who had indulged in an extra glass of his old port and felt it, was rather loth to enter the theatre lest his voice should betray him. However, in he walked and sat in his chair, silent for a few minutes. The students wondered what was amiss with him and cheered. Thereupon he opened his mouth and said, 'Gentlemen, keep diseased parts quiet.' Then he left the theatre amidst a storm of applause." Acting on this text, John Hilton, surgeon to Guy's Hospital, wrote his well-known valuable book on Rest and Pain.

Shall I tire you if I put in another of Abernethy's pithy sayings? Well, it was his practice to give an introductory lecture on October 1st. On one of these occasions, if not the last, very nearly the last, the theatre was crammed with students old and new, as usual, expecting some of his racy tit-bits. He came in, sat in his old arm-chair, looked silently for two or three minutes round the theatre and then exclaimed in a most pathetic voice—" Good God ! What's to become of you all ?"

Now passing to my own memories, which must necessarily from the time at my disposal be of the patchwork order, I have endeavoured to make them as interesting as possible by anecdotes and tales, which are as truthful as such materials generally are. I only hope that the chestnut bell will not be constantly ringing. Mr. Bruce Clarke has kindly helped my memory on some points, and I am sure you will all be delighted to hear that in a letter just received he says : "I really am very fit now."

In October, 1877, I entered here as student with several other Cambridge men. At that time St. Bartholomew's Hospital was well and strongly represented at Cambridge by Professors Paget and Humphry, but the entry of Cambridge men had not been greatly on the increase before this year.

I am bound to confess that the lode-star guiding us to St. Bartholomew's Hospital was the Warden, Dr. Norman Moore, by whose exertions and tact the Bart's entry was steadily increasing to reach its highest number in 1880.

No Warden ever had a more persuasive manner or possessed greater power in setting before a would-be student the enormous advantages St. Bartholomew's offered. To a Cambridge man his arguments were impossible to withstand, and no wonder my friends and myself after visiting the other hospitals elected to enter here—a decision we have never once regretted.

We were told and greatly impressed that the scheme had

been passed to rebuild the Theatres, Museum, Dissecting Rooms and Library, and to make the school far and away the best in London. With the audacity of poverty, my only possessions being the last two years of a Tancred Scholarship, I joined the most expensive London medical school; in those days the dressership fees were eight guineas for three months, and the house-surgeon had only rooms and $\pounds 25$ a year. Luckily by coaching I was able to keep myself and pay my fees during these years.

As showing the knowledge of physiology in 1877 I set a paper for a school, and amongst the very poor answers the following deserve record: "What are the functions of the liver? When your liver is bad you feel very bad—at least, that is what my father says. What are the gases of the atmosphere? Oxygen and nitrogen and zoedone (a popular temperance drink) by the sea. Enumerate the changes taking place in the food from its entrance in the mouth to its exit from the stomach? The food goes in at the mouth and comes out at the anis."

On looking about for a word to make you understand the conditions of the scientific world about 1877 I think "change" perhaps best expresses it. Everything pointed to great changes. Physiology, owing to the guiding hand of Michael Foster, was taking steps to secure a position distinct from anatomy, and the Cambridge school was being formed. In surgery new methods of dressing wounds were being tried, to prevent, or at all events diminish, suppuration and pyæmia. Terebene painted on to allow the wound to heal under a scab was one method, but most surgeons were using carbolic oil or lotion. Pasteur's work had enabled Lister to pursue his antiseptic studies.

It must be borne in mind that the routine was for every surgical wound to be poulticed, and that so-called laudable (non-stinking) pus was to be encouraged.

As everything sounded "change," so even the old Hospital was to be structurally altered by the removal of the Giltspur Gate and the erection of the new school buildings. In 1877 Dr. Robert Bridges wrote in the Hospital *Reports*, vol. xiv, p. 167, an account of the Casualty Department which I strongly recommend you all to read, and suggested changes in the Surgery which have only of late years been carried into effect.

You students, with your splendidly equipped laboratories and your specially trained teachers, can scarcely realise that thirty-five years ago in the London schools there was no physiology, no biology, pathology only represented by a little morbid anatomy, no Electrical Department, no bacteriology. The first demonstration on bacteriology in this Hospital was given by me before your Society on February 19th, 1885, the apparatus and specimens coming from the Healtheries Exhibition. We had few text-books, and those expensive and not written for examination purposes. This was really greatly to our advantage, as we had to observe for ourselves and learn from clinical work and lectures. There were no "cram" books, no "aids," and the average man had a poorer chance than he has to-day.

Time sheds a glamour over the past, and one always hears the older men say, "Where are the giants of the past?" In 1850 one talked in bated breath of Pott, Abernethy, Vincent; in 1877 it was of Lawrence and Paget. Looking back now, one sees that the men of 1877 were just as great. What a grand Surgical Staff we had ! Holden, Savory, Callender, Tom Smith as full surgeons ; Willett, Langton, Morrant Baker and Marsh as assistant surgeons. The most popular member of the Staff was the Senior Surgeon, Mr. Luther Holden, well designated the "students' friend." Endowed by Nature with a very handsome face and perfect carriage, he looked the aristocrat, and his kindness and refined manner won the affection of the student. His long apprenticeship in the dissecting-room made him give anatomy the foremost place in his surgical teaching, and no new book was more appreciated than his Landmarks, Medical and Surgical.

His frequent visits to the dissecting-room were looked forward to by us all, and everyone tried to attract his attention. Sitting on a stool, with generally a bone in his hand, he would make us demonstrate the dissection to him, and then impress the main points on us, all the time trying to help, and not saying, "When you have read it up I will come again and look at it." He was considered the kindest and most popular examiner of his time at the College of Surgeons, where then, as now, the opposite qualities were bestowed on many others. At this time he was very keen on the treatment of popliteal aneurysm by digital compression of the femoral artery, and every student about was pressed into this service so as to ensure relays of men day and night.

Mr. Savory, the second surgeon, was a strikingly handsome man, with a very strong lower jaw and mouth. His finely proportioned vast forehead, smooth, cleanly shaven face, sharp alert eye impressed all and frightened many. He was by nature left-handed, but used either hand with equal ease.

A very good and careful operator (you must remember the operating in those days consisted chiefly of amputations), in amputating a breast he would hold the knife in one hand for the first incision and change it to the other for the second.

On the Surgical side, since the time of Percival Pott, St. Bartholomew's has been celebrated for possessing a great orator, and the succession from Pott passed to Abernethy, Lawrence, Paget, Savory, and Butlin. Sir William Savory was to many the greatest orator of all, certainly as a master of style.

He had studied oratory under Bellew, and told me he had never lost an opportunity of hearing a great speaker or seeing a celebrated actor. His lectures on surgery were largely attended, and he rivetted the attention by his perfect periods and by his incisive similes, such as : "Pyæmia or pus in the blood, there, you have it in a nutshell." "Hypertrophy or enlargement of the part; you see it best in the blacksmith's arm or the ballet dancer's calf, and I advise you to look at the former."

The Hunterian Oration was perhaps his greatest *tour de force*, and it ended with a wonderful peroration just on the stroke of the hour. I was sitting next to Professor Huxley, who turned and said, "Too perfect; I wish he had made a mistake!"

The great power of oratory was never better exemplified than by the way in which he carried the whole meeting with him in his address at the British Medical Association's meeting at Cork in August, 1879. The subject, "On Prevention of Blood Poisoning in the Practice of Surgery," was directed against Listerism.

As a debater he could hold his own with anyone, and as an expert witness he was unassailable. One of the greatest barristers tried to upset his evidence in an Old Bailey trial. "Mr. Savory, I think you said the patient's temperature was 98.4° ; what would you have thought if it had been 99.4° ?" "One degree more," was the reply, to the delight of the crowded court and the complete discomfiture of the counsel.

An extraordinary instance of his debating power was demonstrated at one of the annual meetings when the members of the College of Surgeons parade their grievances before the President and Council. A speaker beginning his speech on the side of the Council with "Mr. Ernest Abraham" encountered very fierce opposition from the members, and the meeting became a regular bear-garden for noise. After the lapse of a few minutes and in response to calls of "chair" Mr. Savory rose and said simply this: "Gentlemen, I am here as President of the College and chairman of this meeting to adjudicate on points of order not those of taste. Mr. X. is in order." Roars of laughter greeted the announcement. A very noisy meeting became a peaceful one, and Mr. X. went on with his speech.

The junior surgeon, Mr. Thomas Smith, known always as Tom Smith, was perhaps the most generally beloved of all the staff.

> Unus homo vobis operando restituit rem, Quod natura parum fecerit, ille facit.

His kind, happy disposition and sympathetic nature was ever ready to help student or colleague. Added to this, he had the charm of always being able to make a joke without hurting the feelings of anyone.

He was a brilliant surgeon, and made his reputation first by his skill in cleft-palate and hare-lip operations. The great draw of the theatre was to see him do lateral lithotomy. The news would quickly spread round the Square, the theatre would be packed, nearly everyone holding his watch to count the fifteen to twenty seconds from the initial incision to the thud of the stone in the receiver. It was as wonderful as any feat of legerdemain. Then, after the patient had

left the theatre, he would say a few points about the case, and perhaps in his inimitable manner advise anyone attempting lithotomy to have a stone always ready in his pocket.

My medical clerking was done for six months with Dr. Gee, whose portrait is the best, perhaps, of all Dr. Bridge's personal descriptions in the "Carmen," the lines, well known by most, ending :

Teque Auscultantem, palpantem et percutientem Pectora, sic morbi ducere signa vident.

He was truly a philosopher, and to the end a disciple of Bacon; his style, replete with Saxon words, was his own, and the amount of his work was simply limited by his health. A sufferer from migraine, his slow deliberate speech and movements were typical of the atheroma he eventually succumbed to. Unable to climb hills as of yore he says in one of his last letters, "I console myself with Bacon's saying, 'the vale best discovereth the hill.'"

Dr. Gee was a great master of clinical medicine, and the two hours spent in his wards on an afternoon were a liberal education. Standing with the patient's board in his hand on one side of the bed, he would listen to the dresser's history of the notes of the case. As the dresser was reading Dr. Gee would put short concise notes, in beautiful copperplate writing, rarely more than a few words, on the board. He would then examine the patient and add his own notes, with the result that the few lines contained the epitome of the case. Questions were then asked the clerk, and the diagnosis almost always put on the board. No one ever pressed facts home more than he did or gave better reasons for the reading of the case.

Dr. Gee was a sceptic as regards most medicines, as the following talk to his clerks will explain.

"Gentlemen, in the homœopathic pharmacopœia you will find a remedy for every disease, nay, more, two or three for each. Now, I have worked at nearly all the chief remedies, new and old, and can safely say I know only two specifics—mercury for syphilis and quinine for ague, and the latter is not always a specific." With all his learning and seriousness he could have at times a pleasant bantering manner, and from this fact many stories were fathered on him. To the "No" of a member of the staff to the question, "Do you know what Hippocrates said of Bright's disease?" the answer came : "You know, Dr. X., Bright's disease was not known in Hippocrates' time."

The next is perhaps a better one from Dr. Gee's love of ancient medicine. "Have you read an old Greek author" —mentioning the name—"on the liver? I have given it to the Medical Chirurgical Society." "No, Dr. Gee, I will get the book out of the Library." Five weeks later, going round the wards, Dr. X. announced he had read the book. "What did you think of it?" "I could find nothing in it." "No more did I, and that is why I gave it to the Medical Chirurgical Society."

In 1877 the staff was greatly strengthened by the advent of Dr. Matthews Duncan, who came from Edinburgh, and wielding a sledge-hammer made the obstetric medicine of the present day. His lectures were largely attended and were very original. Absolutely dogmatic in his utterances he evinced the greatest pity and contempt for much of the usual work in London, and never did a man better succeed by pure insistence. The Listerian principles, including the spray, were brought by him from Edinburgh, and one day Tom Smith, in his inimitable manner, pleased him much by saying, "Well, Duncan, this is a real Scotch mist."

Although saying at times in his lectures excessively funny things, he never turned a muscle of his face whilst doing so.



THE STEWARD, 1887.

He was a great hater of anything unreal, especially as to the neurotic complaints of patients, and frequently, as in the following case, his extreme honesty and integrity was characterised as bear-like. I remember his visit to a society lady who, adorned in her best clothes and jewels, was lying in bed waiting for the doctor. Taking not the slightest notice of the patient he walked straight through the bedroom to a large window looking out on some big oak trees. After a few seconds he turned round and said : "Well, madam, if you would hang some marrow-bones on those trees all the little dicky birds would come and peck at them."

Of the executive staff of the Hospital no man ever endeared himself more to all of us than the Steward, Mark Morris. Under a bluff, honest exterior he tried to conceal the kindest heart possible. With hat on head, a paper in right hand, his head a little on one side and carried backwards, he would walk with a swaying movement into the Square and see that everyone was doing his business. To

see him really upset as to the Hospital's good, which was ever uppermost in his thoughts and heart, was the chance of a birth at the Hospital. His dread in such cases was that the child might be left on the parish and therefore be a burden to the Hospital. He was scarcely ever away from the Hospital a day, and we told him he thought the Hospital could not get on without him. His portrait, painted by subscription, hangs in the Steward's office—a living presentment. When Ouless, who painted it, asked him what he thought of the picture, the answer was: "It is very good, but everyone would say they had never seen Mark in such a good hat."

Amongst his many sayings I remember he used to say that no man could do his duty in a place like the Hospital and be popular; that the best materials for a steward to be made of were india-rubber and nails. He called himself "Morris Magnus, Magister Moralum and Licensed Dealer in Patients."

One department was as well conducted in those days as now, namely, practical anatomy. At St. Bartholomew's the two demonstrators of Anatomy, Mr. Cumberbatch and Mr. Walsham, ably assisted by two assistant demonstrators, were in teaching, knowledge, manual dexterity and helping power as perfect as human nature could provide. The supply of bodies was good and there was no lack of parts for dissection or for practical surgery.

The Dissecting Room, much smaller than the present, was **T**-shaped, and the present Anatomical Department covers the space then occupied by the Dissecting Room and the Anatomical Theatre. During the building of the present Dissecting Room the old round Anatomical Theatre was used as a temporary dissecting room, and round the fireplace there the following incident took place.

Every great speaker has some slight involuntary trick, and Sir William Savory used to slightly rub the hair near the mastoid process with his thumb-the fingers being extended. One day a prosector was copying the great orator, when, without being seen, Mr. Savory appeared and said-" Very good, almost to the life." The counter-stroke occurred two months after at a physiological examination at the College of Surgeons. The same prosector was asked to prick his finger, and put up a specimen of blood. The examinee was asked what he saw under the microscope and replied-"Blood." "Quite right, sir," said Mr. Savory, "Now I wonder if you could tell me whether the blood is that of a vertebrate or that of one of the invertebrates or lower class of animals." "That of an invertebrate, sir," replied the examinee. "Quite right," said the examiner, "something like a worm."

One can scarcely imagine the difference in those days from to-day with the Amalgamated Clubs and Students' Union, the splendid ground at Winchmore Hill, and last, but not least *The Students' Journal*.

The Abernethian Society flourished as now, though it

seems to lead a very quiet existence with none of the fiery elements of opposition as in those days, when at the annual general meeting the president made his own laws, knowing that at the next meeting he would be out of office and not responsible.

As to our clubs, there was a fives' club, with a silver cup, which disappeared with the funds and the secretary, a boxing club, which held its meetings in a room over a shop in Giltspur Street, the Rugby football club, and occasionally a rowing club. The Rugby Football Club was formed in 1873, and in 1881 the team, under the captaincy of Harry Campbell, who initiated the looser and quicker game, won the Inter-Hospital Cup for the first time, a success repeated for the second and last time in 1883 under C. O'B. Harding.

There was a Cambridge Medical Graduates' Club, which introduced us to the older Cambridge men at an Annual Dinner. I remember so well at the first dinner I went to our Botany Lecturer recited "The Society on the Stanislaus," and not to shock us substituted occiput for abdomen, the lines running, " but, a chunk of old red sandstone took him on the occiput."

The old Surgery facing Smithfield was a large hall 90 ft. by 30 ft. with rooms opening off it at the four corners for the House-Surgeons and House-Physicians. There were two enclosed spaces, shut in by screens, about the centre of the room, and here the Junior Assistant Surgeon, the Junior Assistant Physician, and two Casualty Physicians saw cases every morning. Immediately opposite the main door was the Dispensary with windows at which two nurses (called the "Fairy" and the "Angel") served out the more common medicines.

The noise and confusion from 9 o'clock till 10, when the doors were closed, was deafening, and I must refer you to Dr. Bridge's excellent account of the Casualty Department for a full description.

Dr. Bridges, now Poet Laureate, was a most excellent clinical teacher, and notwithstanding the noisy environment gave us many a useful lesson in the Pillbox, as we called the screened space. How he ever managed to diagnose the diseases under these conditions was a wonder to all, and must have been an inheritance from the days when the apothecary—Mr. Woods—sorted the cases chiefly by facial diagnosis. Of Mr. Woods, who existed before the time of house physicians, there were many tales told. Standing up in the Casualty Department he would utter his favourite dictum : "Now all of you who want your bowels open come this way." The patients filed before him, and selecting the obstructions for admission he gave the remainder suitable cards for medicines. It is related of him that he once cured a case of obstruction by giving an enema of soda-water.

A popular surgery mixture was known as "Queen Anne," composed of iron and quassia, but supposed to be quinine. A much vaunted remedy for coughs was the linctus made with rose hips. There was an old tale of a woman who

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came or sent a child so often for it that she was watched and found to sell it in the streets as tartlets.

Another and more probable belief was that the cod-liver oil was used for lamp oil by some patients.

The excuse given by a patient for coming to the Surgery was: "Well, sir, I don't know there's anything the matter with me, but as I was passing the Hospital, I thought I would just slip in and have a dose of medicine."

Such cases tended to run up the great total then of 157,497 patients relieved in one year, and Dr. Bridges reckoned the cases were seen at the rate of 150 in less than two hours.

In the Out-patient Room was a relic of the past in an old operating chair with a very high back, used before the advent of anæsthetics. It was padded and covered with stout leather, and from the sides dangled broad straps to encircle the chest and limbs and prevent struggling.

The only operating theatre was the old one in Abernethy block, with its tiers of seats. On the floor was the cushioned table used indiscriminately for operations and for patients to lie on for Thursday consultations. In a dark cupboard were kept the operating coats of the surgeons, ordinary frock or tight overcoats, dirty and bespattered with the gore of years—the older apparently the better liked. The operating chair of Abernethy was kept in the theatre, but only as a relic of the past.

Operations took place at 1.30 p.m. on Wednesday and Saturday afternoons, and the surgeons had to wait in order of seniority for their turn. The assistant-surgeons scarcely ever operated except during the vacation or in cases of emergency, and then for their seniors. It was not an uncommon occurrence about 3 o'clock to see as many as three full surgeons in the theatre at the same time.

The operations in those days were chiefly straightforward ones, but Mr. Willett, the most go-ahead of the surgeons, was beginning to do extensive dissections in malignant disease. One severe operation on the penis, involving dissection of the inguinal and lumbar glands, occasioned the passing remark of Mr. Savory, "Is this a railway accident?"

You house-surgeons with your assistant house-surgeons to help you may think your work hard, but it is easy compared to the work then.

The surgical wards were distributed between four surgeons and each surgeon had one house-surgeon only. Every month the surgeon had one week of full duty and one week at the women's end of the Surgery.

There were eight dressers, and the house-surgeon was on duty day and night for a week. If a case came at night during his week on duty and was not seen by the house-surgeon he was reported to the office. We were kept in order, and our times of appearance in the morning noted down by a very conscientious and depressed-looking curator of the Surgery.

During my house-surgeoncy, owing to an epidemic of diphtheria and to Mr. Willett being surgeon to the women's wards, I had at the same time cases in no less than

eleven wards: Pitcairn, Harley, Darker, President, Lazarus, Magdalen, Casualty, Radcliffe, Martha, and our corresponding two medical wards. Diphtheria cases were nursed in the general wards, and the cases remained in the medical wards after tracheotomy.

The Square in those days had no shelters, and we stood round the Fountain waiting the arrival of the carriages of the surgeons and physicians. The conservatism of antiquity demanded that no one below the Senior Staff should drive in, an unwritten rule not broken for many years. I believe Mr. Cripps was the first to break it, and then, *horresco referens*, a student started to drive a dogcart in.

The best-turned-out carriage was Mr. Callender's—a very neat pill-box brougham with a pair of black-brown horses. Dr. Gee drove very fast grey horses and had a coachman with a face like a prize-fighter. Whilst waiting for their masters one day Dr. Gee's man blacked very successfully Mr. Savory's smart coachman's eye, and we waited with delight to hear the "How, Gee, am I to drive home with a man with an eye like that?"

As to the general discipline in those days, there was no such thing as a Discipline Committee and the number of "chronics" was very large. On the first of October appeared always a dozen or more of these "chronics"—perpetual students who had very likely passed no examinations. They frequented the Square and loafed about the Dissecting Rooms and Operating Theatre to gain acquaintance with the freshmen, who they introduced to the billiard rooms at a public-house, the "Rose and Crown," close by. They only remained about a month and then disappeared, to return the following October.

The Discipline Committee, under the Secretaryship of Mr. Bruce Clarke, later on cleared the whole gang off. But as far as the Square and School buildings were concerned you will be surprised to hear a strict rule was enforced as to not smoking which was well observed.

One great excitement was the snowball riot, which originated by a snowball going through the gate and accidentally hitting a policeman on the shoulder. After a short time an inspector from Snow Hill and twenty-five policemen came in and unsuccessfully tried to seize the students, who rolled them over in the snow. Several truncheons were lost and decorated the rooms in College for years. Whilst the war was waging opposite the College and elsewhere Mr. Savory and Sister Kenton were espied watching the fun with their heads out of a "window" and greeted with roars of laughter.

During my clerking a book was being written on abdominal tumours, and by mistake two patients with abdominal tumours arriving the same day were changed, and the obstetric case came into the Medical Ward. After an exhaustive examination as to the locality of the tumour, the clerk suggested whether it might not be a pregnancy. Dr. Matthews Duncan was sent for, and after hearing the diagnosis of probable splenic tumour, examined the patient, and, without a smile on his face, said, "Amongst other things, a baby will be born in the space of a few hours," and twins duly made their appearance.

In February, 1881, I became House-Surgeon to Mr. Willett, following, as I did afterwards for many years in the rooms, Mr. Lockwood.

Never could a house-surgeon have had a kinder, more conscientious, or more beloved master than Alfred Willett. He was a most careful and thorough operator, and his diagnosis was rarely at fault. Well over 6 ft. in height, he was exceedingly strong and active, and it was a difficult matter to keep up with him as he ran up the stairs to the wards. At that time osteotomy was perhaps his favourite operation, and his strength and gentleness were admirably fitted for the work. One difficult case has always impressed me greatly as showing his judgment and power of diagnosis. You will find the account of it in the Hospital Reports, vol. xvii, p. 243. As there had just been the first successful operation for rupture of the bladder at St. Thomas's Hospital, we were all on the look-out for such a case. A man injured by a lift accident had all the usual symptoms, and, with the eagerness of the neophyte, I immediately sent for my surgeon. He came down, and the diagnosis was at once utterly upset by simply one question : "When did you pass your water?" and the patient replied, "Half an hour before the accident."

But perhaps the greatest change of all since the seventies is that in the Nursing Department. You, sister and nurses, with your charming blue, pink and white attires, can hardly credit the position, treatment and condition of the hospital nurse then. You may complain that the palatial Nurses' Home is not built yet, but a few details will convince you how lucky it is you were not here in the old times.

As to the nursing in those days, all will agree that it was very different and very inefficient as compared with the present high standard. The sisters of the wards were very delightful, homely, kind creatures, and possessed of great common-sense. Sister Casualty (Miss Jenkins) gave her reminiscences in 1902 in the *Journal of St. Bartholomew's Hospital Nurses' League*, p. 134, and many of the following statements I borrow from her paper. She entered in 1877 among the first batch of lady nurse probationers under Mrs. Drake, and had to sleep in a room off the ward. The only ward baths were in the ward kitchens; they were covered over, and the dinners served on the covers. The night nurses slept Box-and-Cox with the day nurses off the wards. All nurses and sisters had food cooked and eaten in the ward.

When ovariotomies—simple, straightforward cases only were first done in "Martha," the nurse went on duty continuously for thirty hours after the operation, so as not to frighten the woman, and she had to take the pulse every hour and the temperature every two hours as an offset.

The urine and motions remained in the ward under the beds for any time up to twenty-four hours.

The night nursing was partly done by women of the charwoman type, who came in at night. Many took bribes of money and gin from the friends of patients.

All wounds were poulticed, the poultices being changed before the surgeon's arrival. Extra poultices and other duties were paid for by the patients at a regular tariff of so many pence.

The probationers were not altogether to the liking of Mrs. Drake, the Matron, who herself wore no uniform, and objected to the "lady nurses" in the present probationers' uniform with small caps without strings.

As to dress, the sisters wore blue merino dresses without caps or aprons, and the staff nurses had brown merino dresses, ordinary aprons, and caps of any description if they liked to wear them.

The following tale of the sort of test used to prove a woman's ability to undertake the solemn duties of hospital nurse serves to show the difference of the knowledge required now and then. The candidate had just lost her husband, and, anxious to get something to do, came to Bart.'s and fell in with Mark Morris, who was at the time trying an ordinary hand battery. He made her hold the handles in her hands, expecting she would cry out, and when she didn't, but pluckily submitted in silence to the shocks, he said, "Ah ! you're the right sort ; come and be a nurse." This she did, and in a short time was made Sister Mark, a post she held for more than thirty years.

Mr. Bruce Clarke has kindly written the following description of a Surgery anecdote which occurred whilst he was House-Physician.

It was Sister Mark who when I arrived back late at Bart.'s one night and went round the wards, said to me in reply to questions as to whether any new cases had come in during my absence, "Yes, but it is only one of them shammers come for a night's lodging." So I innocently remarked, "Then I suppose we shall have to keep him till the morning." "That's as you please," said she. So realising she had something up her sleeve, I said : "Well let's go and see the patient." When we got to the bedside I saw a miserable specimen of humanity lying on the bed covered with a dirty old blanket, and sister delivered herself of the following speech : "Since you have been out, sir, this poor man has been brought in. He fell down in a fit in St. Paul's Churchyard. Of course, sir, I knew the seriousness of the case so I put him to bed just as he was with all his clothes on. I didn't even remove his boots till I got your permission." And then she went on, "Of course, you know as well as I does that if this poor man's life is to be saved, he must have a hoperation this very night." Then in an altered tone of voice she called out "Nuss, go and fetch all the House-Surgeons and the House-Physicians and the chloroformist and the box of instruments, and whatever you does be quick or we shan't save the poor man's life," and then, pulling me by the coat, she quietly remarked, "You had better come and sit in my room till all is ready," which I did. In a few minutes we heard the patient calling "Sister, Sister," and I said "Hadn't you better go and see what's up?" "No," said she, "it don't matter." At last we heard "Sister, Sister," again; then the ward door closed with a bang. Sister put her head out of her room and remarked: "Who banged that door?" "Please, Sister," said a patient, "the poor man that was brought in in a fit has run away." "And a jolly good job, too," said she. I sat in her room and roared with laughter at the little play which had been rehearsed with the nurses before.

And now to end this olla podrida, may I mention a more personal memory that to-day remains as vivid as thirty-two years ago. During the whole of my association with St. Bartholomew's I have been the recipient of the greatest kindness from all, but the care and extreme kindness shown during the severe attack of diphtheria I had when House-Surgeon in 1881 could not be exceeded. The infection was due to a cut on the right index finger while assisting at a difficult tracheotomy operation, and I was nursed in my room in the residents' quarters by Sister Pitcairn (Miss Mathew probably), to whose care and firmness I owe my life. It was a very near thing, and the turning-point was a large cup of bread and milk which Sister by extreme patience and persuasion induced me to take. The finely divided bread irritating the back of my throat made me cough for six hours, and in consequence I was able to present a good cast of my bronchi to the Museum. This specimen Dr. Gee used to lecture on as the bronchi of a house-surgeon, and the thickest membrane he had ever seen beyond the postmortem room.

In the multitude of counsellors there is wisdom, and never can I be grateful enough to the daily procession of six (Dr. Gee, Mr. Willett, Mr. Butlin, Dr. Hall, Mr. Bowlby, and Mr. Mason) to whose skill and attention I recovered.

I commenced by impressing on you the word "change" as the password of 1877. Looking back thirty-six years it seems almost impossible to realise the magnitude and extent of the changes since then in science. The traditions of our glorious Hospital have been well maintained and nowit will be for you in turn to hand them down pure and unsullied to future generations.

> "Things past belong to memory alone, Things future are the property of hope."

ELECTROTHERAPY—IN THE PAST AND AT THE PRESENT DAY.

By E. P. CUMBERBATCH, M.B., M.R.C.P.

PART II.

N the last number of the JOURNAL a brief account of the history of medical electricity was given. Its progress was slow, especially in the earlier stages, because no one then understood the mode of action of electricity on the body. Static applications were seen to cause shocks and muscular commotion, galvanic and faradic currents produced sensory effects and muscular contraction, high-frequency currents produced often "une chaleur désagreable" (d'Arsonval), but there was much uncertainty whether these effects were essential or subsidiary in the production of therapeutic results. In consequence of this, all kinds of cases were tried so as to see whether electrical treatment would benefit them, and in the early days, when the methods of applying electricity were very few, the process of sifting the suitable from the unsuitable yielded much chaff and little wheat. Even at the present day the prevailing lack of knowledge of the action and the method of action of electricity on the body often leads to its prescription for cases for which it is quite unsuitable, cases which have derived no benefit from other forms of treatment, and drift down, like derelicts, to the electrical department on the chance that some good may be done them there.

Another reason why the progress of electro-therapy has been slow in this country is to be found in the smallness of the number of those who take up this branch of medicine. Few are attracted to it, probably because in their student days they do not see their cases treated, so that they obtain no knowledge of modern electrical methods, while the textbooks on medicine and surgery contain little more than an account of muscle-testing-an account which is not very inspiring. Further, electrical treatment is in many cases followed by no immediately visible results, so that it is open to sceptics to say that results just as good would have occurred if there had been no treatment at all. All this is responsible for the view held by some that electrical treatment is suitable only for derelicts and hysterics. Much of the electrical treatment that is practised at the present day is given in "homes" or "institutes" by people, whose supposed claim to practise it is the possession of a certificate of proficiency in nursing or massage. Yet patients are frequently sent to such places under the impression that it is only necessary to set the machine working or the current flowing, and that no clinical knowledge is necessary.

Then again, the mischievous application of electrical methods, or methods which are called electrical, has formed a field for exploitation by quacks. A book on "electro-

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homceopathy" gives it out that "positive (red) electricity should be applied to the negative parts of the body, that is, the right side of the head and trunk and the inner side of each limb. The negative (yellow) electricity should be applied to the positive parts. . . Both electricities should be applied in succession to the central line of the body. . . Sanguine patients as a rule require blue, rather than red electricity."

An advertiser (from New York) announced that "by delving into the dusty records of the past, and, at the same time, keeping abreast of the latest discoveries of modern science, he had made an astounding discovery, in that he had at last discovered the elixir of life."



STEPHANE LEDUC, PROFESSOR AT THE SCHOOL OF MEDICINE AT NANTES.

At the present day we may recognise that electrical applications, the majority, if not all, act either by the *chemical* (ionic) effects which they produce or by their *thermal* effects. This is the teaching of Dr. Lewis Jones, and it enables us, as he says, to see what results may be reasonably expected from electrical treatment, and teaches us how to proceed so as to obtain the results desired.

Electricity can be applied to the body in the form of electrical currents in their different forms. In order to understand how they can cause *chemical* or *thermal* effects on the body, it is necessary to remember that electrical currents pass through the body in a way quite different from that in which they traverse metallic conductors. Just as a man can walk on land as far as the edge of the sea, and then must take a boat if he wishes to cross it, so the elec-

tricity gets as far as the body in the metallic conductor, and then is carried through the body by the ions present in the tissue fluids. If there are no boats, the man cannot cross the sea; so, if there are no ions, no current can traverse the body. The ions are derived from the salts dissolved in the tissue fluids. It will be remembered that when a salt is dissolved in water, a certain percentage of the molecules divide into two parts, each part of the molecule taking an electrical charge-one part a positive charge, the other a negative charge. These electrically charged parts are the ions. When the body is placed in an electrical circuit, the ions in the tissue fluids begin to migrate, those with the positive charge passing to the negative pole, those with the negative charge passing to the positive pole. There is, therefore, a redistribution of the ions; in other words, an alteration in the composition of the tissues so far as its saline constituents are concerned. When the ions reach the pole they give up their electrical charge and are transformed into the free state, and they may then undergo further chemical changes. There is, therefore, a formation of new chemical bodies at the poles, and a re-distribution of the ions between the poles. Further, if pads moistened with aqueous solutions of salts or drugs be placed on any part of the body, between it and the wire conveying the current, ions can be made to pass through the skin into the body. This method of introducing drugs is known as "medical ionisation." The electrical current can, therefore, be used for three purposes : (1) To produce an alteration in the saline composition of a region. This is the probable mode of action of the galvanic current in causing absorption of fluid effusions. (2) To cause a formation and accumulation of chemical bodies around the poles. These bodies, if they have a caustic action, may be used for the purpose of destroying tissues such as hair-follicles, moles, etc. (3) To bring about the introduction of new chemicals from without.

The foregoing is an account of the mode of action of electricity in producing chemical changes and an explanation why it is possible to use it for introducing drugs into the body. The process takes time, and therefore a continuously flowing current is required-the so-called galvanic current. The faradic current cannot be used because it is intermittent, flowing only for very brief periods with an interval between each period. But this current, also, has to be conveyed by ions. The ions make a sudden movement or jerk, and if the movement is sudden enough it constitutes a stimulus to excitable tissue. The action of electricity in stimulating excitable tissue is thus really a chemical action, a sudden ionic displacement. If there were no ions, electrical currents such as are used for physiological and therapeutic purposes would be powerless to cause muscles to contract. And if the movement of the ions is not sufficiently sudden, no contraction will occur. The mere movement or migration of the ions does not act as a stimulus unless it is sufficiently sudden. Now if the current, strong enough to cause muscular contraction if it passes in one direction, be made to oscillate with extreme rapidity across the body there will be no muscular contraction because the ions remain stationary, or, at any rate, do not move sufficiently, in the short time available, to act as a stimulus. The current may be made stronger and stronger and still no contraction will be produced. Finally, when the current would be strong enough to kill, were it to pass in one and the same direction, the body begins to appreciate a sensation of warmth. The body can tolerate a current of 3 ampères, provided that it oscillates with sufficient rapidity, and if electrodes of large area be used, an agreeable sensation of heat is produced. If the current were unidirectional, one half of an ampère would be sufficient to produce death. Now the high-frequency apparatus of d'Arsonval and the diathermy apparatus as devised by Nagelschmidt produce currents which oscillate at an extremely rapid rate (the so-called "high-frequency" currents). When these currents are passed through the body, part of the electrical energy is transformed into heat, and this heat is produced in all parts where the current flows, not only in the superficial parts, but also in the depths of the tissues. No other device can produce this "thermo-penetration," and high-frequency currents produce their therapeutic effects by means of their thermal action.

In order that some idea may be obtained of electrotherapy as it is at the present day, of the cases suitable for treatment, of the form of electrical treatment given, and, as far as possible, how it acts, an account will be given of the types of case commonly attending the electrical department. At the time of writing, 163 patients are on the register as receiving treatment-60 men, 37 women, and 66 childrenranging in age between four days and seventy-five years. This list includes 92 cases of paralysis from various causes, such as nerve injury, neuritis, myelitis, anterior poliomyelitis, Fifty-nine of the 92 are cases of infantile palsy, while a few are cases of paralysis agitans, hemiplegia, and craft palsy. What sort of electrical treatment should be given to cases of paralysis? Apart from the actual cause of the paralysis and the attendant symptoms, which should also be included in the treatment, the paralysed muscles and nerves should be traversed by electrical currents. The currents may be conducted to and from the part by means of moistened pads placed upon it, or the whole part (if a limb) or the whole body may be immersed in a bath in water traversed by the current, so that the latter may enter or leave the part in all directions.

Now the kind of current that is used and the way in which it is applied makes all the difference if successful results are to be obtained, and this has been proved by experimental and clinical evidence. A galvanic current applied with the strength constant (as is done in many places and institutes) will do little or no good. It will cause no contraction of muscles, except, perhaps, at the moment of

entering and leaving the bath, but merely some migration of ions, and this does little or no appreciable good. A faradic current, if applied continuously, with strength sufficient to cause muscular contraction, will do harm, because the muscles are tetanised, fatigued, asphyxiated, and deprived of lymph and blood. If the faradic current is not strong enough to produce contraction, some improvement will result, but slowly and in small amount. Whichever current be used, it is essential that it should vary rhythmically between zero and the maximum. The prevailing opinion is that the faradic currents should be used if the muscles react normally, galvanic currents if the muscles show the reaction of degeneration. Experiments that have been done on animals have shown that normal muscles, when treated by suitable electrical applications, increase in size, the increase being due to actual growth of muscle. The same has been shown in the case of man. In one set of experiments (on animals) there was a 40 per cent. increase when rhythmically varying faradic currents were used. The rhythmic galvanic currents produced the next best results (18 per cent. increase). The sustained galvanic current produced but little increase, while the sustained faradic current produced diminution in size of the muscles, and there was histological evidence of damage to the muscle-fibres.

For some years rhythmically varying currents have been used in the treatment of paralysis in our Electrical Department, and Dr. Lewis Jones has always advocated their use. Now other hospitals are beginning to adopt the methods recommended by him. The incorrect application of electrical methods in the treatment of paralysis is responsible for the view, held by some, that electrical treatment is of no use, or inferior to massage, and that it does harm when used for infantile paralysis. Dr. Lewis Jones says that, in his experience, the worst cases of infantile paralysis that he has seen have been those which have had no treatment, while, on the other hand, he has never known a case which has been sufficiently treated by proper electrical applications become worse, so as to require, later on, perhaps, amputation-a requirement which may be necessary if all treatment is neglected. On the contrary, he has known cases, in which the muscles gave a reaction of degeneration, give normal reactions after a course of treatment.

(To be continued.)

A CASE OF MASSIVE POST-OPERATIVE COLLAPSE OF THE LUNG.

By R. St. Leger Brockman, M.R.C.S.

HE comparative rarity of occurrence and the still more infrequent accuracy in diagnosis of this form of lung complication after abdominal operation is, I think, sufficient warrant for reporting the following case in the JOURNAL.

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History.—A schoolboy, æt. 9, was admitted to Kenton Ward on November 15th, 1913, complaining of "having sat on an iron spike." At 5 p.m. on the day of admission, whilst climbing over a railing during a game of hide and seek, the patient slipped, and an iron bar standing upright in the ground entered his rectum. The boy pulled the spike out himself and walked home. He was taken to a doctor, who sent him up to the Hospital at once.

On admission.-When seen at 10 p.m., the patient looked ill and flushed. His tongue was furred : temperature, 101'4° F.; pulse, 120; respirations, 28. His lungs were natural; heart-apex-beat in fifth space inside nipple line. The cardiac dulness did not extend to the right of the sternum. His abdomen was not distended, but it did not move at all in the lower half with respiration, and it was rigid and tender below the umbilicus, especially in the left iliac fossa. The diagnosis was made of "peritonitis following a lacerated wound of the rectum." At 10.45 p.m. the boy's abdomen was opened by Mr. Gordon Watson. A laceration $\frac{1}{2}$ in. long was found at the level of the reflection of peritoneum from the rectum on to the pelvic wall. A culture made from this area subsequently grew streptococci, Bacillus coli, and a few anaërobic bacilli. The laceration was closed with two tiers of Lembert sutures. The abdomen was closed in layers without drainage, 3iv of olive oil were introduced into the rectum, and a rectal tube was fixed in position.

The patient's condition on returning to bed and during the night was all that could be desired.

The next morning, at 11 a.m., the boy was very well. His temperature was $100^{\circ}4^{\circ}$ F.; pulse, 120; respirations, 28.

At 11.30 I was sent for. The boy had suddenly collapsed. Temperature, 102.8°; pulse, 140; respirations, 56. At first sight the boy's condition suggested pulmonary embolism. On examination the apex-beat was found in the fifth space outside the nipple line, and the cardiac dulness extended $1\frac{1}{2}$ in. to the right of the sternum. The base of the left lung behind, from 2 in. above the angle of the scapula downwards, was completely dull on percussion, and marked bronchial breathing was heard over this area. Dr. Garrod examined the boy, and made the diagnosis of "massive post-operative collapse of the lung," but thought that there was some additional acute septic infection, and that the boy's hours were numbered. After this examination his pulse disappeared completely at the wrist, his pupils became dilated, and his respiration almost ceased. After mxxv of Curschman's solution and a pint of saline containing 3j of brandy given intravenously the boy rallied somewhat.

He was then put on two-hourly injections of atrop. sulph. gr. $\frac{1}{100}$ and liq. strych. Mij. These were continued for some hours until the patient began to show signs of the toxic effect of these drugs, and they were then at once stopped. Later in the afternoon, as the boy's heart was still much dilated, two leeches were placed over the præcordium. The boy's condition now began to mend, and

by 3 o'clock the next afternoon the dilatation of the heart had disappeared, his respirations were reduced to 30, and the signs in the lungs were only to be found with difficulty. Except for some slight suppuration round the skin sutures the patient made an uninterrupted recovery.

The possibility of accounting for the boy's condition by some acute septic process is, I think, quite put out of court by the subsequent history of events. The rapid recovery made by this patient in thirty-six hours would have been quite impossible if some virulent organism had been the cause. On the other hand, the clinical picture presented by this patient completely fits in with the description of this condition given by William Pasteur in the Annual Oration to the Royal Society of Medicine for 1908. This condition, he says, occurs in cases of abdominal section, chiefly in cases where the seat of operation has been above the level of the umbilicus. It is independent of the kind of anæsthetic used, and is not due to any toxic effect of ether or chloroform on the lungs. In this case a.c.e. mixture was used for induction, the anæsthesia being continued with chloroform. Pasteur claims that the active cause is a reflex inhibition of the diaphragm, and as evidence of this he quotes the condition of atelectasis found in the newborn. The lessened movement of the diaphragm after abdominal operation he has seen on the X-ray screen, and in certain cases the condition has been verified post-mortem when no embolism or blocking of a bronchus has been found. The commonest mistake made is to diagnose the condition as one of post-operative pneumonia. The collapse of the lung usually comes on within twenty-four hours after the operation, and the recovery usually takes place in twentyfour hours to three days. The onset of pneumonia is generally of later occurrence, and its course is of considerably longer duration. The collapse is rarely fatal, though such cases have been known to find their way to the post-mortem room, where nothing further has been found to account for death.

The onset of the condition is sudden, followed by a gradual though rapid recovery. The chief signs are the displacement of the apex-beat, and sometimes evidence of acute dilatation, such as there was in this boy. There is inaction of one side of the chest, with consequent over-action of the other side. There is dulness and bronchial breathing over the affected area, but without crepitations. At first sight the condition strikes one as very alarming, the patient looking so ill and collapsed, but the prognosis is fairly good as the cases rarely prove fatal.

Nothing has been written anywhere as to the treatment of the condition. In this case the patient was laid flat in bed; oxygen was given hourly for ten minutes. Atropine and strychnine were pushed till the patient showed signs of their physiological action. I have used these drugs in other cases in a similar manner, where patients have been almost *in extremis*, and am firmly convinced that such use is justified by the results. Their toxic effects can be seen at once, and then the use of the drugs stopped for a time. Brandy with plasmon and egg was given every two hours through a nasal tube, as the patient would take nothing by the mouth, the egg being given in the form of ovaltine. The application of the leeches was on the advice of Mr. A. G. Evans, who saw the case with me two or three times during the day.

Mr. McAdam Eccles has published a case, in which this complication followed a lumbar nephrectomy, in the West London Medical Journal, vol. xvi, p. 282.

I am much indebted to Mr. Waring for permission to publish the notes of this case.

A CASE OF APICAL EMPYEMA.

By B. WHITCHURCH HOWELL, M.B., B.S., M.R.C.S., L.R.C.P.

HE following case may prove of interest.

A. B., æt. 6, was admitted into the Royal Free Hospital under the care of Dr. Phear on June 8th, 1913, suffering from pneumonia.

History .- Sudden onset of pain in the right hypochondrium with pyrexia, cough and vomiting, two days before admission

Condition on admission .- Signs typical of right apical pneumonia developed, with a leucocytosis of 24,000.

Treatment.-Linseed and mustard poultices to the chestwall, and respiratory and cardiac stimulants.

Progress.—The crisis seemed to occur on the eleventh day of the disease (June 15th), and for three days the temperature, pulse and respiration were normal. The physical signs began to clear up. Then the temperature and pulse began to rise—on one occasion, June 23rd, the temperature was 103.8° F., the pulse 120, and respirations 36. No fresh patch of consolidation could be found and the ratio P/R was normal. The physical signs were thought to be those of delayed resolution (improved note on percussion, tubular breathing, redux crepitations).

The temperature, however, never fell below 100°, and as the physical signs were unchanged, the case was transferred to the Surgical side on July 8th. Under a general anæsthetic I explored the third right interspace in front, and removed a few cubic centimetres of greenish-yellow pus, which gave pure cultures of pneumococci. I then resected about one inch of the third rib close to its cartilage with a special costotome, drained the underlying empyema, and inserted a drainage-tube so that its inner end lay just within the abscess-cavity, thereby avoiding irritation of the lung. The tube was fitted with a small square sheet of rubber next the chest-wall, and by stitching this to the skin the drainagetube was kept in position.

Further progress.—The wound was dressed daily, and any re-accumulation of pus drained by turning the child on to the right side of his chest and holding his body up at an angle of 45°. This proceeding he thoroughly enjoyed. The drainage-tube was removed in six days, and the patient was discharged cured on July 30th. He was seen again on September 20th in excellent health, with good expansion of the lung.

Comments.-(1) The case shows the difficulty sometimes experienced of diagnosing between an empyema and delayed resolution in pneumonia in children, the breath-sounds often coming through the pus, which does not always give the absolute dulness noticed in empyemata occurring in adults.

(2) The pain referred to the hypochondrium is interesting, especially as the pneumonia was apical and not basal.

(3) Apical pneumonia is not common, and apical empyema still less common.

(4) The leucocytosis was not indicative of pus, though the continued fever was; this shows us that pathology is not always a helpmate to clinical medicine.

(5) The secret of the after-treatment seems to be efficient drainage with fresh air and good food. The former was accomplished by the postural device described, and the latter by three weeks' stay in the country amplified by codliver oil and malt, cream, etc.

I am deeply indebted to Dr. Phear and Mr. Pannett for permission to publish these notes.

THE CLUBS.

ASSOCIATION FOOTBALL. SENIOR MIDDLESEX A.F.A. CUP.

(2nd Round.)

ST. BART.'S v. LONDON SCOTTISH.

This match was played at Winchmore Hill on Saturday, November 29th, and resulted in the Hospital being defeated for the first time

this season, the score being 3—1. Bart.'s began to press almost from the kick-off, and certainly looked like doing well. Many attempts were made at the goal, and one of them ended in Soutter's scoring. This, however, was very soon replied to by one of the Scottish forwards, who got clean away and scored.

After the change of ends things began to go wrong with the Hospital, and no one seemed up to form except Jameson at centrehalf, who played a good game throughout. On two further occasions in the second half the opposing forwards broke through the Bart.'s defence and scored. In this part of the game a penalty was given against the Hospital, but our opponents decided to shoot wide.

The following represented the Hospital :

R. G. Mack (goal); E. G. Dingley, H. Rimington (backs); E. M. Grace, G. D. Jameson, G. M. Cowper (halves); A. O. Courtiss, J. B. McFarland, L. Braun, J. S. Soutter, K. D. Atteridge (forwards).

RUGBY FOOTBALL CLUB.

The first half of the season is now over, and although the Hospital team has not been altogether successful, the side shows every promise of being really good, and it is felt on all sides that we have a better chance of winning the Inter-Hospital Cup this season than we have had for some seasons past. Unfortunately, so far we have never

turned out a really representative team, but it is hoped that the full team will be got together at the beginning of the New Year and will be able to play together regularly right up to the cup-ties.

Up to now the Hospital has won 5 and lost 6 matches. 115 points have been scored against us in contrast to 116 points in our favour. Our worst defeats have been by the Old Alleynians, the first match of the season, and by the R.M.C., Sandhurst, on a Wednesday. The games at Bedford and against Rosslyn Park were very closely con-

tested, and in each case we only lost, unluckily, by a small margin. The "A" XV have been playing consistently well and have won the majority of their matches. A notable victory was that over the Old Alleynians' "A," while the O.M.Ts.' "A" only beat us by three points. This year the "A" XV Inter-Hospital Cup should certainly come to Bart.'s.

In view of the all-important cup-ties which come off in February and March it is hoped that all Rugger players will keep as fit as possible during the "vac." and will make a point of turning out regularly next term with a strong determination to win one, if not both cups.

BART.'S IST XV v. STRATFORD-ON-AVON.

This game was played on December 6th, at Stratford, in pouring rain and semi-darkness. The Hospital team was not at full strength. The weather conditions rendered good football impossible, and the game was of the kick and rush type. After a lot of scrappy play, in which the ball was hardly ever haulded, Bart's were awarded a free kick, and Williams landed a good goal from somewhere near the half-way line. This proved to be the only score of the match, so

han-way line. I nis proved to be the only score of the match, so that Bart.'s were the ultimate winners by 3 points to o. Team: A. H. Little (back); C. Savory, J. C. W. MacBryan, A. E. Parkes, R. Coyte (three-quarters); R. H. Williams (capt.), D. D. G. Evans (halves); J. B. Mudge, E. J. Bradley, G. F. Juckes, F. G. A. Smyth, H. C. C. Joyce, C. W. B. Littlejohn, N. A. Scott, G. A. Beyers (forwards).

BART.'S IST XV v. ROSSLYN PARK.

The Hospital was unlucky in just losing this match at Winchmore Hill on December 13th. Neither side were at full strength, Fiddian, Bradley and MacBryan being away from the Bart.'s team. The game was very even throughout, and the home forwards got the ball mostly in the scrum, so that we were constantly attacking. Halftime arrived with no score. In the second half, Rosslyn Park scored a snap try under the posts while one of the Bart.'s forwards was laid out hurt and the attention of the side was consequently diverted. Bart.'s looked like equalising right up to the finish, but never managed to score, so that Rosslyn Park remained winners by 5 points to 0. Team

A. H. Little (back); C. Savory, A. E. Parkes, W. F. Eberli, W. E. Wilson (three-quarters); R. H. Williams (capt.), D. D. G. Evans (halves); J. B. Mudge, R. L. Kitching, G. F. Juckes, C. E. Kindersley, H. C. C. Joyce, C. W. B. Littlejohn, N. A. Scott, E. A. Fiddian (forwards).

THE DRAMATIC CLUB.

The Entertainment will be held on January 12th, 13th and 14th, instead of the 5th, 6th and 7th, as stated in the December issue of the Iournal.

CORRESPONDENCE.

FABIAN RESEARCH DEPARTMENT.

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

SIR,-The Committee of Inquiry into the working of the Insurance Act, instituted by the Fabian Research Department, has reason to believe that some insured persons are being refused the benefits to which the Act entitles them, and that many poor people feel unable to resist what seems to them oppression. Will you allow me, through your columns, to invite all who know of any case of what seems to be wrongful refusal of benefits, to write (in strict confidence) to me, giving full particulars ?

Information is wanted as to the following cases among others :

(1) Refusal of sickness benefit when the proved incapacity to work is caused by pregnancy, on the ground that this is not a disease. But the Act entitles to benefit for every "disablement," without specific disease, and Section 110 of the Commissioners' Hand-book explicitly recognises incapacity caused by the disablement of pregnancy as a valid ground for sickness benefit.

(2) Restriction of sickness benefit in pregnancy and maternity to a maximum of four weeks. There is no limitation of sickness benefit in the Act for members of approved societies, apart from the twentysix weeks' maximum.

(3) Refusal to continue sickness benefit, when the doctor certifies incapacity to work, on the ground that the patient is found (I) breaking the rules for persons on benefit (thereby incurring a fine only); (2) doing light household work deemed by the doctor not harmful; (3) even "looking after her children!"

(4) Refusal of sickness benefit on the ground that, although unable to follow his own occupation, the patient is capable of "some" work. This amounts to a parody of the law, for no one is ever incapable of any work whatsoever, unless he is continuously unconscious. (Even

the bed-ridden paralytic may knit, or pick peas, or write a book!) (5) Failure to provide the "adequate medical attendance and treatment," guaranteed by the Act for all cases without any exception. Particulars are desired of all cases in which (1) panel doctors have required payment for services beyond the scope of their contract with the Insurance Committee; (2) panel doctors have been unable to give the treatment required, e, g. surgery, eye cases, etc.; (3) hospital treatment was required and not obtained; (4) the prescribed drugs or appliances have not been supplied free of charge; and (5) appliances not included in the Commissioners' list (trusses, elastic bandages, spectacles, crutches, etc.) have been required and refused.

(6) Failure to provide what is required by tuberculosis patients, such as (1) inability to gain admission to sanatorium; (2) refusal of the necessary means of adequate domiciliary treatment, such as openair sleeping arrangements or necessary ventilation; (3) refusal to allow nourishing food, such as milk and eggs, which the Act

empowers the panel doctor to prescribe under certain circumstances. (7) Refusal of maternity benefit or of sickness in connection therewith, on the ground of "misconduct," or because of alleged breach of rules.

(8) Expulsion from approved society, for instance, on ground of "withholding material information."

The Committee welcomes testimony on both sides; and would like equally illustrative cases in which, under the circumstances indicated above, benefits had been given or continued and instances of their advantageous results.

[JANUARY, 1914.

I am, etc., SIDNEY WEBB.

37, NORFOLK STREET, STRAND, LONDON, W.C.; November, 1913.

THE BOOKSHELF.

REVIEWS.

SKIN DISEASES IN GENERAL PRACTICE: THEIR RECOGNITION AND TREATMENT. BY HALDIN DAVIS, M.B., B.Ch., B.A. (Oxon.), F.R.C.S.(Eng.), M.R.C.P.; Physician in Charge of the Skin Department, Paddington Green Children's Hospital; Chief Assistant in the Skin Department, St. Bartholomew's Hospital; Assistant In USAN Department, St. Batholomews Hospital; Assistant Physician to the Hospital for Diseases of the Skin, Blackfriars. (London: The Oxford University Press, Warwick Square, E.C.) Price 15s.

It is with particular pleasure that we welcome this excellent book, not only for the pardonable prejudice in its favour from its emanating from a member of the staff of this Hospital, but because we are glad to recommend to practitioners that rarest of blessingsa book which really supplies a need. Mr. Haldin Davis's book is eminently practical, for his classification of skin diseases is not an ætiological one (only the essential pathological features are considered), but it is based upon the distribution of the lesion, and thus enables anyone, however ignorant of even the commonest skin affections, to increase considerably his chances of recognising the condition, which in the case of disorders of the skin is absolutely essential for successful treatment.

It might be thought that an objectionable amount of cross-

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references would be entailed by this scheme, but so skilfully has the author done his work that this is by no means the case.

It may be said that the success of this book may largely be due to the peculiar circumstance, implied in the preface, that it was conceived in the author's mind when he was a student and when skins constituted to him the greatest of mysteries. In this way he has with exceptional success appreciated the difficulties of the uninitiated.

Since we feel justified in anticipating that this manual may well become a standard one and are perfectly certain that it will run to several editions, we feel that it may be of distinct advantage to criticise the illustrations. On the whole, we doubt if any real service is afforded by the ordinary half-tone reproductions of eruptions. If these are to serve merely as a means of enabling a reader to visualise the distribution of a rash, well and good; but when they are intended to indicate the character of the eruption we feel that generally they fail to be of the slightest educative value. True, the shape of the lesions may be faithfully reproduced in a photograph, but the recognition of a rash depends upon many other features, in particular its colour. The peculiar non-actinic colouring of most skin rashes renders the task of the dry plate an impossible one. Some slight improvement is added if elaborate colour screens and panchromatic plates are employed, yet even if this labour is undertaken, the result is in our experience disproportionately poor.

Our destructive criticism is issued in the hope that it may prove constructive. The colour photographs in Mr. Davis's book are so magnificent, such life-like renderings of the actual lesions, that one would like to see a future edition containing more of such photographs and fewer of the half-tones, even if the latter cannot be entirely eliminated. We are well aware that the cost of production of such pictures is very high, and the weight of the paper necessarily employed for such illustrations makes a book very heavy, but if our recommendation can be followed, we are sure that a considerable addition may be made to the value of a very valuable work.

We do not feel it necessary to select any features of the book for special consideration; in passing, however, it is interesting to note that, contrary to many dermatologists, Mr. Davis favours a rheumatic origin for erythema nodosum. We may say, however, that we have particularly admired the clearest description of the treatment of psoriasis that we have ever read, and the treatise on the treatment of the skin of the face ought alone to ensure a sale comparable to that of a popular novel.

The style is particularly good. Mr. Davis's book is delightfully easy to read; he employs well-chosen phrases and exercises care in his selection of "good English"—a feature very seldom encountered in scientific works. We have only one minor quarrel with him; even though he elevates it to the supreme position, we do not agree with his describing fresh air among "drugs."

EPIDEMIC INFANTILE PARALYSIS. By Prof. PAUL H. RÖMER, Translated by H. RIDLEY PRENTICE, M.B., M.R.C.P. Pp. 179, with illustrations. (London : John Bale, Sons & Danielsson, Limited.) Price 75. 6d. net.

This is a valuable monograph on poliomyelitis, in which the main eatures of the disease are set out from all points of view.

features of the disease are set out from all points of view. The book is divided into six chapters. Opening with an historical retrospect, a brief consideration of the symptomatology of the disease in man is given. The main portion of the work deals with ætiology and pathology; these sections are excellent, the author detailing at length his own animal experiments with the virus, and comparing the results he has obtained with those of other workers.

Prof. Römer is an enthusiastic follower of the monkey method of identifying the poliomyelitis virus. Though this monkey work is undoubtedly very valuable, and the monkey test conclusive when both the clinical symptoms of poliomyelitis and the pathological lesions are produced, we need to be a little cautious in our deductions when atypical results ensue. When virus produces in the monkey symptoms of general muscular weakness, without definite muscular paralysis, and post-mortem degenerative lesions without infiltration of the central nervous system, the result is not so conclusive. Control experiments carried out in the same way on the monkey with material from other diseases of children, possibly or even probably due to ultra-microscopic virus, are highly desirable in the present state of our knowledge before everything of this nature is classed "poliomyelitis."

The translator is to be congratulated on the highly finished way in which he has done his work. We are glad to notice that he has dispensed with an introduction by some obscure English writer,

which apparently is the usual practice when publishing a translation nowadays. A full bibliography is given, and the 57 illustrations, many of which reproduce histological changes in the monkey's nervous system, are excellent, though by many readers a section showing a normal "anterior horn" under high power would doubtless be much appreciated.

We heartily recommend this monograph to all those who are interested in the study, and especially to those engaged in the experimental study, of poliomyelitis. Indeed, to the latter it should prove indispensable.

HOSPITAL AND TEACHING APPOINT-MENTS HELD BY PAST STUDENTS OF THE HOSPITAL.

OMISSIONS FROM LISTS I AND 2. Hospital. Name and Post. (J. R. H. Turton, Dem. of Path. St. George's Hospital . (J. K. H. Turton, Dem. of Tuber and Asst. Curator of Museum. C.J. Ogle, Anæsthetist. (W. A. Turner, Phys. and Lect. on Neurology. F. W. Tunnicliffe, Asst. Phys. King's College Hospital and Medical School. W. R. Smith, Prof. of Forensic Medicine. G. Harrison Orton, M.O. in charge of X-ray Dept. J.E.S. Fraser, Lect. on Anatomy. W. G. Wynter, Phys. and Lect. on St. Mary's Hospital . Medicine. Stephen Paget, Cons. Aural Surg. Middlesex Hospital . H. Martin Grey, Asst. in Electro-J. H. Parsons, Ophth. Surg. and Lect. on Clin. Oakth University College Hospital Westminster Hospital . . London School of Medicine for [R. Farrant, Surg. Registrar. G. Harrison Orton, M.O. in charge of Elect. Dept. W. d'Este F Women (Royal Free Hos-. d'Este Emery, Lect. on Path. pital). Robert Jones, Lecturer on Mental West London Post-Grad. College J (West London Hospital). Diseases. L. W. Sambon, Lecturer. London School of Tropical H.Williams, Lect. on Post-Hygiene. Sir F. H. Lovell, C.M.G., Dean. F. W. O'Connor, Demonstrator. Medicine. Royal Institute of Public Health Prof. W. R. Smith, Principal. German Hospital . . A. Compton, Hon. Asst. Surg. London Temperance Hospital . A. Abrahams, Med. Registrar.

EXAMINATIONS AND DEGREES.

UNIVERSITY OF OXFORD.

The degree of M.B. was conferred on R. O. Ward.

UNIVERSITY OF CAMBRIDGE.

The following degrees have been conferred : M.C.--K. J. A. Davis, R. M. Vick. M.B., B.C.--H. W. Barnes, H. Y. Mansfield.

UNIVERSITY OF LONDON.

M.D. Examination.

Medicine .- G. Hadfield (University Medal).

B.Sc. Examination.

H. M. C. Macaulay (First Class Honours in Physiology).

UNIVERSITY OF LIVERPOOL.

The Diploma in Tropical Medicine has been taken by : E. C. Hepper, E. E. Wilbe.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Final F.R.C.S.

C. W. Archer, M. Bates, F. H. Diggle, A. L. Moreton, C. T. Neve, S. B. Radley, R. A. Ramsay, R. M. Rowe, P. J. Franklin, J. Gow, I. S. Bookless.

SOCIETY OF APOTHECARIES.

Diploma of L.S.A. has been granted to W. R. Sadler, H. V. Capon.

NEW ADDRESSES.

BATES, MARK, 33, The Tything, Worcester CORKER, Surg.-Gen. T. M., K.H.P., Headquarters, IXth Division, Ootacamund.

GASK, G. E. (Tel. Mayfair 3665.) GIRVIN, Lieut.-Col. J., R.A.M.C., Military Hospital, Curragh Camp. INNISS, Lieut.-Col. B. J., R.A.M.C., Meerut, U.P., India. JORDAN, A. C., 13, Upper Wimpole Street, W. (Tel. Mayfair 5340, unchanged.)

MASTERMAN, E. W. G., 80, London Road, Tunbridge Wells (temporary)

MILLER, T. M., c/o Dr. Lock, 3, Calverley Terrace, Tunbridge Wells.

Power, D'Arcy. (Tel. Mayfair 776.) RUSSELL, E. N., Health Office, Mombasa.

RYLAND, A., 30A, Wimpole Street, Cavendish Square, W. (Tel. Pad. 1950.)

STRAHAN, S. S., Manila Railroad Company, P.O. Box 44, Manila.

TRAVERS, E. 2, Phillimore Gardens, W. (Tel. 2305 Park.) WELLS, W. W., 97, Sloane Street. S.W. (Tel. Vict. 7167.) WILSON, Cyril, c/o Raymond Wilson, Esq., Wilsonia, Upsher, Balfour, Stockenstrom, Cape Colony.

WITH, Lieut. P. A., R.A.M.C., c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.

APPOINTMENTS.

MARSHALL, J. C., M.D. (Lond), F.R.C.S., appointed Assistant Surgeon to the Western Ophthalmic Hospital.

RUSSELL, E. N., M.B., B.C.(Cantab.), appointed Temporary Medical Officer to East African Protectorate, Mombasa.

RYLAND, A., F.R.C.S.(Edin.), appointed Registrar at the Central London Ear, Nose and Throat Hospital, Gray's Inn Road, W.C.

VICK, R. M., M.C.(Cantab.), F.R.C.S., appointed Assistant Surgeon to the Metropolitan Hospital, Kingsland Road, N.E.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments, promotions, etc., have been notified since November 21st, 1913:

Fleet-Surgeon H. Clift to the "Argonaut" and for group of ships of Third Fleet, December 1st, 1913.

Fleet-Surgeon H. C. Arathoon to the "Goliath," December 10th, 1913

Fleet-Surgeon A. Woollcombe to the "Venus," undated, and to The "Woolwich," on commissioning. Fleet-Surgeon E. Folliott to the "Majestic" and for group of

Thrd Fleet ships, January 1st, 1914. Staff-Surgeon N. Harris to the "Weymouth," undated. Surgeons F. Wright and D. Arthur to the "Vivid," additional for

disposal, December 1st, 1913. Staff-Surgeon A. Woollcombe promoted to the rank of Fleet-

Surgeon, to date November 29th, 1913.

R.A.M.C.

Surgeon-General T. M. Corker, K.H.P., has been transferred to the IXth (Secunderabad) Division, and his address is Headquarters, IXth Division, Ootacamund.

BIRTHS.

BECK .- On December 21st, at Bromyard, the wife of Ashton Beck, M.B., of a daughter.

FERNIE.—On December 13th, at 24. Crooms Hill, Greenwich, the wife of C. H. Fernie, M.R.C.S., L.R.C.P., of a son.
FOLLIOTT.—On December 3rd, at 67, Weymouth Street, the wife of Fleet-Surgeon E. Folliott, R.N., H.M.S. "Iphigenia," of twin sons.

- GIBSON.—On October 30th, 1913, at 4, Upper Gloucester Place, N.W., the wife of Sydney H. Gibson, L.R.C.P., M.R.C.S., etc., of a son.
- ODELL .- On December 14th, at "Ferndale," Torquay, the wife of William Odell, M.D., F.R.C.S., of a son.

SOAMES .- On December 17th, at Ridgeway, Reigate Hill, to Ralph and Mary Soames, a son.

MARRIAGES.

ASHLEY .- LAVINGTON .- On December 11th, at the Cathedral, Brisbane, by the Very Rev. the Dean of Brisbane, Thomas E. Ashley, M.R.C.S., L.R.C.P.(Lond.), of Brisbane, second son of R. W. Ashley, Esq., J.P., and Mrs. Ashley, of Woodville, Stoke Bishop, Bristol, to Muriel, second daughter of Mr. and Mrs. Cyril

BISNOP, Bristol, to Muriel, second daughter of Mr. and Mrs. CBy. E. Lavington, of Druid Stoke, Stoke Bishop, Bristol. (By cable.) TATCHELL.—FRASER.—On November 20th, at St. Paul's, West-bourne Grove, Percy Tatchell, M.R.C.S., L.R.C.P., youngest son of Edward Robert Tatchell, and of the late Mrs. Tatchell, of Northbank, Seaview, Isle of Wight, and 73, Holland Park, W., to Miriam, youngest daughter of the late James Fraser, of Lloyds, and of Mrs. Fraser, of 16, Prince Edward Mansions, W., and Craichill Kessock Craighill, Kessock.

DEATHS.

- LAWRENCE.—On December 22nd, 1913, at Burford, Dorking, Sir James John Trevor Lawrence, Bart., K.C.V.O., aged 81.
 WALCH.—On December 27th, at Brighton, Charles Nash Crosby Walch, M.B., of "The Croft," Rustington, sixth son of the late James H. B. Walch, of Hobart, Tasmania, aged 44.
 WELLS.—On November 14th, 1913, G. L. Wells, M.B., B.S.(Lond.), M.B., Ch.B.(Leeds), F.R.C.S., of 15, Eldon Terrace, Leeds.
 WOODS.—On December 10th, 1913, at Dashwood House, Ramsgate, from septic poisoning, Frank Woods, M.R.C.S., L.R.C.P., L.S.A.

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, Smithfield, E.C.
- The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., at the Hospital.
- All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVER-TISEMENT MANAGER, the Journal Office, St. Bartholo-mew's Hospital, E.C. Telephone ; 1436, Holborn.
- A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price 15. post free) from MESSRS. ADLARD AND SON, Bartholomere Close. MESSRS. ADLARD have arranged to do the binding, with cut and sprinkled edges, at a cost of 1s. 9d. or carriage paid 2s.—cover included.



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FEBRUARY, 1914.

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St. Bartholomew's Hospital Journal,

FEBRUARY 1st, 1914.

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

CALENDAR.

Tues., Fel	D. 3Dr. Herringham and Sir Anthony Bowlby on duty.
Wed., ,,	4Clinical Lecture (Surgery), Mr. Waring.
Fri., ,,	6.—Dr. Tooth and Mr. D'Arcy Power on duty.
	Clinical Lecture (Medicine), Dr. Morley Fletcher.
Tues., ,,	10.—Dr. Garrod and Mr. Waring on duty.
Wed., ,,	11Clinical Lecture (Surgery), Mr. D'Arcy Power.
Fri., ,,	13.—Dr. Calvert and Mr. McAdam Eccles on duty.
	Clinical Lecture (Medicine), Dr. Herringham.
Tues., ,,	17.—Dr. Morley Fletcher and Mr. Bailey on duty.
Wed., ,,	18.—Clinical Lecture (Surgery), Mr. D'Arcy Power.
Fri., ,	. Dr. Herringham and Sir Anthony Bowlby on duty.
	Clinical Lecture (Medicine), Dr. Tooth.
Tues., "	ADr. Tooth and Mr. D'Arcy Power on duty.
Wed., ,,	25.—Ash Wednesday.
	Clinical Lecture (Surgery), Mr. McAdam Eccles.
Fri., ,	, 27Dr. Garrod and Mr. Waring on duty.
	Clinical Lecture (Medicine), Dr. Garrod.
Mon., Ma	r. 2.—Hichens Prize.
	Applications for Luther Holden Scholarship to be
	sent in.
Tues., ,	, 💊.—Dr. Calvert and Mr. McAdam Eccles on duty.
Wed., ,	4Clinical Lecture (Surgery), Mr. McAdam Eccles.
Fri., ,	, V.—Dr. Morley Fletcher and Mr. Bailey on duty. •
	Clinical Lecture (Medicine) Dr. Calvert

EDITORIAL NOTES.

T is not long since we mentioned the formation of a "Concert of Editors" of the London Hospital Journals. Since this was formed a few months ago the editors have met several times, and some hard work has been put in. Most of the medical schools of Great Britain outside the metropolitan area are already represented as honorary members. So far we have concentrated our attention, first upon our own organisation, and secondly, upon that subject of so much importance to students-the Basle terminology. With reference to the latter we have been in correspondence with several of the larger publishers of medical works, and have pointed out to them the position in which matters stand. The battle is not yet finished, but we are able to announce that some at least of the publishers will keep their backs turned upon the unofficial innovation. Messrs. Cassell & Co., Ltd., in writing to us state--"We have no present intention of substituting the Basle anatomical terminology for the official terminology in books published by us"; while Messrs. Baillière, Tindall & Cox state that "We at any rate are not trying to force upon an unwilling body unacceptable terms for the sake of the increased profits in the United States and Colonial markets."

For the benefit of students who find a difficulty in obtaining up-to-date works in the old terminology, we wish to bring to their notice the fact that there are such books to be obtained, and if we refer specially to works on anatomy, it is because in other subjects there are plenty of standard works in the official terminology still on the market.

The books we would mention are *Buchanan's Anatomy*, Paterson's *Anatomist's Note-Book*, and as a revision book, Fagge's *Pocket Anatomy*. All these are still written in the old terminology for the most part, and used in conjunction with one another should prove a serviceable combination.

Buchanan's Anatomy is not quite so large as Gray's or

Cunningham's, and it is written on rather a different basis, being dealt with in special sections, after the same plan as Cunningham's *Practical Anatomy*. This makes it a very useful book to work with in connection with dissections, and though it is rather smaller than the other large textbooks, this is compensated for by the fact that it is more concise and more easy of digestion.

Paterson's *Anatomist's Note-Book* is a very useful book for dissecting purposes, but it must be used in connection with a larger book, such as the one above mentioned. This book has only just been published and a review is given on another page.

The names of Sir W. J. Collins and Surg. Gen. H. E. Hathaway both appear in the new year's honours list as having been respectively created K.C.V.O. and C.B. To both of these past students of the Hospital we extend our most cordial congratulations.

We heartily congratulate Mr. G. Hadfield on his success in obtaining the University Medal in the London M.D. Examination.

Further, we have to extend our congratulations to Mr. J. W. Gill, M.R.C.S., L.R.C.P., of St. Germans, who has been placed on the Commission of the Peace for the County of Cornwall.

On Sunday, January 11th, the centenary of the birth of the great Sir James Paget was celebrated at Great Yarmouth, of which town Sir James was a citizen. His son, the Bishop of Stepney and Bishop-Elect of Edmondsbury and Ipswich, preached at a memorial service, at which the civil, military and naval forces were all represented. An account of this historic event will be found in another column.

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As usual the wards on Christmas Day were resplendent with visions of fairyland. From room to room one might wander, and come ever upon some fresh scheme of decoration or some original plan for distributing pleasures. In one ward it may be the carnation and lily hold their own, in another paper, cunningly fashioned by patient and nurse, forms a canopy of wistaria, almost hiding with its delicate mauve blossoms the ceiling and the walls.

The entertainments by the various troupes and friends of the Hospital were well up to par this year. Indeed several people who had passed many a Chrtstmas Day beneath the roof of St. Bartholomew's remarked that taken all round they had never known a more entertaining series of entertainments.

In the morning there were two claimants to the title of "Father Christmas," one of whom was accompanied by a reindeer of somewhat fearsome appearance. Whether it was due to Father Christmas or to the reindeer we know not, but in one of the wards visited it is said that a little girl fled beneath the bed in terror; happily she was consoled when she was made to understand that the entertainment was for her most particular benefit.

Among the notabilities present was Mr. Winston Churchill. At least, he was introduced to us under that name. In spite of his correct "get-up" and general appearance, however, we should not have estimated the gentleman's age at more than six years. He carried a monocle—we are doubtful ourselves about this monocle, but as we do not know the First Lord of the Admiralty very intimately, we are not in a position to say whether it was a correct feature of the impersonation.

Perhaps the most curious part of the proceedings on Christmas Day is the *first* dinner. This takes place about 9 a.m! No—it is not a late breakfast, but dinner, with turkey and plum pudding complete, and those who partake of it are the nurses on night duty. Even on Christmas Day the routine of work must somehow proceed, and this early dinner is one of the necessary items.

One must not pass over these happenings without a word as to the organisation of all this festivity. The whole of it is almost entirely due to the sisters and to the nurses. For many a long day they have been working and quietly preparing for the great event, some of them making decorations, others dressing dolls, others perhaps making the harmless, but necessary pin-cushion (these, for the Christmas trees) ! Whatever the success of Christmas Day in St. Bartholomew's, let it not be forgotten that this success is chiefly due to our enterprising nursing staff.

ELECTROTHERAPY—IN THE PAST AND AT THE PRESENT DAY.

By E. P. CUMBERBATCH, M.B., M.R.C.P.

PART III.

ORE than half the total number of patients attending the Electrical Department are cases of paralysis. They attend with great regularity. The men begin to come at one o'clock, each in his turn takes his treatment, and returns to receive fresh applications week after week and month after month. Female patients with facial palsy are models of regularity in their attendance. Mothers bring their paralysed infants twice weekly for one year, two years, even for longer periods, until they are too heavy to carry.

There are eight baths in the Electrical Department and they are in constant use. Three of these are arm baths; two are full length baths for the treatment, at the same time, of the trunk and extremities; two are for the use of children; while in another any one extremity can be treated singly or

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together with any other. When the baths are filled, the current passes through the water from one end of the bath to the other, and when the patient or one of his limbs is immersed, part of the current passes through him. This method of applying the current has special advantages. The patient is kept warm so that *long* applications may be given. The water covers the patient and acts as a perfectly fitting electrode of the largest possible area, so that the current can enter and leave the skin at all points. In this way the total amount of electricity traversing the part will be large, thus enabling *strong* applications to be made, while the large surface of entry of the current reduces the current density at the skin to a small value, thus ensuring *painless* applications.

The currents that are supplied to these baths are rhythmically varied in their strength between zero and the maximum that the patient can bear with comfort. The current starts from zero, reaches its maximum in about two seconds, and reaches zero again in the same time. When once the suitable strength has been ascertained, very little further attention is required. The current that passes through the baths is on a circuit completely disconnected from the main circuit, so that there is no risk to the patient, and no necessity to have the bath insulated from the earth and to keep a constant guard over the patient.

The more frequently the applications can be made the better. Bergonié states that he has observed better results by prolonging their duration and increasing their frequency. He now gives two applications daily, each lasting thirty to sixty minutes, in the treatment of children with infantile palsy. No fatigue occurs, and nothing but good results. A portrait of Bergonié is shown on this page.

When a motor nerve or its nucleus of origin is sufficiently injured or diseased, the alteration in the electrical reactions of the muscles supplied must occur, whatever treatment is given and however soon it is commenced. But nerve fibres will recover their function or regenerate, and it is seldom that all the nerve-cells representing a muscle in the spinal cord are destroyed. While the lower motor neuron is regaining its function, what is happening to the muscle that is receiving no treatment? The muscle ceases all work. It is not even a resting muscle, for there is some degree of continuous contraction or tone in a resting muscle, and chemical changes are still going on in it. But when there is a lesion of the lower motor neuron, the muscle ceases work entirely. It hangs loosely from its extremities, supported by the skin. Its circulation becomes feeble in the extreme, and the blood-supply to the adjoining parts is much impaired. The temperature is lowered and the muscle cannot shiver itself warm. The skin becomes blue and cold, and chilblains develop. The growth of the bone is retarded. The muscle-fibres then slowly die and are replaced by fibrous tissue, which gradually shrinks, and contractures of the limbs may develop. Patients in this

condition are sometimes seen and present a sorry spectacle, examples of long-continued extensive paralysis, neglected or improperly treated.

To prevent these changes, a proper circulation must be maintained in the limb, and the muscles and nerves must be artificially stimulated so as to make them work and improve their blood-supply. No method of treatment can bring this about more effectively than electrical currents properly applied in the way described. Every part is traversed by the current, and every nerve-fibre and muscle-fibre is stimulated, while all the tissues benefit from the improved blood-supply.



J. BERGONIÉ, PROFESSOR IN THE UNIVERSITY OF BORDEAUX.

The good results that are obtained from properly applied electrical treatment of paralysis can be seen in the Electrical Department. When treatment is commenced, chilblains, if present, disappear, the skin loses its blue colour and the limb becomes warm, even though, at this stage, no voluntary power of the muscles may have been regained. Provided that the nerve or its motor nucleus has not been damaged beyond repair, and provided that the cause of the paralysis is no longer operating, the voluntary power gradually returns, and finally the electrical reactions become normal. Cases which seem to have fallen into the last degree of atrophy and paralysis will benefit if the treatment is persevered with for a sufficient length of time, and voluntary power and normal reactions may return.

Massage forms a useful subsidiary treatment, but it is a mistake to think that it can replace *properly applied* electrical treatment. If anyone doubts this, let him see the children with infantile paralysis that are receiving only massage, and those that are receiving electrical treatment at St. Bartholomew's Hospital, and let him see them week by week. Those who are having only massage and manipulation develop chilblains and the limb remains cold, blue and lifeless. This bad condition persists until electrical treatment is commenced, when the chilblains disappear, the blue colour goes and the limb remains warm. If these patients who are having electric baths are examined each time that their cards are renewed, no chilblains are seen and the skin is warm and has a good colour, and the good condition persists if the baths are continued.

The objection is raised that the electrical treatment stimulates the antagonist muscles (if they are healthy) to contract, so that those which are paralysed are passively stretched. This can be avoided by applying a suitable splint so as to support and fix the part moved by these muscles. It is to be remembered that if these paralysed muscles show the reaction of degeneration and if the galvanic current is used to treat the paralysed limb, the healthy antagonists will give a quick twitch, while the paralysed muscles will give a sluggish contraction which will long outlast the quick twitch, thereby causing a passive stretching of the *healthy* muscles.

Besides the cases of paralysis, many other patients with very different forms of disease find their way to the Electrical Department. Brief mention will be made of these forms of disease, first taking those which are suitable for electrical treatment, giving some account of the form of treatment applied, and explaining, as far as is possible, how the electricity acts. The galvanic current is applied to a large number of these cases. It was mentioned before that the therapeutic action of electricity was due either to the chemical or to the thermal effects which it produced. When the continuous current passes through the body, chemical changes occur at the point where the electricity leaves the metallic conductors to be "ferried" across the tissue fluids by the ions present in them, also at the point where the electricity leaves the tissue fluids to enter the other metallic conductor on its way back to the source of the current.

Thus, if a platinum wire be inserted into the follicle of a *superfluous hair* and connected to the negative pole of a battery and the circuit be completed by connecting the positive pole of the battery to some other part of the body, a white froth is seen in the follicle, the root is destroyed and the hair can be lifted out. Chemical changes have occurred around the platinum wire. Sodium ions bearing a + charge of electricity, have been attracted to the negative pole (the platinum needle), the + charge has been neutralised, free sodium has been formed which decomposes the water in the cells of the follicle, forming

hydrogen and caustic soda, and the latter destroy the follicle.

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Again, in the treatment of lupus, a brush of platinumneedles are inserted into the diseased tissues and connected to the positive pole of the battery. The patient has previously taken potassium iodide, so that iodine ions are present in the tissue juices. Those that reach the diseased part are attracted to the + pole because they bear a - charge. This charge is neutralised at the needles, and the free iodine that is deposited in the tissue destroy the bacilli in the neighbourhood.

In the treatment of *nævi*, two needles may be inserted and the current passed from one to the other. Caustic soda, and hydrogen are formed around the negative pole, and acids (chiefly HCl) at the positive pole. These chemical products coagulate the blood in the nævus.

The so-called electrolytic action of the current when used. to destroy tissue is really the chemical action of these products which accumulate at the points of entry and exit of the current. The passage of the current produces further changes in the tissues between the poles. The ions which, convey the electricity are redistributed, those with the + charge migrating "down-stream" with the current, those with the - charge migrating "up-stream," against the current, so that there is an alteration in the composition of the tissues so far as their soluble, ion-forming constituents. are concerned. The passage of the galvanic current acts. promptly and effectively in the relief of congestion following. injury; and the fluid effusions are rapidly absorbed. Thegood effect following the application of the galvanic current. to sprains and similar conditions seems to be little known,. although it was familiar to Remak as far back as 1856. The vaso-dilatation produced by the current helps in the production of these good effects, although it is likely that the redistribution of the ions lowers the osmotic pressure of the fluid and so aids in its absorption into the blood-vessels.

If the action of the chemical products that are formed around the points of entry and exit of the current is not desired (for they may irritate or injure the skin), padsmoistened with salt solution are placed on the skin, and the conductors that convey the current are placed on them, out of contact with skin. The chemical products that accumulate at the point where the metal conductor touchesthe pad do not reach the skin till they are diluted beyond harming power by the water in the pad. When the current: flows another action is now seen. Ions migrate from the pad, through the skin, into the body. This method of introduction of drugs is known as the "ionic method." Not the whole molecule is introduced, but one of its two component ions. The germicidal action of zinc chloride solution is dueto the zinc ion and it is only the zinc ion which we wish to introduce, and this is brought about by the electrical current. The ionic method secures the introduction of the therapeutically active ion; it introduces it only into the part.

desired, provided that this part does not lie deeply; it introduces it with a thoroughness equalled by no other method (provided again that the part lies superficially), every cell and nucleus receiving some ions. The ionic method of treatment has been applied in almost every branch of medicine and surgery. It is applied to several cases in the Electrical Department, where its efficacy is put to a severe test because many of the cases that are sent there and are treated by this method have proved to be refractory to other methods of treatment given elsewhere.

Of the various ions that have been introduced, none have proved of more value or have been more extensively applied than the zinc ion. The starting-point for the application of the zinc ion to cases of ulcer dated from the publication, in 1903, of a paper by Leduc, describing the successful treatment of a case of rodent ulcer. At the time of writing zinc ions have recently been used in the Electrical Department for the treatment of a very callous "tropical" ulcer. The patient, a native of West Africa, came to England for treatment. The ulcer has been twice ionised with zinc and it has nearly completely healed. Other methods of treatment were without avail. Mr. D'Arcy Power has kindly allowed me to mention this case, which is under his care. A case of membranous conjunctivitis of both eyes of many years' duration is now under treatment by zinc ions. A mass of granulations on the orbital surface of one lid has been reduced in size and the pus is diminishing. This case, also, has been refractory to other methods of treatment. Two other cases of callous ulcer have healed, each after a single application of zinc ions. Discharging sinuses can be made to close by ionising their walls with zinc by means of a zinc rod, clothed with a thin layer of cloth saturated with the solution of a zinc salt. It is necessary that the zinc solution should be in contact with every part of the wall of the sinus, otherwise the infecting organisms will not be all killed and pus will form again and re-open the sinus. Warts can be removed by transfixing them with a zinc needle which is connected to the + pole of a battery. Acids are formed around the needle, zinc ions are produced, and the wart drops off in a few days.

Zinc ions have been used with success for cases of septic infections of the middle ear, the frontal sinus, the nasal mucous membrane and the uterus ; for rectal fistula, rectal ulcerations, anal fissure, for boils and carbuncles, for the disinfection of the roots of teeth and for many other conditions.

Of the ions used for medical cases, the salicyl ion is, probably, the most frequently applied. It is of great value in the treatment of some joint affections for inflammation of muscles and fibrous tissue and nerves. It greatly relieves the attendant pain. It is also of value in the treatment of neuralgia. Many cases of these diseases attend the Electrical Department. The part to be treated is covered with a thick absorbent pad, saturated with a 1 per cent.

solution of sodium salicylate. The pad is connected to the negative pole of the battery, and the salicyl ions, bearing the - charge, are repelled from the negative pole into the underlying tissues. The best results are seen in cases of simple arthritis. Cases of neuritis, as a rule, do well. Good results are sometimes seen in cases of sciatica. The applications must be long and extensive and the inflammatory products in the nerve-sheath must not have been replaced by fibrous tissue. The least satisfactory results are seen in cases of rheumatoid and osteo-arthritis. The patients will say that they are relieved for a few hours or for a day or two, and then the pain recurs. Sometimes no relief at all is obtained. Good results are often obtained in cases of neuralgia. A patient reappears in the Electrical Department every few months when her trigeminal neuralgia reappears. One or two applications of salicyl ions always abolishes her pains.

Chlorine ions are of value in bringing about the resolution of scar-tissue, providing that the agent responsible for its formation is no longer at work. Two cases have recently been successfully treated—one, a case of fibrous ankylosis of a finger-joint, the other, a case of contraction in the scar following a complete Halsted operation and inability to raise the arm beyond an angle of 45° with the trunk. Both these patients recovered full range of movement.

A very brief account has been given of the use of three ions. Many others are used, *e. g.* the ions of silver, copper, lithium, magnesium, iodine, cocaine, quinine, etc., for many different conditions. Much work is still waiting to be done on medical ionisation.

ANATOMICAL MONUMENTS.

T is a well-established fact, and in many ways a matter for great regret, that one of the objects of the logists is to wipe away most of those very interesting monuments left on the human body in memory of the honoured and venerable pioneers of systematic and descriptive anatomy. These anatomists have given the dignity of their respective names to unnamed structures in the body, and thus their names have been handed down to us. Thus the thickened lower border of the aponeurosis of the externus obliquus abdominis folded back upon itself presents a living monument to Poupart. Occasionally there seems to be some doubt as to who was the first anatomist to call a particular structure his own, for there are sometimes more than one name given to a structure, e.g. the suspensory muscle of the duodenum stretching between the duodeno-jejunal flexure and the diaphragm has been described by Treitz as well as by Lockwood, of St. Bartholomew's Hospital. The new terminologist would probably evade this difficulty by

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giving it a Roman nomenclature, thereby dropping the curtain before Treitz and Lockwood. At such a crisis as this, when an attempt is being made to obliterate the names of these great men, it should be our object as students of anatomy to inquire into the life of these grand old men, and to learn a little of what they did and how particular structures came to be named after them, for a student beginning his course of dissections in the rooms is apt to skip over these classic names, and not pause for a moment to pay his respects to these most celebrated anatomists by asking himself such questions as : "Who was Poupart? Where did he come from? What did he do? How did this ligament come to be called after him?"

An attempt is being made in this and following articles to describe very briefly the life history of these anatomists. The English names are taken first, and we shall limit ourselves in the first instalment entirely to the abdomen. Most of the details have been copied from the *Dictionary* of National Biography.

ALCOCK'S CANAL, containing the Internal Pudic Vessels and Nerve in the Parietal Pelvic Fascia.

Alcock, Nathan, was born in Cheshire, 1707, and was of the kin of Bishop Alcock, the founder of Jesus College, Cambridge. He studied first at Edinburgh, then under Boerhaave at Leyden, where he graduated M.D. at the age of thirty. From Leyden he came to Oxford, and gave lectures on anatomy and on chemistry. At forty-two he became M.D. of Oxford, and was elected F.R S. His happiness was disturbed by the death of a lady to whom he was, after a long engagement, about to be married, and he retired to his native place, Runcorn, because this and some fits of illness made him disinclined for the exertions of professional life. After an extensive private practice he died of apoplexy at the ripe age of seventy-two. He was six feet high, of dark complexion, and athletic make. He was a resolute Whig in politics, and in the Church a follower of Hoadly. His Leyden thesis was on pneumonia. He published no other work.

COLLES' FASCIA, Deep Fascia of the Perinaum.

Colles, Abraham, was born in 1773 at Milmount, near Kilkenny. During his education in Kilkenny Grammar School a flood swept away part of the house of a doctor named Butler, and carried a work on anatomy into a field near Colles' home. The boy picked it up ; the doctor gave him the book, and this led to Colles' choice of a profession. He entered Dublin University at seventeen, and obtained the diploma of the Irish College of Surgeons at twenty-two. Subsequently he graduated M.D. of Edinburgh, and then went on foot from there-to London, where he remained for some time, assisting Astley Cooper in the dissections for his works on hernia. He returned to Dublin, and at thirty was appointed visiting surgeon to Steevens' Hospital.

Colles became a masterly operator, being cool and dexterous, and singularly fertile in resource. He was the first man in Europe to tie the innominate artery, and he did it successfully. When he first tied the subclavian artery for aneurysm the operation had only twice been attempted in England, never in Ireland. His name is most widely known in connection with Colles' fracture of the radius. His paper on the subject appeared in the *Edinburgh Medical and Surgical Journal*, 1814, vol. x.

At thirty-one Colles became Professor of Anatomy and Surgery in the Irish College of Surgeons, and held the office for thirty-two years. Colles' practice, both as physician and surgeon, was very remunerative, for many years exceeding \pounds 5000 per annum. He remained surgeon to Steevens' Hospital till two years before his death, on 16th November, 1843, in his seventieth year. He was offered a baronetcy at sixty-six, which he declined. He was a Liberal in politics, and a Protestant in religion. He never lost an opportunity of frankly admitting his blunders. On one occasion, at a post-mortem examination of a patient on whom he had operated, he turned to the class and said, "Gentlemen, it is no use mincing the matter, I caused the patient's death." Colles was about the middle size, well proportioned, and of dignified manner, with a shrewd, clear eye, a fine forehead, and a decided mouth. His works include Use of Mercury in Venereal Complaints, Essays on Lithotomy, Tying the Subclavian Artery, Dissection Wounds, and Fracture of the Radius.

COWPER'S GLANDS, Opening into the Bulb of the Urethra in the Male.

Cowper, William, was born in Petersfield in Sussex in the year 1666. His name is sometimes spelt phonetically Cooper. He was the youngest son in the family and was not related to Earl Cowper, first Lord Chancellor of Great Britain. He began practice as a barber-surgeon in London at the age of twenty-five. At twenty-eight he published Myotomia Reformata, or A New Administration of the Muscles of the Humane bodies, wherein the true uses of the muscles are explained, the errors of former anatomists concerning them confuted, several muscles not hitherto taken notice of described, to which are subjoined a graphical description of the bones and other anatomical observations. At thirty Cowper was elected a Fellow of the Royal Society. In 1698 he published at Oxford The Anatomy of Humane bodies, with figures drawn after life by some of the best masters in Europe. This work gave rise to a keen controversy with Dr. Bidloo, a Dutch professor, as to Cowper's use of plates taken from a book of Bidloo's on anatomy. Bidloo described Cowper as a highwayman and a miserable anatomist who wrote like a Dutch barber. It was in 1702,

at the age of thirty-six, that he described that pair of racemose glands which are situated beneath the anterior end of the membranous part of the urethra in the male, and are to this day known by anatomists as Cowper's glands.

Cowper had a considerable surgical practice, and his papers prove that his attainments in pathology and comparative anatomy were as respectable as his knowledge of human anatomy and practical surgery. In 1708 he suffered from difficulty of breathing and during the winter became dropsical. He gave up work and retired to his native place, where he died a year afterwards at the age of forty-three.

SACRO-GENITAL FOLD OF DOUGLAS AND DOUGLAS' POUCH

Douglas, James, was born in Scotland in 1675, graduated M.D. at Rheims, and settled in London about 1700. He soon attained reputation as an anatomist and was elected F.R.S. at thirty-one. He practised midwifery, and was admitted an honorary fellow of the College of Physicians at forty-six. He first lived in Bow Lane, Cheapside, but ultimately settled in Red Lion Square. He was continually engaged in dissection and was occasionally permitted to make a post-mortem examination at St. Bartholomew's Hospital, though never a member of the staff (Phil. Trans., 1716, No. 345). His first publication was Myographiæ Comparatæ Specimen. At forty-one he published a paper on the Hypertrophy of the Heart, and it is clear that he actually heard in a ward of St. Bartholomew's Hospital the murmur produced by disease of the aortic valves, and needed but one more step forward to have anticipated the discovery of auscultation by Laennec. His brother, John Douglas, who practised surgery in London, had revived the high operation for stone in the bladder, and in connection with this and with the question of tapping in dropsy, Douglas investigated the difficult subject of the arrangement of the peritoneum in relation to the several viscera of the abdomen. He describes a fold, which always goes by his name : "Where the peritoneum leaves the fore side of the rectum, it makes an angle and changes its course upwards and forwards over the bladder; and a little above this angle there is a remarkable transverse stricture or semi-oval fold of peritoneum which I have constantly observed for many years past, especially in women." In 1726 Douglas took part in the exposure of the imposture of Mary Tofts, who professed to give birth to rabbits at Guildford. He visited the woman and demonstrated the fraud at once. Anatomy (human, comparative and pathological), botany, and the practice of his profession, which was large, as he was physician to the Queen, were not sufficient to exhaust the energy of this laborious physician. He collected editions of Horace and published his Catalogus Editionum Horatii. Pope honours the physician with the couplet :

> "There all the learned shall at the labour stand, And Douglas lend his soft obstetric hand."

He died in Red Lion Square at his sixty-seventh year, and was buried in the church of St. Andrew, Holborn.

FORAMEN OF WINSLOW.

Winslow, Forbes Benifuus, was the ninth son of Thomas Winslow, a captain in the 47th Regiment of Foot, and was born at Pentonville in August, 1810. The family lost their American property in the War of Independence and came to England. After education at University College, London, and at the Middlesex Hospital, where he was a pupil of Sir Charles Bell, he became a member of the Royal College of Surgeons of England at twenty-five, and graduated M.D. of Aberdeen at thirty-nine. He had to pay the expenses of his own medical education, and did so by acting as a reporter for the Times in the gallery of the House of Commons, and by writing small manuals for students on osteology and on practical midwifery. When he was thirty years old he published the book entitled The Anatomy of Suicide, an endeavour to demonstrate that most suicides are not criminal but are victims of mental disease. This was followed in 1843 by The Plea of Insanity in Criminal Cases, and in 1845 by The Incubation of Insanity. He opened two private lunatic asylums at Hammersmith, where he employed the humane method of treating lunatics which is now universal. He founded the Quarterly Fournal of Psychological Medicine at thirty-eight, and continued it for sixteen years. When the Earl of Derby was installed as Chancellor of the University of Oxford, the honorary degree of D.C.L. was conferred on Winslow at his forty-third year. He continued to write numerous papers, and one in particular was an essay "On Uncontrollable Drunkenness." He was examined before a committee of the House of Commons in 1872 on this subject. He died at Brighton when sixtyfour years of age, and was buried at Epping. The Medical Circular for March 16th, 1853, contains his portrait.

A CASE **ILLUSTRATING** THE ADVAN-OF URETERIC CATHETERISA-TAGES TION.

By W. GIRLING BALL, F.R.C.S.(Eng.).

HE following report of a case recently treated in the Hospital is of some interest from it view of illustrating one of the advantages of passing a catheter up the ureter. The use of instrumentation as a means of diagnosis and prognosis is becoming familiar, but as a means of treatment the opportunities so seldom arise that little is known of its value.

The case is that of a woman, æt. 24, who had been under the care of Dr. Garrod, and was admitted to Stanley Ward under Sir Anthony Bowlby.

Since twelve years of age she had been subject to attacks of severe pain in the right side suggestive of a renal origin. The attacks had occurred at intervals varying from a week or two to three months, but were becoming more frequent. During the last three years the patient noticed that as the pain disappeared the frequency of micturition was increased. On no occasion had she observed any blood or other abnormal constituent in the urine.

Six days before her admission she was seized with violent pain in the right loin, accompanied by painful and frequent micturition.

Vomiting was also a prominent symptom. The symptoms gradually passed off, but when examined it was found that she had a swelling in the abdomen.

On admission she was looking very ill, temperature 98° F., pulse 84.

The abdomen was distended, especially on the right side, and was observed to be moving badly on respiration. In the right hypochondrium was a large swelling as big as an ostrich egg, intensely tender on palpation, so much so that it was impossible to make out its exact definition. The points of maximum tenderness were at the lower pole of the swelling, which could be felt in the region of the umbilicus and in the posterior renal angle. Bimanually, however, it was felt to pass into the right loin. There was resonance over the swelling in front of the abdomen, but dulness in the loin. The urine was slightly turbid, sp. gr. 1012, no blood, but a small number of pus-cells were present. Under an anæsthetic a catheter specimen of the urine was drawn off, and a cystoscopic examination made. The bladder-wall was natural and showed no evidence of cystitis. The left ureter was working naturally, the efflux of urine from the left kidney being quite clear. A careful observation of the right ureteric orifice was made, but even after a period of some minutes it did not pass any urine into the bladder. A ureteric catheter was then passed through the cystoscope and up the right ureter without difficulty until it reached five inches, where an obstruction was met with ; this, however, was overcome, and twelve inches of the catheter were passed up the ureter (after-events showing that this probably curled up in the cavity of a hydronephrosis). Fourteen ounces of urine were withdrawn, coincident with a marked diminution in the size of the swelling ; this did not completely disappear, a small lump being still left, hard in consistency, dull on percussion, the dulness being inseparable from that of the liver. On the next day the patient was much better, free from pain, and no swelling was palpable.

The urine drawn off from the kidney by the catheter was faintly turbid, alkaline, sp. gr. 1013, containing pus-cells in small numbers, but was sterile on cultivation.

A week later the patient was in the same condition, there being no evidence of a re-collection of fluid. An attempt was made to pass an opaque catheter into the pelvis of the kidney again, but the same obstruction was met with at five inches up the ureter which could not be overcome. Collargol was injected through the catheter with the object of outlining the pelvis of the kidney but it only ran down the side of the catheter into the bladder, none of it passing into the renal pelvis, owing presumably to a valvular orifice into it. At the time of this investigation it was noticed that the right kidney was not discharging urine into the bladder.

Skiagrams taken on three occasions failed to demonstrate the presence of a calculus.

The urine obtained from the bladder in a twenty-four hours specimen contained 16 per cent. of urea. Right lumbar nephrectomy was performed, the kidney being removed with considerable difficulty owing to the fact that it was adherent to the surrounding tissues, especially high up to the under-surface of the diaphragm.

The patient made an uninterrupted and complete recovery. Up to the time of the removal of the kidney the patient was only passing small quantities of urine, namely, an average of 18-25 oz. *per diem*, but after the operation this amount was increased to 40-55 oz. in the same period.

From the history of the case and the conditions found it was realised that the patient had a hydronephrosis, this diagnosis being confirmed by the ureteric catheterisation and the subsequent operation. It was also thought that in all probability the distension of the kidney was due to some renal abnormality, such as a kinking of the ureter by an abnormal renal vessel, owing to the fact that the symptoms had commenced early in life, appeared in recurrent attacks with Dietl's crises not associated with hæmaturia, and with negative skiagraphic evidence. This proved to be the case; the renal pelvis was markedly distended, and most of the renal tissue was destroyed. The upper end of the ureter about half an inch below its junction with the pelvis of the kidney was kinked over and grooved by a small vessel running into the lower pole of the kidney; the ureter was narrowed at this point, thus accounting for the obstruction to the passage of the catheter and the collargol injection.

The points of importance in this case seem to me to be these : The diagnosis from ordinary clinical observation and without the use of instruments was possible, but on account of the marked abdominal tenderness, the size of the tumour and its relations it was by no means certain. It is true that it was confirmed by the cystoscopic observation that the right ureteric orifice was not working, but the removal of the fluid with the coincident disappearance of the tumour completed the evidence beyond all doubt. The factor of greater importance, however, was the part played by the ureteric catheter in dealing with the conditions found. The patient was extremely ill, and knowing that the swelling was a hydronephrosis, only one line of treatment was possible, namely that by some means the sac had to be emptied and in all probability at one time or other nephrectomy would have to be performed. Had a lumbar exploration been

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carried out, a nephrostomy would have been the only operation possible, as the patient was too ill to stand a nephrectomy even had it been possible. Moreover, for other reasons, two operations were imperative, as owing to the urgency of the case time would not have allowed the investigation of the working capacity of the opposite kidney and thus render nephrectomy possible at the first instance. In this way it is obvious that the procedure adopted had considerable advantages over that usually adopted, the discomforts and W. W. Jacobs and Louis N. Parker, originally produced with great success by Mr. Cyril Maude at the Playhouse. It provides admirable parts for amateurs, though it presents difficulties in staging. These were admirably overcome, however, and the performance went without a hitch, the barge entering promptly on its cue in the last act. The first scene is laid in a corner of Major Smedley's garden. As usual, Mr. Barnsley was a tower of strength. The part of Captain James Barley suited him very well, though not



"BEAUTY AND THE BARGE."

dangers of a nephrostomy being avoided, one operation only being made possible, and time allowed for investigation of the function of the opposite kidney. The opportunities for doing this must be rare, and I am grateful to Sir Anthony Bowlby for allowing me to carry out these procedures in this case.

THE CHRISTMAS ENTERTAINMENT.

N innovation this year was the repetition of the entertainment on three nights instead of two—a welcome innovation as far as the audience was concerned, judging by the large attendances on each occasion. The play selected was "Beauty and the Barge," by perhaps so well as that of the old bookseller in "Liberty Hall" last year. For Mr. Barnsley is one of the few amateurs who can really act a pathetic part, and pathos except just before the final fall of the curtain was not in Captain Barley's line. His characteristic was "no 'arm, but too much affability," and Mr. Barnsley gave a most humorous rendering of the troubles that characteristic led him into. Mr. Sherman is fated to play the heavy and usually irascible father, and on this occasion he was very irascible. We presume, however, that his flow of language had passed the Censor, and we congratulate him on the ease with which he uttered it. Mr. Geoffrey Evans was becomingly meek as Mrs. Smedley, and Mr. Thacker made a charming Lucy Dallas. Mr. Whitehead extracted plenty of fun out of the woes of Mrs. Baldwin, and Mr. Just made a

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life-like character study of the part of Dibbs, the sour but enamoured gardener, who acted up to the dictum that "all's fair in love." Mr. Cowan looked very pretty as Ethel Smedley; we understand that it was his first appearance on any stage, and with more experience he should do well as an *ingenué*. Mr. Robbins as Lieutenant Seton Boyne made an effective entrance by climbing up the cliff into the garden, and throughout he made an ideal romantic, resourceful hero. Mr. Ogier Ward kissed with great verve, but apart from his passionate first entry did not have much chance.

The second scene, in the bar of the "Old Ship" at Coastham, was very well acted, while the humours were not overdone. Mr. H. B. G. Russell found in Mrs. Porter, the haughty and jealous landlady of the inn, a part which suited him to perfection. Mr. W. F. Thompson's hornpipe was colossal, and the other sailors' parts were very well done by Mr. Mack, Mr. Aydon, Mr. Roxburgh and Mr. Brock. It is a very difficult thing for amateurs to make a lot out of small parts and to play into each other's hands, and the sailors deserve great praise for the skill with which they did it. Mr. Carte, in a fearsome makeup, gave a graphic portrayal of "the acute abdomen." Mr. Savory was adequately hen pecked as the husband of Mrs. Porter. A special word of praise is due to Mr. Pavey Smith's charming representation of Augustus, third hand on the barge. The third act, laid in an open meadow by the river, owed much of its success to his rigid insistence on what constituted the duty of the third hand and his delightfully shy and naïve wooing. Altogether it was a most enjoyable performance, on which we congratulate actors and stage managers alike, especially Mr. Sherman, who had much to do with all the arrangements. If the prompter, Mr. Kitching, had anything to do, he did it so unobtrusively that we did not notice it, and that, after all, is the chief duty of a prompter.

The Hospital Musical Society, under the conductorship of Mr. Hume, has become an established institution, and they discoursed pleasant orchestral music to us between the acts. Perhaps in the overture there was an occasional difference of opinion between the strings and the wind as to the precise key, but that is a feature of the newest music; at any rate they played with spirit, and in the "Pirates of Penzance" they did justice to the musical humours of Sullivan.

THE PSYCHOLOGY OF DREAMS.

A Paper read before the Abernethian Society.

By M. N. PERRIN, B.C.

REAMS are perhaps some of the most vivid of our mental experiences. Their glowing realism and brilliancy have conferred upon them-at least from the point of view of the dreamer himself-an importance which has continued unbroken since the earliest times. Ancient literature is full of instances, in which men are said to have dreamed of forthcoming events, which have eventually occurred. Many well known instances occur in the Bible, and in all cases it is clear that a dream was not considered merely a product of a disordered imagination, but that it was a manifestation of a faculty, which in ordinary waking life was in abeyance, a faculty which, in many instances, seemed supernatural. In accordance with the standard of credulity, which existed in earlier times, all these phenomena were tacitly admitted to be supernatural, and no more was said about them. Prophetic dreams were said to owe their inspiration to a higher power, and that was the end of it.

In our own times, since men have studied natural sciences the prevailing tendency has been in the opposite direction, and all these phenomena, which played so important a part in the lives of earlier generations, have been treated with scorn. It is only recently that the materialistic attitude, which pronounced everything which had not a ready explanation according to the laws of Nature as ridiculous or a mere superstition, is being replaced or supplemented by the broader conceptions of psychological inquiry.

When the facts of hypnotism first became known, the medical profession were so intolerant that the pioneers were not only ignored, but were actually persecuted. Braid and Esdaile, who used hypnotic trance as a general anæsthetic for major operations during the last century, were eventually ruined, yet now therapeutics by hypnotic suggestion find a place in every modern book on treatment.

In this paper I shall try to show that dreams are not to be regarded merely as the confused product of a mind partially dulled by sleep, but that they are manifestations of a definite mental unit or personality, which has powers in many respects transcending those of normal waking consciousness—a personality, which is in intimate relation to the subconscious acts of everyday life, those acts whereby the bodily economy is maintained. That though dreams may often appear to be purely reflex abstractions derived from organic sensory stimuli, yet many have an origin far more profound in thought processes, on the nature of which we can at present only speculate.

The study of dreams is beset with many difficulties, as it is almost impossible, in most cases, to eliminate the interpretations and additions of waking thought. The tendency to adjust the apparently disconnected concepts of the dream to the demands of waking reason seems to be an involuntary impulse too strong to be resisted.

Many people, on waking, are perfectly conscious that they have been dreaming very vividly while asleep, and yet they are totally unable to remember the subject. Others have a confused memory, which is subsequently modified. In cases where the dream assumes a definitely motor shape, as in somnambulism, complicated acts may be performed, indicating that there has been some train of reasoning in the sleeper's brain, even though in these cases nothing is usually remembered on waking.

Nurses watching at the bedside of a patient have often noticed the expression of a dream on the sleeper's features, and in some cases, when words were spoken, they have been able to determine the whole nature of the dream. In many cases the sleeper remembers nothing of his dreaming in the morning, even though he is told what he said while asleep. It is therefore not certain that there is any direct continuity at all between sleeping and waking memory—a point which will be discussed later in considering the nature of memory in dreams.

It is said that if the observer make a practice every morning of recording his sleeping impressions on a slip of paper by the bedside at the moment of waking—jotting down any sequence of events, however absurd, immediately they occur to his mind—much more definite results are obtained, and the bond between sleeping and waking memory strengthened.

The distinction between the dream itself, and the dream as remembered, is an important one. Freud, in his book on the Interpretation of Dreams, lays great stress on this. He has worked out an elaborate system of pyscho-analysis, by means of which he separates the true significance, or "latent content," of the dream from the apparent interpretation, or "manifest content," which is the form in which the dream is related. He considers that all the mental processes of sleep are subject to distortion by virtue of a "dream censor" or controlling influence from waking consciousness, which comes into action as consciousness returns. In order to eliminate this source of error, the patient is directed to state all the points of the dream, however absurd or trivial, which spontaneously occur to him. It is essential that he should repress any tendency to criticise or modify these ideas. In some cases the dreamer is requested to repeat his account of the dream, which he rarely does in the same words. The passages, which are changed, are then taken to be those which have been most affected by the "endopsychic censor," and therefore those which, in their original form, were outstanding features in the "latent content." Starting from these weak points in the dream's disguise, the fabric is reconstructed by a complicated process of psycho-analysis, and the final product,

or elaboration of the "latent content," in most instances is utterly different from the original "manifest content." The interpretation thus obtained depends on a number of fundamental rules which have been laid down by Freud, and its validity only appeals to those who believe in his theory.

There are, therefore, at least two sources of error in the interpretation of any dream, namely, primary defective memory, and what may be called secondary wilful distortion, both of which tend to prevent us from arriving at the true nature of the dream. If it were only possible to approach the mental process itself, which gives rise to dreams, while the waking consciousness is still in abeyance, much more definite results would be obtained.

An instance is quoted somewhere of a medical man who frequently conversed with his patients while they were asleep, receiving consecutive and intelligible answers to his questions, as though the patient were awake. It was only necessary to speak in a soft, monotonous voice so that the words might blend with the thoughts of the sleeper, and not appear to come from someone at the bedside. By this means he was able to get into communication with the sleeper's mind, and tap his thoughts when in that condition. He was able to find out whether the patient had a headache, or whether he felt tired, whether he was in a state of repose, whether his mind was disturbed by unpleasant thoughts. It would be interesting to know how far this statement is corroborated by the observations of others. I have never succeeded myself in obtaining answers from anyone asleep, and I rather doubt the accuracy of the statement. I have no doubt, however, that it is perfectly possible to hold a conversation with a subject in hypnotic trance, and so to arrive at the processes of the subconscious mind, but this method is obviously subject to limitations.

Even though we admit that some form of mental activity may be always present during unconsciousness, yet it is obvious that many nights are spent in absolute oblivion. Dreams are, therefore, to be regarded as abnormal occurrences, for the production of which some form of stimulus is necessary. In many cases this stimulus is not far to seek, as it reaches the brain through the medium of the senses ; in others the dreams appear to be spontaneous, and no direct and obvious cause can be assigned. It seems probable that in these cases we must look for some cause directly connected with the functions of the brain itself, a cause which may be due to impressions stored up by conscious or unconscious memory, or which may, in some cases, reach the brain from outside by channels other than those of common sensation.

The factors concerned in the production of dreams may therefore be classified into two groups: Those which are peripheral and those which are central in action. To the first class belong external stimuli acting through the senses and internal stimuli from the visceral organs, while in the second class we must include drugs, and those unknown

factors, which cause apparently spontaneous dreams. It is stated by some that all dreams are derived from a peripheral source, such as some slight discomfort in position, or deviation from the normal diet. This, however, is probably not the case, as subsequent considerations will show.

Considering first the peripheral stimuli, it appears that such dreams occur typically in lighter sleep, during the socalled hypnagogic state, which intervenes between sleeping and waking. This is more particularly the case with those which are due to sensorial stimuli. When a violent objective stimulus is the cause, it often appears that the very same disturbance, which awakens the sleeper, has set off a train of dream thought, which has an ending appropriate to the nature of the stimulus. When awakened by a sudden noise, the sleeper often finds that he has been indulging in a long and complicated dream, the detailed incidents of which have led up to some sudden and explosive catastrophe. One observer states that when he used to be awakened by an alarm clock, it probably happened hundreds of times that the sound of the instrument fitted into a very long and connected dream, as if the entire dream had been especially designed for it.

With regard to external or objective sensory stimuli, we find that all the five senses are common channels, the resulting dreams being in logical sequence with the stimulus, and thus providing direct evidence of the cause.

Internal or organic physical excitations, or those stimuli which reach the brain from the viscera, are more common. In these cases we naturally find that there is no close connection between the nature of the stimulus and the nature of the dream, though the result is equally definite.

That dreams such as these are far the most common may be inferred from the fact that the medullary and subcortical brain centres, which are more particularly concerned in visceral control, are constantly in action, whereas those of the cortex are in abeyance during sleep.

Experience points to many disturbed conditions of our internal economy, which cause dreams. The viscera in their healthy state hardly remind us of their existence, though, when their action is intermittent, as in disease, they may become the source of most painful sensations, which must be put on an equality with the external excitants of the pain and sensory stimuli.

Strumpell declares that "during sleep, the mind becomes far more deeply conscious of its connection with the body than in the waking state; and it is compelled to receive and be influenced by stimulating impressions originating in parts and changes of the body of which it is unconscious in the waking state."

Among dreams of this nature, erotic and vesical dreams are perhaps some of the most vivid, and the relation between vesical dreams and nocturnal enuresis in children is obviously of clinical importance in the cure of this condition by hypnotic suggestion.

The heart, lungs, and stomach probably only produce dreams when they are disturbed in action. As a child, I remember well the horror of suffocative dreams, which were presented in various forms, and which were no doubt due to acute attacks of bronchial asthma in which I indulged at that time. These respiratory dreams continued for years after I had my last asthmatic attack, and at this moment I have no more vivid memory than that of being crushed by a locomotive, which always seemed to run up against that particular part of a wall against which I was condemned to stand. This dream and others like it occurred frequently, and I used to dread their appearance.

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It is said that the dreams of persons who suffer from diseases of the heart are generally very brief, and terminate in a terrified awakening. Some observers have even distinguished between the dreams associated with mitral and those with aortic disease.

Several instances are on record, in which premonitions of physical diseases and disorders are experienced in dreams. Sleeping consciousness has become aware of disturbances hours, or even days, before they have become manifest to waking consciousness in the form of symptoms. Havelock Ellis states that in one case a man, before an attack of hemiplegic paralysis, repeatedly dreamed that he had been cut in two down the middle and could only move one side of his body. Several other similar cases are recorded by other authors, erythematous conditions of the skin apparently playing an especial part in the production of these dreams. Later an example will be given in which the erythema was apparently produced by the dream, and it will be clear that this dream, with its converse, emphasizes the close relation between mental and bodily processes.

Dreams such as these, dealing with conditions which may at the time be latent in the body, are to be distinguished from the so-called prophetic dreams which deal with future external occurrences, and are probably always fallacious.

It seems possible that use might be made of these symptomatic dreams in diagnosis, though at present we have not nearly enough evidence at our command. At all events, occurring, as they sometimes do, before the causative symptoms have become manifest, they are evidence at least of the enhanced power of perception during sleep.

Certain drugs, which produce sleep, have also the property of exciting dreams. By their direct action on the cells of the brain, through the blood-stream, they modify mental activity, often to a very marked extent. The majority of these appear to act first by paralysing the higher centres by a process of dissolution, which follows an evolutionary order, picking out those centres first which are developed last, the finer degrees of attention, judgment, and association being the first to go. How far this process is analogous to normal sleep is uncertain, but it seems probable that when consciousness is completely lost there is no essential difference except in degree, the subject being less easily roused. Concurrently with the loss of consciousness, dream activity often appears, and is itself ultimately involved in the general depression, which ends in coma and death. The question to be considered is, how far the flash of vivid mental activity, which interrupts the steady progress of depression, is due to cerebral inhibition only, and how far it is a specific mental product due to the action of the drug on that part of consciousness which still remains? The answer to this question depends very largely on the nature of the drug employed, and whereas some, such as opium, seem merely to emphasise the natural tendencies of the individual by the removal of inhibitory influences, others, such as mescal and hashish, introduce new dream imagery, which is specific to a large extent for the drug employed. The selective action of these drugs for certain cells of the brain is remarkable. On their mode of action we can only speculate until we know the relation, which exists between brain cells and thought processes. In some cases actual microscopic changes are found in the cells, blood-vessels, and neuroglia of the brain, as in the delusional insanity produced by alcohol. Such cases have a more definite pathological significance, and will not be considered. Other drugs, even when taken in small quantities, produce vivid dreams without any recognisable pathological changes in the brain substance.

Nitrous oxide is a powerful stimulant to dreaming. Its chief characteristic is one of emotional disturbance, a fact which was recognised long ago when it was called "laughing gas." From my own observations, however, nearly as many patients awake in extreme despair as in great joy, but a very large proportion of the total number are either roaring with laughter or weeping bitterly. In two consecutive male cases the other day the first was wildly enjoying a beanfeast, and the second was bitterly bewailing the loss of his mother.

Opium produces dreams, in which the actions of everyday life or of particular adventures of the dreamer are presented in glowing and vivid forms. His intellectual faculties are enormously intensified along lines similar to those of normal life, and his whole mind seems exalted. De Quincey says : "If a man whose talk is of oxen should become an opium eater, the probability is that he will dream about oxen." Though his confessions are somewhat disappointing, it is evident that his own experience bears out this theory, for we constantly come across instances of the exaltation of his inherited sensitive temperament, of his marked literary imagination, and of his sentimental reaction to the experiences of life. It is doubtful whether the creative faculty is intensified by this drug, though Kubla Khan is said to have been written as the result of a dream, or dreams, while Coleridge was taking large quantities of laudanum.

The Arabians eat a confection of hemp known as hashish, which causes drowsiness and vivid dreams. The chief characteristic of this preparation is the feeling of exaltation and of amplification, which it induces. In this respect it bears a striking resemblance to the delusions of general paralysis of the insane, though in addition there is a very constant amplification of the sense of time, so that minutes seem like hours. Almost all observers agree in emphasising this characteristic of the drug, which seems to be specific, and Prof. Brown, of Cambridge, has told me that he has experienced it on more than one occasion.

Perhaps the most elegant of all narcotic preparations is the Mexican drug, mescal. Havelock Ellis, the author of various works on psychology, tried the action of this drug upon himself. After a short initial stage of increased energy and intellectual power, he soon became faint and unsteady. Then a constant play of brilliant colour floated before his eyes. The air seemed laden with aromatic perfumes, which appeared as translucent clouds of the most delicate colours. It appears from the comparison of several accounts that this colour property is the result of a specific action of the drug, and that it is not merely an exaggeration of thenormal tendencies of the individual.

We now come to those dreams, for which no definiteobjective stimulus, travelling to the brain by nerves or bloodstream, can be found—dreams which have their elements in memories. These are of frequent occurrence in normal individuals, especially in childhood, and their study is of the greatest value from the psychological standpoint.

There are also dreams, which can only be explained by some process of telepathy, whereby ideas are conveyed to the brain by channels other than those of common sensation. (*To be continued.*)

THE CENTENARY OF THE BIRTH OF SIR JAMES PAGET.

UNDAY, January 11th, was the hundredth anniver_ sary of the birth of Sir James Paget. The occasion was marked by special celebrations at Great Yarmouth, where Paget was born, and where the first twenty years of his life were spent. It seemed as if the town had, for the occasion, put off its modern guise as a seaside resort, and had taken on something of its old character; for so wintry was the weather that the sea-front, swept by a biting east wind, remained deserted and unrecognised, while the more sheltered South Quay became again, as of old, the most important part of the town. And here still stands the house where Paget was born, converted now to a School of Navigation, but bearing a prominent tablet upon which its fame is inscribed. And at no great distance from this the house of Mr. Costerton, the surgeon to whom he was apprenticed, is to be seen, now serving as an eating-house.

The Vicar, the Rev. C. Lisle Carr, had arranged three special commemoration services in the Parish Church, at all of which the Bishop of Stepney (one of Sir James Paget's-

sons) was the preacher. At the morning service there attended the Mayor of Great Varmouth, with the aldermen and councillors of the borough, representatives of the naval and military forces stationed in the town, and a large gathering of medical men.

We might say much of the magnificent church, one of the largest in England, we are told, and capable of seating some 3400 persons. The scene was impressive enough as the church filled with its great congregation; much more so, however, during the beautiful service and the moving sermon on the life of Sir James Paget, which was alive with the personal touch which the preacher was so well able to give.

After the morning service some short speeches were delivered in the Priory Hall, hard by the church. The Bishop of Stepney presented to the town a claret jug, the history of which he supplied. One day there had come to his father's house an accident case, a very unusual event; it was a fracture in a very rare situation. The bone was set, and its possessor was heard of no more until, some years later, on Sir James's birthday, this jug arrived as a mark of the patient's gratitude. Mr. Stephen Paget then presented a silver fruit dish, which had been a gift on the occasion of Sir James and Lady Paget's golden wedding; he also presented the key with which, in 1888, Sir James had opened the Great Yarmouth General Hospital. In this way, Mr. Paget happily remarked, Yarmouth would have mementoes of his father's practice, his married life, and of his connection with the town.

Among the Bartholomew's men who were present were Prof. Howard Marsh, Messrs. H. Blakeway, A. L. Moreton, J. Burfield, Donald Day, H. C. Nance, Haynes Robinson, C. J. Muriel, E. W. Everett, R. Wrigley, and W. Wyllys, and Drs. Herbert Mayo and W. Arnold Smith Wynne. The last-named, who entered at Bart.'s in 1853, when Paget was Assistant Surgeon, could tell us much about Bart.'s in the "fifties," and much about his old master; of his deep religion particularly, which stood plain in his face for all to see, impossible to be hid, animating him in all his doings ; of how he seemed to be a person apart, different from other men, totally unsuitable to be made a joke of ; so that when, during one severe winter, sly snowballing of the members of the staff was thought to be a good joke, not a man ever aimed at him. Much more we could have heard but for an unkind train that hastened the moment of parting, but we hope for another opportunity.

OBITUARIES.

SIR JAMES JOHN TREVOR LAWRENCE, BART., K.C.V.O.



UR Hospital has sustained a loss in the person of one of its former most active and respected treasurers, who served its interests laboriously for twelve years. For some months before his death on December 22nd last Sir Trevor Lawrence had been in failing health, and had he lived to the 30th day of that month he would have attained the age of 82 years.

Not all the present members of the Consulting Staff can remember his distinguished father, who was on the active list of the surgeons at the age of eighty years, and was created the first baronet two months only before his death. Sir William Church was one of his dressers, and the present writer was, as medical tutor, the junior member of the Medical Council when Sir William Lawrence presided at its meetings in 1865, having been examined by him for the M.R.C.S. in 1862.

Mr. Lawrence was educated at Winchester College, and subsequently entered the Medical School of St. Bartholomew's and became a member of the Royal College of Surgeons. He was known as a remarkably proficient student of anatomy, and a most expert dissector. He passed into the Medical Service of the Indian Army, and spent ten years, including the period of the Mutiny, in various parts of India, being stationed for a considerable time near the Himalaya frontiers.

He retired in 1863 and came home. He succeeded his father as second baronet in 1867. Two years later he married Miss Matthew, only child of Mr. John Matthew, of Burford, near Dorking, and subsequently' settled in that beautiful property as his country residence.

In 1874 he unsuccessfully contested the city of Gloucester as a Conservative, but was elected unopposed as one of the two members for Mid-Surrey in 1875, and continued to represent that division (and later the Reigate division) till he retired from Parliament in 1902.

His active service for St. Bartholomew's began after Sir Sydney Waterlow's retirement from the treasurership, when Sir Trevor was urged to accept this burdensome office, and held it for twelve memorable years in the history of the Hospital. Many difficulties and troubles awaited him, financial and other. He set himself to face these, and was untiring in carrying out his duties with the Almoners and Governors. He initiated and accomplished much good work; including the rebuilding of the Pathological Block and the Out-patients' Department, the foundation-stone of which was laid by King Edward in 1904.

The Medical Staff can never forget that he was instrumental in securing for it a voice in the management of the Hospital, and it always felt that he was in full sympathy with it as an old member of the School. He inaugurated the policy of making the Hospital direct landlord of its property, by abolishing the middle man, a policy which proved financially sound, as well as of great advantage to the tenants. He gave annually \pounds roo for a research studentship in the School, and, together with his sisters, founded a Lawrence Scholarship and Gold Medal in memory of their father for similar purposes.

He was, from its inauguration, a member of the Council of King Edward's Hospital Fund, having been appointed on the special recommendation of Lord Lister, and he was for many years vice-chairman of the Distribution Committee.

In 1895 he was gazetted a Knight of Grace of the Order of the Hospital of St. John of Jerusalem, and in 1902 he was appointed a Knight Commander of the Victorian Order.

He inherited from his mother a taste for horticulture, and his practical knowledge of the subject led to his election as President of the Horticultural Society, a position which he held with extraordinary ability and success for nearly twenty years. The Society was at a rather low ebb when he assumed office, but with several leading horticulturists he raised it to a most flourishing condition, numbering 13,000 members, leaving it in possession of a fine hall in Vincent Square, a beautiful garden at Wisley (the gift of the late Sir Thomas Hanbury), and in full financial prosperity. His services were recognised by the Victoria Medal of Honour, conferred on him in 1900, the presentation of his portrait, painted by Sir Hubert von Herkomer in 1906, and, within a month of his death, by the Veitch Memorial Medal in gold.

Sir Trevor Lawrence had other tastes beyond that of horticulture and orchid-growing, for which he was justly famous and in great repute. He possessed one of the finest collections of Japanese lacquer in this country, and printed a finely illustrated catalogue of this for private circulation in 1895. He was a vice-president of the Japan Society.

He had also a fine collection of Chinese and European porcelain, including a valuable and representative collection of early Worcester.

Our late treasurer was a generous and broad-minded man, an unostentatious supporter of charities, and a popular and delightful host.

He was a man of great refinement. The best of everything was not too good for him. His mental activity and his many interests in life, both in town and country, prevented, as they commonly do, any manifestation of premature senility in him, and he remained fresh in mind and hale in body up to his last year of life.

His temperament was naturally bright and optimistic, his temper well controlled. One can recall no memory of any mood of depression or of acerbity in him, although he was by nature keenly sensitive to anything displaying pettiness or vulgarity.

He had a faculty for making and keeping friends. Those who enjoyed his hospitality at Burford, and were present at his various receptions of foreign medical and horticultural representatives, cannot fail to remember their charming experiences. Many distinguished *savants* and men of note were from time to time his guests, amongst whom may be mentioned Lister, Kelvin, Paget, Charcot, Virchow, Pasteur, Russell Lowell, George Meredith (his neighbour), Lecky, Wolseley, Browning, and Herbert Spencer.

His political instincts were vigorously Conservative, but he never manifested a narrow party spirit. Happily for him, the House of Commons in his day provided a more agreeable environment than it affords at present. His courtesy and geniality won for him regard amongst all political parties.

His funeral took place on the 27th December in the churchyard of St. Michael's Church, Mickleham, near Dorking. A memorial service was held at Holy Trinity Church, Prince Consort Road, in London, at the same hour. At the latter were representatives of St. Bartholomew's Hospital and of the various societies to which Sir Trevor belonged, together with many attached friends.

He has left a widow, three sons, and a daughter. The successor in the baronetcy is Mr. William Matthew Trevor Lawrence, who was born in 1870, and was educated at Shrewsbury, New College, Oxford, Heidelberg, and Berlin. He is an Examiner in the Board of Education. The reputation of the family will be well maintained in his hands.

D. D.

REV. WILLIAM OSTLE.

THE death of the Rev. William Ostle, for so long Chaplain to the Hospital, will delete from the memory of many Bartholomew's men a tender link with the past. In the eighties and nineties his striking figure was a familiar object in the human landscape of the Square. Those who knew him only in his church or as a preacher knew his weakness and not his strength. His earnestness and singleheartedness in his work or his subject was but feebly clothed with the embellishments of diction ; matter rather than manner was his characteristic. He was no pusher of cults and the poorest possible exponent of obtrusive sacerdotalism. It is as a man and not as a priest that he will live in the memory of those who were privileged to know him. His life object seemed to be to ingratiate himself into the lives of those whom he thought he could influence, and having done so to influence them for good. Two traits in his character seem to stand out to the writer of these lines in high relief. The first was his intense loyalty to his Hospital and the Medical School attached to it ; in his outside life he might occasionally grant that some good medicine and surgery were to be found outside Bartholomew's, but he would never admit that there was anything bad within it. The second trait, which he possessed to a remarkable degree, was the power of making and keeping friends. He took infinite pains to keep in touch not only with present but also past parishioners, and

by this means greatly increased the sphere of his usefulness. He will be missed and remembered by many of those who in the ebb and flow of life through the Hospital and School have from time to time found both comfort and example in his unobtrusive but genuine kindness. F. W. T.

ST. BARTHOLOMEW'S HOSPITAL WOMEN'S GUILD.

HERE are a few changes to record amongst the names of those responsible for carrying on the work of the Guild. Miss Tweed has been obliged to give up the post of Honorary Secretary, which has been taken by Mrs. Norman Moore, 67, Gloucester Place, Portman Square, W., to whom general communications should be addressed. Mrs. Tooth has been elected Vice-Chairman, and has retired from the position of Honorary Work Secretary, which Miss Gask now fills. All letters respecting needlework should be directed to her at the Matron's Office.

The Committee of the Guild would be very grateful if readers of the JOURNAL would make the work of the Guild known amongst their friends.

THE CLUBS.

UNIVERSITY OF LONDON O.T.C., MEDICAL UNIT, "A" SECTION.

A dinner of past and present members of the above section is to be held at the Holborn Restaurant (Queen's Salon) on Tuesday, February 10th, at 7.15 for 7.30. It is hoped that all members of the section will make a special

It is hoped that all members of the section will make a special effort to be present and to bring any likely recruits with them.

Tickets, price 4s., should be obtained as soon as possible from H. K. Griffith, F. G. Barnes, or L. F. Strugnell. Drills have recommenced on Tuesdays at 5 o'clock in the Old

Surgery and are being well attended.

It is hoped that any intending recruit will join as soon as possible so as to complete his drills before camp.

THE BOOKSHELF.

REVIEWS.

THE ANATOMIST'S NOTE-BOOK. By A. M. PATERSON. Pp. 350. (Henry Frowde and Hodder & Stoughton.) 6s. net.

The author of this book has struck out a new line for himself. This book is quite unlike anything we have hitherto seen in use for the elucidation of anatomy, and we have nothing but praise as regards the general scheme and intentions.

The book is not a text-book, nor is it intended to be; it is meant entirely for use in the dissecting room, and for the purpose of dissections very concise directions are given. It is necessary, of course, to use it in conjunction with some general text-book on anatomy, as the author does not attempt to describe the general relations of parts, although giving full directions for finding and dissecting them. Opposite each page is a blank sheet whereon the student may make his own drawings and notes as he proceeds; this in itself is an excellent innovation if the student can be persuaded to carry out the idea.

The diagrams in this book are some of the best we have seen, no attempt having been made to crowd too much detail into any one figure.

As regards the vexed question of terminology we are glad to see that for the most part the author has confined himself to the old terms, though in one or two places, where the Basle term is already in common use, he has substituted this for the older word. The number of instances in which this has taken place are few and not in any way sufficient to confuse the student.

THE POCKET ANATOMY. Seventh Edition. By C. H. FAGGE. 3s. 6d. net. (London : Baillière, Tindall & Cox.)

This little book is well known to most students as a valuable asset for quick revision work.

While it is extremely concise it is at the same time very thorough, and very few facts of importance are missing from its pages, to which there is a comprehensive index.

On reading the preface we were inclined to think that the book was going to cease its utility for a time, for the author states: "In this edition the chief innovation is the inclusion of those terms from the Basle nomenclature which are in general use and appear to me likely to become established." The author, however, does himself an injustice. *Very* few alterations have been made. The musculospiral nerve remains as it was; so does the supinator longus! In fact the author's preface, taken in conjunction with his book, would seem to indicate that he does not think many of the Basle terms are likely to become established. The book is an excellent pocket companion for any student.

GRAY'S ANATOMY. Eighteenth edition. 32s. net. Pp. 1311. (Longmans, Green & Co.)

This new edition improves in many ways upon previous ones. But there is one outstanding feature which we receive with more than doubtful feelings.

The Basle nomenclature has been adopted throughout—or rather the Basle nomenclature with modifications. This is hardly the place to discuss the merits or demerits of the said nomenclature, but the use of it in this kind of work previous to any definite acceptance of it for examination purposes by the Council seems rather unnecessary. While students have to master the accepted terminology for examination purposes, it seems a pity to attempt to force them to the difficulty of mastering two languages instead of one—and we know of many students who, having purchased a work in the Basle terminology, promptly have sold it and purchased an older edition of something else.

One feature we notice more particularly in this book than in any other is the style. The long and involved sentences so frequent in text-books are almost wholly absent, and the text, clear and concise, lessens considerably the work of the student.

Another point of excellence consists of the engravings. About two hundred new ones have been added, and, like the text, their quality consists in simplicity and clear outline.

The most noteworthy alterations in the work itself, apart of course from the Basle nomenclature, are firstly that the paragraphs on surface anatomy have been gathered together and cast into one chapter—an arrangement which is more convenient for general purposes, and is of easier reference. The only drawback to this chapter on surface anatomy is that it seems very small when viewed collectively, and indeed it might with advantage be considerably extended in future editions, for it is a pity that a work otherwise so comprehensive should possess one section incomplete.

The other alteration is the shortening of the chapter on histology. This we regard with pleasure, for histology and anatomy, though so closely allied, must be studied by very different means, and it is better to segregate them apart than to try and get both into one monumental volume.

On the whole we have seen no more interestingly or well compiled work on anatomy, if only the Basle nomenclature had been accepted as the orthodox tongue—which is not vet the case.

as the orthodox tongue—which is not yet the case. For those who have the leisure or inclination to use this Basle terminology the work must be sincerely recommended. But to the student preparing for examinations we are afraid we cannot suggest its use.

EXAMINATIONS AND DEGREES.

UNIVERSITY OF CAMBRIDGE.

December, 1913.

First Examination.

Part I.- Chemistry.-P. T. Liang. Part III.-Elementary Biology.-P. T. Liang.

Second Examination.

Part I .- Anatomy and Physiology .- J. D. Legge-Currie.

Third Examination.

Old Regulations.

Part I.-Pharmacology and General Pathology.-R. E. Barnsley, R. Sherman, G. N. Stathers, S. M. Hattersley, R. Stansfeld, J. W. Stretton, C. R. Taylor.

Part 11.-Surgery, Midwifery and Medicine.-The following have now satisfied the Examiners in all three sections: R. G. Canti, S. M. Hattersley, G. Sparrow, W. B. Gourlay, J. M. Postlethwaite, J. W. Stretton, F. W. Watkyn-Thomas.

Third Examination.

New Regulations.

Part I.-Surgery and Midwifery.-D. C. G. Ballingall, G. D. East, L. R. Shore, E. H. R. Brunton, C. J. Scholtz. Part II.-Medicine.-E. J. Bradley, G. D. East, P. W. Ransom, E. H. P. Brunton, A. R. Jennings, R. L. M. Wallis.

UNIVERSITY OF LONDON.

December, 1013.

First Examination for Medical Degrees.

A. O. Bolton, I. Braun, H. E. K. Eccles, L. C. Goument, L. Handy, C. E. E. Herington, D. C. James, G. F. Juckes, N. Synn, J. A. van Heerden.

CONJOINT BOARD EXAMINATION.

December, 1913.

First Examination

Chemistry and Physics .- A. E. Parkes, K. E. Shellshear. Chemistry.-H. Amin, D. R. Thomas. Physics.-G. Millar.

Biology .- A. E. Parkes. F. E. G. Watson.

Second Examination.

Anatomy and Physiology .- C H. D. Banks, J. F. Haynes, J. M. M. Marshall, R. R. Powell. Practical Pharmacy.—G. Aspinall-Stivala, J. D. Bangay, C. D. Day.

Final Examination.

The following have completed the examinations for the Diplomas of M.R.C.S. and L.R.C.P.: M. T. W. Steedman, N. Gray, G. D. East, F. G. A. Smyth, P. Dvorkovitz, F. H. Guppy, L. E. Napier, J. G. L'Etang, F. H. L. Cunningham, G. H. S. Letchworth, F. D. Marsh, L. C. Wilkinson, G. Aspinall-Stivala, C. K. Sylvester, R. G. Lyster, A. N. Garrod, J. F. W. Wyer, R. E. S. Waddington.

D.P.H.

The following have taken the D.P.H. of the Conjoint Board : J. H. Wood, A. H. Moore

LONDON SCHOOL OF TROPICAL MEDICINE.

J. R. Dood, Col. A.M.S., has taken the D.T.M.

NEW ADDRESSES.

ALLNUTT, Lieut. E. B., R.A.M.C., c/o Grindlay & Co., Bombay. BROWN, W. G. S., 16, Woburn Place (corner of Coram Street), W.C.

CORBEN, C., Burdon Lane, Cheam, Surrey. DAVIS, K. J. A., 16, Upper Wimpole Street, W. EDWARDS, T. P., The General Infirmary, Leeds.

FISHER, A. G. T., 38, Royal York Cresent, Clifton, Bristol. GIBSON, T. S., "Newlands," Whitchurch Lane, Edgware, N.W.

- JAGO, W. J., 8, Gelliwastad Road, Pontypridd, Glam. JEUDWINE, Capt. W. W., I.M.S., c/o Grindlay & Co., Bombay, India.
- MATTHEWS, Major E. A. C., I.M.S., Xth Lancers, Loralai, Baluchistan.

Deductistan. O'CONNOR, Capt. R. D., R.A.M.C., c/o Messrs. Holt & Co., 3, Whitehall Place, S.W. OSMOND, Lieut. T. E., R.A.M.C., R.A.M.C. Mess, Lucknow, India. WILLIAMS, E. C., County Health Offices, The Bulwark, Brecon. YETTS, Staff-Surg. W. P., R.N., Junior United Service Club, S.W.

APPOINTMENTS.

ALLNUTT, Lieut. E. B., R.A.M.C., appointed 6th (Poona) Division, India.

EDWARDS, T. P., M.B., B.S.(Lond.), appointed House-Physician, Leeds General Infirmary.

Leeds General Infirmary. GRAHAM, G., M.D.(Cantab.), M.R.C.P., appointed Assistant Physi-cian, East London Hospital for Children, Shadwell, E. Jovce, J. L., M.B., B.C.(Cantab.), F.R.C.S., appointed Surgical Registrar to the Royal Berkshire Hospital. NANKIVELL, A. T., M.D.(Lond.), D.P.H.(Cantab.), appointed Medical Officer of Health and School Medical Officer to the Declement of Peole Borough of Poole.

RAMSAY, J., M.D.(Lond.), appointed Honorary Assistant Physician to the Blackburn and East Lancashire Infirmary, and Medical Officer to the Blackburn Post Office.

WHALE, H. L., M.D., F.R.C.S., appointed Surgeon for Diseases of the Throat, Nose, and Ear, Hampstead General and North-West London Hospital.

WILLIAMS, E. C., M.D., B.S. (Lond.), D.P.H. (Cantab.), appointed Medical Officer of Health to the Breconshire County Council.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments, etc., have been announced since

December 20th, 1913: Staff-Surgeon H. Kellond-Knight to the "Pembroke," additional for disposal, January 23rd, 1914. Surgeon G. M. Levick to the "President" for five months' course at

the Naval Medical School, Greenwich, February 2nd to June 30th inclusive.

Surgeon G. Scott to the "Vivid," additional for disposal, January 31st, 1914.

Surgeon F. C. Wright to the "Snipe" (China), additional, to date January 15th, 1914, and on recommissioning. Surgeon D. G. Arthur to the "Britomart" (China), additional, to

date January 15th, 1914, and on recommissioning.

BIRTHS.

- BUTCHER. On Wednesday, December 24th, at Pittsworth, Australia, the wife of C. B. Deane Butcher, M.R.C.S., L.R.C.P., of a son. FAWKES.—On January 3rd, At Church Hill, Midhurst, Sussex, the wife of Marmaduke Fawkes, M.B., B.S.(Lond.), M.R.C.S., L.R.C.P., of a daughter.
- of a daughter. MAIDLOW.—On January 18th, at the Ridge, Ilminster, the wife of William H. Maidlow, M.D., of a daughter. PAGE.—On January 11th, at Holly House, North Walsham, the wife of Cecil H. W. Page, M.A., M.D.(Cantab.), of a son.

MARRIAGES.

NEWTON-DAVIS—ATHERTON.—On October 30th, in the Cathedral Bombay, by the Rev. Archdeacon of Bombay, Capt. C. Newton-Davis, I.M.S., 18th King George's Own Lancers, to Mary Atherton, M.B., B.S. (Lond), daughter of T. Atherton, Esq., of Pinner, Middle-

 M.B., B.S. (Lond), augment of the sex, and Tiflis, Russia.
 Woon-KEIR.—On January 20th, at St. Marylebone Presbyterian Church, W., by the Rev. R. C. Gillie, Stanley Wood, M.R.C.S., L.R.C.P., of 22, Accrington Road, Burnley, to Mary Robb Keir, of Laurieston, Falkirk.

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TIMES OF ATTENDANCE OF THE STAFF IN THE WARDS AND OUT-PATIENT DEPARTMENTS.

This Time-table will be Published Quarterly and also whenever there are any Important Alterations.

	-Landstone With Star and Star	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
(Dr. Herringham	_	1.30		1.30	1.30	
A State of the state of the state of the	Dr. Тоотн	1.30	1.30		1.30		
Medical Wards	Dr. GARROD	1.30	1.30		1.30	1.30	
	Dr. CALVERT	1.30	1.30		1.30	1.30	_
	Dr. MORLEY FLETCHER	1.30	1.30		1.30		
	Sir A. BOWLBY	1.30	_	1.30		1.30	
Surgical Wards (operating	Mr. D'ARCY POWER	1.30	1.30	-	1.30	1.30	
days in heavy type)	Mr. WARING	1.30	1.30	1.30	1.30	_	
augs in nearly igne)	Mr. Eccles	1.30	1.30	_	1.30	1.30	
	Mr. BAILEY	1.30	1.30	1.30	1.30		
Gynæcological Wards .	Dr. GRIFFITH	2	_	2		2	
	Dr. DRYSDALE		1.30			1.30	
Medical Out-patients	Dr. HORTON-SMITH HARTLEY .	1.30	_	-	1.30	_	
	Dr. Horder	-	-	1.30		-	1.30
	Mr. RAWLING	9				-	_
0.10.1	Mr. Gask	-	9			_	
Surgical Out-patients	Mr. Gordon Watson		-			9	
and and in the state burner	Mr. WILSON			-	9	-	
C. I. F. S.	Mr. GIRLING BALL.	_		9		-	9
Diseases of Women (O, P's.) {	Dr. WILLIAMSON	-	1.30		. —	-	9
Contraction (Contraction) (Contraction) (Contraction)	Dr. BARRIS	9	-	-	1.30	-	-
Diseases of Children	Dr. MORLEY FLETCHER	9.30	-	-		-	
Orthogoal's Density (Dr. THURSFIELD	-	-	9.30	1		_
Thread N. D.	Mr. ELMSLIE.	1.30	-	-	1.30		
Infoat and Nose Depart-	Mr. HARMER.	1.30			1.30	-	-
ment	Mr. Rose		9.30	_	—	9.30	_
Ophthalmic Department . {	Mr. JESSOP	-	1.30		1 1 - Y -	1.30	_
	Mr. SPICER	1.30	-	-	1.30		
Aural Department	Mr. WEST	1.30	-	_	1.30		-
Skin Department	Mr. Scott	-	9	-		9	-
okin Department.	Dr. ADAMSON	-	9	9	_	9	_
Dental Department	D. August	_	9	-			· · · · ·
	Dr. AUSTEN	_			_	9	-
	Mr. EADDANK			9	C C PA	9	9
Electrical Department	Dr. CUMPERPLICE	9	9	_	9	_	-
	DI. COMBERBAICH	1.30	1.30		1.30	1.30	
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		1.30	1.30	_	1.30	1.30	

DEATH.

HALL.—On January 3rd, at Bankside, Mayfield, Sussex, very suddenly, Henry John Hall, M.R.C.S.(Eng.), L.R.C.P.(Lond.), the second surviving son of the late Henry Acton Hall, of East Hanney, Berks.

ACKNOWLEDGMENTS.

St. Mary's Hospital Gazette, Guy's Hospital Gazette, British Journal of Nursing, The Nursing Times, London Hospital Gazette The Universal Gazette, University College Hospital Magazine, The Middlesex Hospital Journal, South African Nursing Record, The Hospital, The Medical Review, Giornale della R. Società Italiana d' Igiene.

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, Smithfield, E.C.
- The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., at the Hospital.
- All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVER-TISEMENT MANAGER, the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: 1436, Holborn.
- A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price Is. post free) from MESSRS. ADLARD AND SON, Bartholomew Close. MESSRS. ADLARD have arranged to do the binding, with cut and sprinkled edges, at a cost of Is. 9d. or carriage paid 2s.—cover included.



Bartholomew's



REUF.

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

Vol. XXI.—No. 6.]

MARCH IST, 1914

[PRICE SIXPENCE.

CALENDAR.

Mon.,	Mar.	2.—Hichens Prize.
		Applications for Luther Holden Scholarship to be
		sent in.
Tues.,	,,	3Dr. Calvert and Mr. McAdam Eccles on duty.
Wed,	,,	4Clinical Lecture (Surgery), Mr. McAdam Eccles.
Fri.,	,,	6Dr. Morley Fletcher and Mr. Bailey on duty.
		Clinical Lecture (Medicine), Dr. Calvert.
Mon.,	,,	9Kirkes' Scholarship and Gold Medal.
Tues.,	,,	10Dr. Herringham and Sir Anthony Bowlby on duty.
		Harvey Prize. Junior Practical Anatomy.
Wed.,		11Clinical Lecture (Surgery), Mr. Bailey.
		Senior Practical Anatomy.
Thurs.,	,,	12.—Senior Scholarship. Junior Scholarships.
Fri.,	,,	13.—Dr. Tooth and Mr. D'Arcy Power on duty.
		Clinical Lecture (Medicine), Dr. Fletcher.
Mon.,	"	16Second Examination for Medical Degrees (Lon-
		don) Part II begins.
Tues.,	,,	17Dr. Garrod and Mr. Waring on duty.
Wed.,	,,	18.—Clinical Lecture (Surgery), Mr. Bailey.
		Second Examination for Medical Degrees (Lon-
		don) Part I begins.
Fri.,	,,	20.—Dr. Calvert and Mr. McAdam Eccles on duty.
Tues.,	,,	24.—Dr. Morley Fletcher and Mr. Bailey on duty.
		First Examination Conjoint Board begins.
Thurs.,	,,	26.—Second Examination Conjoint Board begins.
Fri.,	,,	27Dr. Herringham and Sir Anthony Bowlby on duty.
		Cambridge Lent Term ends.
Tues.,	,,	31Dr. Tooth and Mr. D'Arcy Power on duty.
		Essays for Wix and Bentley Prizes to be sent in.
		Final Exam. Conjoint Board (Medicine) begins.
		Winter Session ends.
Wed., A	April	1.—Examination for D.P.H. (Cambridge) begins.
Thurs.,	,,	2Final Exam. Conjoint Board (Midwifery) begins.
Fri.,		3Dr. Garrod and Mr. Waring on duty.
1 PE		Final Exam. Conjoint Board (Surgery) begins.
Sat.,	"	4.—Oxford Lent Term ends.
Mon.,	,,	6.—Second Exam. of Society of Apothecaries begins.
Tues.,	,,	7.—Dr. Calvert and Mr. McAdam Eccles on duty. 5

EDITORIAL NOTES.

N January 29th the Mid-sessional Address was delivered to the Abernethian Society by Dr. Henry Head, F.R.S., Physician to the London Hospital. According to the precedent established when Sir William Osler addressed the Society in December last, Dr. Head was admitted as an Honorary Member of the Society, and a large audience then listened with great delight to an address full of wit, wisdom, and instruction. Dr. Head was unwilling that the address should be printed in full, but a few sentences extracted from his notes are printed on another page of the present number. Dr. Head's subject, "Functional Nervous Disorders and their Management," was one upon which he could speak with the authority of great experience, and, since it concerns nurses as much as doctors, was particularly well suited for the occasion. Dr. Head found his audience very appreciative, and appeared to enjoy himself almost as much as they did.

We offer our most sincere wishes for success to Mr. McAdam Eccles, who is standing as a candidate for the Council of the Royal College of Surgeons of England at the forthcoming election. We hope that all members of the Hospital who are Fellows will support him, and that they will not neglect to send back their voting papers when received in June with at least one vote for him.

We understand that Mr. W. G. Spencer, an old Bart.'s man, now surgeon to Westminster Hospital, will also be a candidate. We hope he will secure a seat.

*

We apologise for several omissions from the quarterly timetable published in the last issue. These will be rectified when next we publish the table. They are as follows: Dr. Langdon Brown, Mondays, Tuesdays and Fridays, at q a.m.; Dr. Thursfield, Wednesdays, Thursdays and Saturdays, at 9 a.m.; Dr. Walsham, Mondays, Tuesdays, Thursdays and Fridays, at 1.30 p.m.

The following interesting extract is taken from the *New York Medical Journal* of January 24th, 1914:

"Alfred Noyes, in his poem, 'Flos Mercatorum,' says among other things of Whittington :

"London sickened from the lack

Of water, and he made fresh fountains flow.

He heard the cry of suffering and disease,

And built the stately hospital that still

Shines like an angel's lanthorn through the night,

The stately halls of St. Bartholomew."

The verse is, we fear, more interesting than accurate, however.

We extend our heartiest congratulations to Dr. J. W. Trevan, who has been admitted as a Member of the Royal College of Physicians.

We are glad to say that the amount asked for in connection with the Etherington-Smith Memorial has now been received, the total amount subscribed up to date being \pounds_{2040} .

The Theatre has been in use since Tuesday, January 13th, on which date the first operation in the re-constructed Theatre was performed by Mr. Waring.

The Etherington-Smith Memorial Ward is also completed, and the first patient was Mr. R. W. Mellor, H.P. to Dr. Tooth, who was admitted there on February 2nd.

It is proposed to put up a Memorial Tablet in the Ward as follows :

In Honour of

RAYMOND BROADLEY ETHERINGTON SMITH, M.D.Cantab., F.R.C.S.Eng.

Born 11th April, 1877. Died 19th April, 1913. Assistant Surgeon to this Hospital and Warden of the College. Sometime President of the C.U.B.C. and Captain of the Leander Club. A Surgeon of Brilliant Promise. A Great Oarsman.

A Beloved Friend.

This Ward Dedicated to the Use of the Medical Staff was Founded by those who, Having Admired His Character and His Care er, Desired to Perpetuate His Memory.

A somewhat similar tablet is to be put up in the Theatre. The tablet to be erected in the Ward will probably include a medallion of Etherington-Smith which Mr. George Drinkwater has offered to make.

It is perhaps a suitable moment for recalling to mind the old Theatre, which will soon be numbered among the forgotten dreams, and we have therefore much pleasure in appending herewith a few recollections with which Mr. Bruce Clarke has kindly provided us :

"My first recollections of the old Theatre were in the early seventies, our only general operating theatre as it was in those days. Operations were only performed on Wednesday and Saturday afternoons, except, of course, in cases of emergency. All the surgeons and assistant surgeons made a point of being present unless prevented by some important call. Operations were performed by them in the order of seniority. It was by no means an infrequent occurrence to have no operations on a Wednesday, but Saturday was rarely a blank day.

"The Theatre itself, until its present complete metamorphosis, has undergone but little change. The old deal floor was replaced by oak during the time that I was assistant surgeon. I well remember on that occasion suggesting an impervious mosaic floor, or something of a like nature, and being severely taken to task for it on the ground that it would be very cold to the feet.

"Perhaps the most striking change is in the garments of the operators. In those days an old cupboard under the gallery was devoted to the surgeons' coats, which survived for many years, covered with caked blood and pus, until at length the Sister would use one which she deemed disgraceful as a shroud for an amputated limb, which was sent over to the P.M. Room for decent interment. She then, perhaps, tactfully substituted another, but little better, which the wearer promptly put on, like the Dominie's in Sir Walter Scott's novel, in blissful ignorance that his old one had been abstracted during the night.

"Each surgeon owned a peg in the coat cupboard, and his name was painted over it. I well remember seeing the name of Mr. Lawrence over one of the pegs. It was still visible through a coat of white paint by which it was partially obscured. Lawrence had only bid his adieu to the Hospital about eight years previously.

"Sir William, or Mr. Savory as he then was, never tired of referring to the great Lawrence, and, if tradition is to be trusted, copied him in nearly every detail. Indeed, it was a tradition amongst the students of those days that the operating coat which he invariably donned was Lawrence's, so desirous was he that the mantle of Elijah should descend upon the shoulders of Elisha.

"Two operations invariably attracted a full theatre lithotomy by Tom Smith, which we timed on our watches thirty seconds or more, and an amputation at the hip-joint, which, incredible as it may seem, could be performed almost as rapidly. Five surgeons took part. One compressed the aorta, another seized the anterior flap, two more were ready with forceps—not Spencer Wells', for none existed in the instrument cupboard—and the operator wielded the long knife.

"On these occasions the patients were placed on a special operating table, said to be Percival Pott's. It somewhat resembled the vaulting horse in a gymnasium, and was covered with black leather. The legs were painted red somewhat the colour of a country waggon; a tray pulled out filled with sawdust to catch the blood.

"I must not omit to mention the ring-bolts in the floor and on the walls for the fixation of pulleys for the reduction

I think I once saw them used on a of dislocations. dislocated hip.

"And now we are face to face with the crowning point of our theatre metamorphosis. How soon will it need reconstruction?

" Tempora mutantur et nos mutamur in illis."

We understand that among the candidates for election to a scholarship at Epsom College is Malcolm H. C. Dyson, æt. $10\frac{1}{2}$, the son of an old St. Bartholomew's man, the late M. G. Dyson, F.R.C.S., who was in general practice at Rotherhithe, and who died of pneumonia thirteen months ago, three hours after his wife had given birth to a daughter.

The boy obtained 3980 votes at the last election, and we hope old friends of his father will help to secure his election this coming June.

We also hear that Mrs. Janet E. Haward, the widow of Dr. F. R. Haward, is a candidate for an Epsom College Pension at the coming election in May. Dr. Haward was a house-surgeon here many years ago, and used to have a good practice at Ealing, but had very bad health for ten years before his death and consequently left his widow quite unprovided for. Mrs. Haward is strongly recommended, and we feel confident that old Bartholomew's men who are subscribers to Epsom College will gladly give her their votes if they are not already promised.

The Catering Committee have decided to institute a 1s. lunch. The experiment was tried before in the first year of the Company, but there was so little demand for it that it was dropped. The Students' Union representative, however, thinks that it is a desirable thing, and it was decided to give it a month's trial from next Monday, March 2nd. If sufficient support is given to it it will be continued. It is proposed to have a choice of a hot or cold dish with a sweet or cheese and bread, the menu to be varied daily. It will not, of course, be possible for any other dishes not on the list to be substituted; if such dishes are desired they must be paid for at the à la carte prices.

FUNCTIONAL NERVOUS DISORDERS AND THEIR MANAGEMENT.

Definitions and Aphorisms from the Mid-Sessional Address delivered to the Abernethian Society on January 29th, 1914.

By HENRY HEAD, M.D., F.R.C.P., F.R.S.

EURASTHENIA.-A chronic exhaustion showing itself in loss of nervous control and consciousness of visceral activity.

For the development of neurasthenia it is necessary that something should produce the preliminary exhaustion by lowering vitality; but overwork never hurt anybody; most of these patients have hereditarily lowered resistance.

Marriage without physical affection is an impossible human relationship.

The mental treatment of neurasthenia.-Remove or mitigate underlying worry if possible; but wait till after the decree nisi has been obtained.

Treatment by suggestion must be steady and reasonable. Don't make an appointment to see a neurasthenic when you have to catch a train. If you do you will lose your patient or your train.

In the re-education of a neurasthenic never send him back to full work after a holiday. Make him choose what he wants to do and determine to do it. Delegate unimportant work.

Psychasthenia.—Chronic mental exhaustion accompanied by doubt, fear and obsessional ideas; it is due to loss of mental inhibition.

Action is the resultant of two opposing forces, and every act postulates a question suppressed. Doubt arises when the contrary idea is not inhibited, and it therefore appears in dreams and psychasthenia-"Shall I catch my train?"

All children and animals have fear, but it is suppressed in civilised man, who experiences anxiety. Deep down lies panic fear, which comes up in dreams and psychasthenia when inhibition is removed.

Adolescence and the fear of not " keeping fit."-The presentday pre-occupation with physical fitness is a sign of degeneracy. It leads to the cult of the body, not as something beautiful and strong, but simply in order that we may feel "fit," a condition incompatible with efficient intellectual activity. For this end all sorts of quacks have invented many kinds of ritual exercises, which men carry out daily with fear. Golf is in many cases only another instance of the same dismal cult.

Hysteria.- A mental state characterised by an increased power of self-suggestion and dissociation of personality.

For the diagnosis of hysteria it is necessary, not only that all signs of organic disease should be absent, but that positive signs of hysteria should be present.

The mental treatment of hysteria.-Attempt to switch the dissociated part into the continuance of the patient's mental life. Hypnotic suggestion is a failure, but non-hypnotic suggestion or persuasion is extremely valuable. Never bully, but lead. Do not say, "Turn up your eyes," but "Look up at the ceiling." Do not employ a nurse who keeps a diary, and talks to the doctor or the friends about what the patient cannot do.

GENERAL CONCLUSIONS.

To the medical man .- Your first duty is to do your patient no harm.

Carefully prune your conversation of antitherapeutic suggestions. Don't think out your diagnosis aloud. Purge your mind of certain phrases which become automatic-"A touch of rheumatism," "Just escaped pneumonia."

Do not think in terms of surgery in cases of functional neuroses. When you hear that a patient is vomiting, do not think first of gastro-enterostomy.

Be natural, but on guard. You will then be ready to deliver your blow at the moment required. At the same time remember that your most brilliant conversation is useless with a neurasthenic. She is interested in herself, not in you.

Nature's moral code, under which we work, is cruel and unrelenting. There is no forgiveness of sins; but in the medical man this knowledge should be tempered towards the patient by clinical curiosity and human sympathy.

To the nurse.—Keep well. When fatigued you cannot exercise the quiet suggestion for good. These patients are vampires, and if you are mentally or physically anæmic you cannot stand the drain. Always have a time off for complete rest and meditation. Cultivate a love of solitude and don't spend your leisure in rushing about. A tired nurse is a danger in the sick-room. Keep your observations apart from your statements. Don't fail to observe signs you think are for the worse, but don't tell the patient what you see.

Don't make statements that are demonstrably false, and never make conditional statements—"I never saw a case like yours that did badly unless the heart was affected." Some little thing will lead the patient to believe his heart is affected and you wonder why he is getting worse.

All conversation should be directed towards the patient's well-being. Don't chatter irresponsibly of operations or other medical cases. In giving massage lay emphasis on what the patient can do, not on what she can't.

Don't be afraid. Nurses are extraordinarily brave with regard to physical danger, but many are terrified at what they do not understand, and to most women things of the mind are full of fear. The frightened nurse is useless as a suggestive agent.

To all who have to deal with these morbid conditions.— Be as honest in thought as you would naturally be in deed. Be without fear and never lose courage. And, finally, call nothing common or unclean.

ELECTROTHERAPY—IN THE PAST AND AT THE PRESENT DAY.

By E. P. CUMBERBATCH, M.B., M.R.C.P.

PART IV.

ATIENTS are sometimes sent to the Electrical Department with the request that "high-frequency" treatment may be given them. What is "high-frequency"? "High-frequency" is the name applied to a certain form of electrical current : the current oscillates, that is, its direction of flow is continuously reversing, and the name refers to the rate of the oscillation, which is exceedingly high. The expression "high-frequency" is, therefore, an abbreviation for "current of highfrequency oscillation." Such a current must not be confused with the "alternating" current, which is supplied on the mains in certain districts, for in the latter the "alternations" or reversals of direction are not more than two hundred per second, whereas in the high-frequency currents the oscillations may be thousands or millions per second. No mechanical current-reverser can be used to produce such rapid oscillation. But if a condenser, such as a Leyden jar, is charged, the current that flows when the jar is discharged, though of momentary duration, is oscillatory in character, providing that certain conditions in the circuit are fulfilled.

The use of high-frequency currents for medical purposes was originated and developed by d'Arsonval, of Paris. He showed, in 1890, that when muscle was excited more than 5000 times a second the contraction became progressively feebler as the frequency of the excitation further increased ; and in 1891 he communicated to the Société de Biologie that when the frequency of current oscillation was sufficiently high, muscles and nerves were not excited, and that he had been able to pass through his own body such a current, reaching a magnitude of 3 ampères, with no other effect than a sensation of heat.

The apparatus designed by d'Arsonval for the production of high-frequency currents for medicinal purposes contains two Leyden jars, which act as the condensers. They are charged from a large induction coil which is continuously working, so that the jars can be quickly re-charged each time they discharge. Each discharge produces a group of high-frequency current oscillations, and the current as supplied to the body is made up of rapidly following groups of these high-frequency oscillations. The current reaches a magnitude of half an ampère.

The diathermy apparatus also produces high-frequency currents, but of higher value, $2\frac{1}{2}$ or 3 ampères. It was devised by Nagelschmidt, of Berlin, and the name indicates the all-important action of high-frequency currents, namely, "heat-penetration"—the production of heat through the tissues. The action is much more evident when the diathermy apparatus is used, on account of the stronger currents which it produces.

The principle on which the high-frequency currents are produced in Nagelschmidt's apparatus is the same as in d'Arsonval's. The condensers take the form of metal plates immersed in oil, which insulates one from another. They are charged from an alternating current taken from the mains and raised to a suitably high voltage by means of a transformer fitted to the apparatus.

When a high-frequency current passes through the body, the muscles do not contract, neither is pain felt, although the current surpasses the minimum that would cause death

if it were not of high-frequency oscillation. At first nothing at all is felt; then a sensation of warmth, which may gradually increase, depending on the parts through which the current flows. For many years no one could satisfactorily explain why these currents, though of such magnitude, caused no pain or muscular contortion, but if it be remembered that it is the sudden movement of the ions which constitutes the electrical stimulus, the failure of the high-frequency current to stimulate excitable tissues will be explained. The frequency of the oscillations is so high that the ions cannot keep pace with them. They are unable to move, or to move sufficiently, and, therefore, muscle and nerve are not stimulated, or not stimulated sufficiently to produce a response. As the current is increased in strength, the tissues become hotter, and still no contraction or pain is produced. The blood-stream now acts as a cooling fluid, and prevents a dangerous rise of temperature. If the circulation is impeded, the blood and tissues may be coagulated en masse. This has been performed on animals-Heat is developed along the path traversed by the current. The degree to which the tissues are heated depends upon its concentration or density in the path along which it flows. Thus, if it enters the body through a flat electrode covering a large area of skin, there will be a large surface of entry for the current, its density will be small, and the skin will be only slightly warmed; but if the current enters by way of a needle, the current density will be infinitely greater, and the tissues around the needle will be coagulated or even carbonised.

The question may now be asked : "What cases are likely to receive benefit from high-frequency or diathermic treatment?" The recognition of the principle that highfrequency currents produce heat-penetration has furnished the guide for their scientific application. If the whole body is traversed by high-frequency currents heat is "pumped into it" and the katabolic chemical processes are increased. D'Arsonval showed long ago that there was an increased output of CO₂, an increased formation of heat, and a greater output of urea and phosphates. In other words, the physiological fire has burnt more fiercely. Supposing, now, there is a patient with deficient power of digestion and assimilation, with subnormal temperature and insufficient heat formation, a condition to which Bergonié has applied the name "misère physiologique." Heat can be artificially introduced into the body of such a patient by the highfrequency current so as to supply the heat which the body cannot supply, and such patients derive much benefit from high-frequency current applications.

General applications of high-frequency influence the blood-pressure. The pressure is first lowered on account of the vaso-dilatation, but a compensatory rise is, as a rule, produced by the heart. But if the blood-pressure is pathologically raised and if the heart is labouring unduly against it, it falls without a subsequent rise. Nagelschmidt has reported cases of long-lasting improvement in such conditions. A patient is undergoing treatment in the Electrical Department, and on one occasion when general highfrequency application was made, the blood-pressure fell from 145 mm. to 120 mm., and the pulse-rate increased from 96 to 112.

High-frequency may be applied locally. The resulting heat penetration produces vaso-dilatation, and pain is often promptly relieved. A patient who suffered from neuritis accompanied by much pain has recently been successfully treated in the Electrical Department by diathermy.

A case of post-herpetic neuralgia was cured, also a case of obstinate metatarsalgia which had resisted other forms of treatment, including surgical operation. It has been applied to many cases of rheumatoid-arthritis and osteo-arthritis that have been sent to the Department. As a rule the pain is relieved for a few hours and then it recurs. Perineuritis of the sciatic nerve, when accompanied by much pain, responds well to diathermic treatment. Good results have been reported in the treatment of acute gonorrhœal arthritis, the local rise of temperature of the affected joint being unfavourable to the life of the gonococcus.

High-frequency currents may be applied locally by means of special electrodes. These are held a short distance off the skin or are lightly moved about over it. The gap between electrode and skin is bridged by the current in the form of small sparks. These produce erythema, and they have been used for the destruction of nævi, lupus and rodent ulcer. Ozone and vapours of nitrous and nitric acids are also formed from the atmospheric gases by the sparks, and they may have a bactericidal action in the treatment of infected ulcers.

The heat that is developed during the passage of the high-frequency current can be used for the destruction of new growths, and the high ampèrage of the current furnished by the diathermy apparatus renders this device particularly suitable for the purpose. Here, again, there is heat-penetration, not merely local heating, as is the case when a redhot platinum needle is used, so that there is destruction of the growth for a short distance around and below the needle. In addition the blood and lymph are coagulated, so the channels for extension are obliterated. Diathermic cautery has been applied to many cases of inoperable malignant growth that have been admitted to the hospital. The cautery can be very quickly performed. One electrode is of large area and is placed on the skin of some distant part. The other electrode terminates in a needle or group of short needles, which are inserted a few millimetres into the growth. The current is turned on and is gradually increased. Soon, the tissue around the needles pales, and is coagulated. The needles are inserted into different parts of the growth, and the whole mass is gradually coagulated in sitû. The mass, later on, sloughs off, and, if the destruction of the growth has been complete, the excavation fills up with

granulation - tissue, which quickly forms and has this peculiarity—it does not contract or form adhesions with other parts in contact. Diathermic cautery might be applied to operable growths so as to coagulate them *in sitú* and seal the vessels leading from them before using the knife, for it seems that there would then be less risk of spread when the growth was excised and the vessels cut across.

Diathermic cautery has recently been applied to two cases of fibro-angioma of the lip in the Electrical Department, and very satisfactory results were obtained. One case was treated without a general anæsthetic, cocaine being introduced locally by the ionic method. Cases of extensive nævus have also been treated by the same method.

A short account will now be given of static electricity and its physiological effects on the body. As with the other forms of electricity, so with static; when these effects are known, together with the way in which they are produced, the cases to which it may be applied with reasonable prospect of success can be more readily judged.

In the earliest electrical applications for medical purposes static electricity was used. It was generated by frictional machines. It was collected on an insulated conductor, where it accumulated (hence the name "static") till it leaked away or was drawn off on to the body. Modern generators of static electricity are the various forms of influence machine, such as the Wimshurst and the Holtz. They generate electricity with great rapidity, the positive being collected on one conductor, the negative on another. The patient sits on a chair which is insulated from the earth, and is connected to one conductor, usually the positive. He is then positively charged. An electrode is then connected to the negative conductor and brought gradually nearer to the patient until the positive and negative charges neutralise each other in the form of an electric discharge passing between electrode and patient. The nature of the discharge depends on the electrode. If the latter terminates in a point or a number of points a continuous discharge takes place, even when the electrode is some distance away, and the patient feels as if a cool breeze were blowing on him when the skin is uncovered. If the skin is covered by dry cloth a pricking sensation is felt, which becomes stinging and burning when the electrode is brought close to the skin. This form of application is known as the "static breeze." It acts as a strong stimulant of the skin and sensory nerves, probably as the result of the heating of the skin at innumerable minute points. Erythema is produced, and it lasts for some hours, and sometimes urticaria is seen. As a result of this peripheral sensory stimulation the blood-pressure rises. The physiological action of static electricity, applied in the way described, is to raise the blood-pressure. It can easily be shown that there is a rise, by measuring it before and after an application. The raising of the blood-pressure is the therapeutic action of static electricity applied in the way described, and thus the indication and contra-indication for its use are made more certain. It was mentioned in Part I, in which the history of medical electricity was reviewed, that Golding-Bird obtained good results in the treatment of amenorrhœa in young subjects by static electricity. These patients most probably had low blood-pressure, and to this their symptoms were most likely due. The static treatment cured these patients by raising their blood-pressure.

Patients with headache as the result of low blood-pressure quickly improve under static treatment, and the headache often disappears during the first application.

The erythema and skin stimulation that is produced by the static breeze is often effective in the treatment of some skin diseases, such as eczema and psoriasis. Pruritus is often relieved.

If an electrode ending in a metal ball, 3 in. in diameter, be used, the discharge on to the patient does not take the form of a "breeze," and nothing is seen till the ball is a few inches off the skin, when sparks pass with sharp, snapping clicks. Each spark produces a sudden violent commotion of the muscles in the neighbourhood. Pains which are felt in muscles and fasciæ are sometimes relieved instantaneously. What probably happens is the breakage of adhesions, as the result of the sudden muscular contraction.

A final note will be made of another of the uses of electricity in medicine-for the purposes of diagnosis. When its motor nerve is sufficiently injured or diseased, not only is the muscle paralysed, but a peculiar change takes place in its contractile substance. It can still contract when artificially stimulated, but it now contracts sluggishly instead of briskly. Further, impulses of brief duration, such as are given by the induction coil, are powerless to cause the muscle to contract, just as a short sharp slap cannot shut a heavy door : a slow push is required. So also the paralysed muscle requires an impulse of longer duration. Such an impulse is given by the galvanic current. A muscle that the induction coil current, the so-called "faradic" current, cannot cause to contract, but which contracts sluggishly when stimulated by the galvanic current, is said to show the "reaction of degeneration," and it means that there is a lesion somewhere in the lower motor neuron.

The method of testing the reactions of muscles by faradic and galvanic currents was devised in 1868 by Erb, who introduced the term "reaction of degeneration." It is still in general use, but it has serious defects. It causes much pain. It is often difficult to decide whether the contraction is quick or sluggish, as it is often neither quick nor sluggish. But more particularly the method has this defect : no attention is paid to a very important point, the *duration* of the stimulus. It is supposed that the induction coil gives a very brief, or even an instantaneous, stimulus. Dr. Lewis Jones has taken graphic records of the waves of discharge of medical coils, and he has found that their duration varies, but in most of them it lasts about $\frac{1}{400}$ sec. A normal muscle will respond to an impulse of infinitely shorter duration, and it will have passed some way along the downward path of degeneration if it requires an impulse as long as $\frac{1}{400}$ sec. before it will contract. Yet during the past forty-six years muscles have been labelled as having normal reactions because the coil current causes them to contract. Again, the muscles which respond sluggishly and only to the galvanic current have all been grouped together under the heading "complete R.D." But if the duration of the shortest exciting impulse be measured it will be found that some require $\frac{1}{200}$ sec., others $\frac{1}{25}$ sec. or even longer; others require intermediate duration of stimulation. The whole subject is badly in need of further investigation. The condenser method, in the form devised by Dr. Lewis Jones, is destined to render valuable service. Science is measurement, and in place of the coil, which gives an impulse which is not short enough, and the battery current, which gives an impulse the duration of which is unmeasured and always too long, we have a box of twelve condensers which give impulses of known duration varying between $\frac{1}{2 \pm 000}$ sec. and $\frac{1}{200}$ sec., and, by slight modification, between $\frac{1}{200}$ sec. and $\frac{1}{25}$ sec. The muscle is tested with each condenser in turn, and the shortest impulse that can cause it to contract gives the measure of the condition of the muscle. Instead of the three conditions as expressed by the terms "normal reaction," "partial R.D.," and "complete R.D.," with which we have hitherto been satisfied, we can, by the condenser method, recognise twelve or more, and each can be expressed by a figure indicating either the minimum duration of the exciting stimulus, or the capacity of the condenser which produced it.

ANATOMICAL MONUMENTS.*

(Continued.)

OME writers claim for anatomy the highest antiquity. The descriptions of wounds in the Iliad have been supposed adequate to prove that in the time of Homer, who lived about ten centuries before the Christian

Era, man had distinct notions of the structure of the human body.

Hippocrates has been justly honoured as the Creator of the Science of Medicine and Anatomy. The knowledge

* The foramen of Winslow has been erroneously credited to Forbes Winslow in the last JOURNAL. It has since been pointed out that the entrance into the lesser sac of the peritoneum is guarded not by an English but by a Danish anatomist, who was a pupil and successor of Duverney, as well as a convert to Catholicism. He became a naturalised Frenchman, and finally was appointed Professor of Anatomy at the Royal Garden in 1732. Winslow's exposition of the human structures is distinguished for being not only the first treatise of descriptive anatomy divested of physiological details and hypothetical explanations foreign to the subject, but for being a close description derived from actual objects without reference to the writings of previous anatomists.

possessed by the Hippocrates family was transmitted in various treatises which have long been known to the learned world under the general name of the "Hippocratic Writings." But it may indeed, without injustice, be said that the anatomy of the Hippocratic school was not only erroneous, but fanciful and imaginary.

Amidst this general obscurity in which the early history of anatomy was involved there appeared Aristotle, who was born about 384 years before Christ; and among the services which the philosopher of Stagira rendered to mankind, one of the greatest and most substantial is that he was the founder of Comparative Anatomy.

Hitherto anatomical inquiry had been confined to the examination of the bodies of brute animals. There is, indeed, no testimony of the human body being submitted to examination previous to the time of Erasistratus and Herophilus. It is vain to look for authentic facts on this point before the foundation of the Ptolemaic dynasty of sovereigns in Egypt. This event collected into one spot the scattered embers of literature and science which were beginning to languish in Greece under a weak and distracted government and an unsettled state of society. The sons of her soil, mainly due to internal strife, wandered into Egypt and found, under the fostering hand of the Alexandrian monarchs, the means of keeping alive the sacred flame of Anatomical Science. Among these, Herophilus and Erasistratus have the distinction of being known to posterity as the first anatomists who dissected and described the parts of the human body. The modern student will be able to pay his respects to Herophilus at the "wine-press" by the internal occipital protuberance. It is to be regretted, however, that Erasistratus has not laid his seal on any structure to remind us of his greatness, although he is said to have described correctly many structures for the first time.

After the decay of the school of Alexandria, anatomical knowledge languished in neglect and obscurity. During the first century of the Christian Era, it began to be revived in Rome under the reign of Nero. In this connection, mention must be made of Claudius Galenus, whose anatomical writings are preserved even to the present day. The death of Galen, which took place about 180 A.D., may be regarded as the downfall of anatomy in ancient times. Anatomical learning, thus neglected by European nations, is believed to have received a temporary cultivation from the Of these, several nomadic tribes known under Asiatics. the general denomination of Arabs and Saracens had gradually coalesced under various leaders. The works of Greek and Roman authors were translated into Arabic, which speedily raised a succession of learned Arabians.

Notwithstanding the diligence of the Arabian physicians, little was done for anatomy, and the science made no substantial acquisition. The Koran denounces as unclean the person who touches a corpse. The rules of Islamism forbid dissection, and whatever their instructors taught was borrowed from the Greeks. The era of Saracen learning extends to the thirteenth century, and after this we begin to approach happier times. The University of Bologna, which as a school of literature and law was already celebrated in the twelfth century, became, in the course of the following one, not less distinguished for its medical teachers. It seems to have been written in the Book of Destinies that the science of anatomy was to be cultivated first in Italy, and that this country should be honoured in giving birth to the first eminent anatomists in Europe. This distinction she long retained; and this glory she acquired in the names of Achillini, Mondino, Columbus, Vesalius, Fallopius, and Eustachius.

The sixteenth century had commenced before France began to gain any anatomical distinction in the names of Dubois (Sylvius), Fernel, and Etienne. From this period onwards the study of anatomy began to diffuse into all the nations of the world.

GLISSON'S CAPSULE ensheathing the "Portal Canal" in the Liver.

Glisson, Francis, an English physician, was born in 1597, at Rampisham, in the county of Dorset. He was educated at Cambridge, and during forty years occupied the chair of medicine in the University. At thirty-seven he was admitted into the College of Physicians in London, of which he afterwards became president. Five years later, this body appointed him professor of Anatomy. He filled this situation with much credit at the commencement of the civil war, when he took refuge in Colchester; but after the surrender of that city to the Parliamentary forces, he went to London, and became a member of that association of learned men which afterwards became the Royal Society.

In 1654 appeared his *Anatomia Hepatis*, in which Glisson first described the capsule of the vena porta, hepatic artery and bile-duct which goes by his name at the present day. Glisson was also the first who attributed the contraction of the heart, and of the other muscles, to the action of a stimulus on their irritable principle, but his views on physiology are now held in little estimation. He died in the year 1677, aged 80 years.

BARTHOLIN'S GLANDS in the Female, analogous to Coveper's Glands in the Male and Duct of Bartholin (Sublingual).

Bartholinus, Thomas, a very celebrated physician, son of a learned writer, was born at Copenhagen in 1619. After studying for some time in his native country, he went to Leyden, where he studied medicine for three years. He then travelled into France, and resided two years at Paris and Montpellier in order to improve himself under the distinguished physicians of those Universities, after which he visited Italy, remained for three years at Padua, and then went to Basle, where he obtained the degree of doctor in philosophy. Returning to Copenhagen, he was nominated to the chair of Anatomy in his twenty-ninth year, which he held for thirteen years. He then retired to a little estate he had at Hagestaed, near Copenhagen, where he hoped to spend the remainder of his days in peace and tranquility, but his house having been burnt in 1670, his library, with all his books and manuscripts, was consumed. In consideration of this loss, the King of Denmark appointed Bartholin his physician, with a handsome salary, and exempted his land from all taxes; the University of Copenhagen also chose him for their librarian; and, in 1675, he was honoured with a seat in the Grand Council of Denmark. He died on December 4th, 1680, at the age of sixty.

[MARCH, 1914.

FALLOPIAN TUBES; AQUÆDUCTUS FALLOPII; HIATUS FAL-LOPII AND MUSCLE OF FALLOPIUS (PYRAMIDALIS NASI).

Falloppio, Gabriello—in Latin, Fallopius—is described as one of the three great anatomists to whom may be assigned the honour of having restored, if not actually created, the science of human anatomy, Vesalius and Eustachius being the other two. Eustachius and Vesalius were contemporaries. Fallopius was a pupil of the former. He was a native of Modena, and though the year of his birth is not accurately known, it is assigned to the end of the first quarter of the seventeenth century. He received his medical education at Ferrara, and in that city he established himself as a teacher of anatomy, after completing a scientific tour through the most civilised portions of Europe. From Ferrara he removed to Pisa, attracted thither by the liberal offers of Cosmo I, Grand Duke of Tuscany, and from Pisa to Padua, where the Venetian Senate appointed him to succeed Vesalius.

His career in his new sphere, though brilliant, was short, as he died in 1562 at the age of forty, after holding his various appointments for only eleven years.

His only work, the Observationes Anatomica, was first published at Venice in 1561, and has been frequently reprinted. Fallopius is said to have described better than heretofore the internal ear, especially the tympanum and its osseous ring, the two fenestræ, and their communication with the vestibule and cochlea, and to have given the first good account of the stylo-mastoid hole and canal, of the ethmoid bone and cells, and of the lacrymal passage. In myology he rectified several mistakes of Vesalius. He made some curious researchesinto he organsof generation in both sexes, and discovered the utero-peritoneal canal which still bears his name.

Malpighian Bodies, etc., of the Kidney and Spleen; Malpighian Layer of the Skin.

Malpighi, Marcello, an eminent physician and anatomist was born near Bologna in 1628. He studied medicine in that

city, and graduated as doctor in his twenty-fifth year. Three years later he became professor of medicine in the University of Bologna, and was promoted during the same year by Frederick II of Tuscany to the medical chair at Pisa. There his intercourse with Borelli, the mathematician, tended greatly to convince Malpighi of the propriety of applying experimental researches to the study of medicine. He was soon forced, however, by declining health to return to his former situation in Bologna. From Bologna he was summoned in 1691 to Rome, to occupy the position of principal physician to Pope Innocent XII.

The discharge of his new duties was rendered burdensome by attacks of gout, palpitation and other diseases, and he died of apoplexy in 1694, at the age of sixty-six. Malpighi's discoveries relate chiefly to the structure of the skin, spleen and kidney.

He also devoted much of his time to the organisation of plants and the lower animals.

His grand work, *De Anatome Plantarum*, appeared in 1669.

MECKEL'S DIVERTICULUM; MECKEL'S CARTILAGE (EM-BRYONIC); MECKEL'S GANGLION; CAVUM MECKELII.

Meckel, Johann Friedrich, was born at Halle in Germany in 1781, of a family of some note in the annals of medicine. On receiving his doctor's degree at the University of his native town, he already gave evidence of the possession of distinguished talents for physical research by his inaugural thesis, De Conditionibus Cordis Abnormibus. Having directed his attention almost exclusively to the study of comparative anatomy, he undertook travels into Italy and France to widen the sphere of his observation and perfect his knowledge of his favourite science. After his return to Halle in 1809, he was appointed Professor of Anatomy and Physiology in his native university; and gave to the world, at the age of thirty-two, his essay on Comparative Anatomy which established Meckel's scientific reputation. He laboured for a long time with great industry in perfecting the excellent collection commenced by Reil, and known at the present day by the name of The Physiological Archives of Meckel (12 vols. 8vo, Halle, 1815-1827). After gaining for himself a distinguished name among the most eminent scientific men of Germany, Meckel died in his native town on October 13th, 1833, aged 52 years.

"Rectal Valves and Columns of Morgagni"; Hydatids of Morgagni; Sinus of Morgagni; Caruncula Morgagni (Middle Lobe of Prostate).

Morgagni, Giovanni Battista, one of the greatest physicians of the eighteenth century, was born at Forli in Italy on February 25th, 1682. He studied medicine at Bologna, and subsequently proceeded to Venice and Padua, where he

pursued his investigations, both in physics and in comparative anatomy, with great ardour. At the age of twenty-four he published his Adversaria Anatomica prima, a work of great originality; and at the age of thirty was appointed professor of the theory of physic at Padua. He then occupied himself in describing the structure of a number of organs which had been ill-observed before his time. Morgagni was now promoted to the first chair at Padua, and successively admitted a member of the Royal Society of London, of the Academy of Sciences at Paris, and of the Academies of Petersburg, Berlin, and several learned Italian institutions. He continued to labour till the close of his long and honourable career, which terminated on December 6th, 1771, at the age of nearly ninety. The knowledge of Morgagni was not confined to the medical art. His vast erudition embraced philology, criticism, history, and antiquities, as may be gathered from the list of his various works. His most celebrated work, De Sedibus et Causis Morborum per Anatomen indagatis, is still a standard reference on pathology and has been translated into most of the European languages.

POUPART'S LIGAMENT. (Montreal Medical Journal, 1904.)

Poupart, François, naturalist, anatomist and surgeon, was born at Mans in France in the year 1661. Until his death in 1709 he lived in a state of comparative poverty, but this he bore without discontent. His early education was received from the fathers of the Oratory in his native place. His love for science took him to Paris where he studied at the Jardin du Roi. Entomology had a special charm for him, and he devoted much time studying the habits of live insects and the anatomy of dead ones. The smallness of his means was sufficient to discourage him from pursuing his investigations, but this did not thwart his purpose. He applied himself seriously to the study of anatomy and surgery. He finally presented himself for examination in the latter at the Hôtel-Dieu in Paris and is said to have passed with credit, although he subsequently astonished everybody by announcing that he had studied but the theory and did not even know from experience how to bleed a man. Opportunity to practise surgery was therefore given to him, and at the end of three years he took his degree at Rheims.

Some articles published in the *Journal de Savants* gained him an immediate reputation. At the age of thirty-eight he was admitted to the Academy of Science as a pupil of the celebrated Mery, anatomist and Court surgeon. Mery was the first to show that in hernia the peritoneum is not pierced, but is carried down as a covering of the protrusion. Not satisfied with the labours of the day, he is said to have spent his nights secretly dissecting in his bedroom—a practice not always to be commended where sanitary inspectors make their rounds. Mery's pupil, Poupart, was not less diligent

than his master. Poupart's *Complete Surgery* was his masterpiece. Eley credits him with the discovery that the sacrum and coccyx are but modified vertebræ. He seems to have made a study of deficiencies compatible with a continuation of the bodily functions; thus he describes the case of a patient who went through the world short of one kidney, and gives an account of how a woman from whom he had removed half of the skull used to gain her livelihood by receiving alms in the receptacle thus provided. It is an interesting fact to note that his description of the so-called ligament was neither new nor accurate, but that Vesalius should be given the credit ! So says the biographer.

SCARPA'S FASCIA, Deep Fascia on the Anterior Abdominal Wall; SCARPA'S TRIANGLE in Front of the Thigh; FORAMINA OF SCARPA; GANGLION OF SCARPA.

Scarpa, Antonio, was born at La Motta, in Italy, in the year 1748. He early distinguished himself as an anatomist and surgeon, and his works in both these branches of science have spread his reputation throughout all Europe. For many years he occupied the chairs of clinical and operative surgery in the School of Pavia. Scarpa was an exact as well as a laborious observer, and did more than most men of his time to advance the progress of surgery. Surgical anatomy, which has given a particular direction to the researches of surgeons, owes its first development to the labours of Scarpa, and forms, in some sort, the distinctive character of his productions. Scarpa commenced his career as an anatomist, but afterwards directed his attention principally to the practice of surgery. The plates which represent the nerves of the heart, and those which accompany his treatises on hernia and aneurysm, are the most perfect productions of their kind. Scarpa died at Pavia on October 30th, 1832, at the age of 84.

ON APHASIA, WITH NOTES OF TWO CASES.

By ANTHONY FEILING, M.B., M.R.C.P.

ASES of genuine aphasia are sufficiently uncommon to render their study both interesting and important. Of course, in many cases of right hemiplegia a temporary disturbance of speech is present, and to this condition the term "aphasia" is often somewhat loosely applied ; such a condition is more correctly termed "anarthria," indicating by that expression a defect due to injury of the fibres arising from the cortical motor centres governing the muscles of articulation. But apart from these motor centres there are other more specialised areas in which sensory impressions are gathered and stored and movements initiated, both of which are essential for the production of language, whether oral or written. Disturbances of these more specialised centres give rise to any or all of the various forms of aphasia.

There have recently been in the wards of the Hospital two cases which exemplify very well the two principal forms of aphasia commonly recognised, namely, the sensory aphasia of Wernicke and the motor aphasia of Broca. It will be convenient to refer to the history and condition of these two patients, and to discuss briefly the pathological anatomy of aphasia in relation to them. For the purposes of this article I will only mention the facts which are relevant to the question at issue, namely aphasia, and will not enter into any discussion as to the exact nature of the pathological processes at work. Within the limits of such a paper as this it is obviously impossible to discuss all the evidence, anatomical and pathological, which has been brought to bear on the localisation of function in the cortex with regard to aphasia; consequently the dogmatic nature of any subsequent statements must be excused on this ground.

For permission to examine and report these cases I am much indebted to the kindness of Dr. Calvert and Mr. Rawling.

CASE 1.—A. W—, male, æt. 45. Admitted to hospital n an unconscious condition on December 6th, 1913. The history was difficult to obtain, as we were entirely dependent on the statements of the patient's relatives. Except for an attack of epistaxis two days before, accompanied by headache, he was in his usual health till the day of admission, when he was found unconscious on a seat in a public garden. One interesting point in the previous history was that in August, 1913, while watching a cricket match, the patient suddenly suffered from a feeling of "pins and needles" in the left side of the face, which appears to have been followed by an inability to swallow properly lasting for about three days. From this he made a perfect recovery. Except for this his previous history showed nothing unusual.

The family history is interesting. His father and two paternal uncles are all said to have died from cerebral hæmorrhage; one brother is an epileptic.

He recovered consciousness shortly after his admission to hospital. Examination then showed that he was suffering from a right hemiplegia, with aphasia. I examined him particularly with regard to the question of aphasia, and noted the following points :

(1) He was right-handed, and could safely be assumed to have been able to read and write intelligently.

(2) His hearing and vision were both quite good.

(3) He could not understand spoken language, except a

few simple remarks such as "Good morning," "Put out your tongue," etc.

(4) He could not read either printed or written matter.

(5) He could speak spontaneously in an ordinary voice. There was no articulatory defect; his words were for the most part well-formed and intelligible, but his speech was a meaningless jargon of words.

(6) He could indicate his meaning by signs with his left hand.

(7) He could recognise objects, though he could not name them; he was evidently also perfectly familiar with the use of common objects, such as a knife, a pen, paper, etc., and was able graphically to indicate their use. There was therefore no apraxia.

(8) Since his right arm was paralysed no test of his power of spontaneous writing was possible, but from what will be said later, it is safe to assume that it would have been impossible.

(9) Considering the grave disadvantages under which he laboured, his mental condition appeared perfectly good, except for an uncontrollable tendency to relapse into tears not unnatural under the circumstances.

Though slight exceptions to the truth of the above statements could be found—and it is very rare for an aphasia to be absolute—we may assume what I have stated to be the approximate extent of his aphasia.

CASE 2.—F. M—, male, æt. 35. In July, 1910, he received a blow on the left side of the head; one week later loss of speech, reading and writing were discovered; he was never unconscious; never vomited, had no head-ache, no fits. Some loss of memory. Has been able to do his work. The power of reading has returned.

When examined with regard to the nature and extent of his aphasia the following points were noted :

(1) He was right-handed and perfectly intelligent; he had been able to read and write quite well.

(2) There was no paralysis of any kind detected.

(3) Hearing and vision were normal.

(4) He could understand language easily, whether spoken, written or printed.

(5) He could not utter spontaneous speech beyond a few short words and simple sentences such as "Yes," "No," or "Good morning"; he could, however, indicate his meaning by signs.

(6) He could not repeat words nor read aloud.

(7) He could not write spontaneously, except a few familiar names, such as his own name and address, and these only imperfectly. He could, however, copy letters and numerals fairly well.

(8) He could recognise, though he could not name, objects, and could by suitable signs indicate their proper use.

Looking at these cases we see that although they both present one feature in common, namely that neither can utter nor write intelligible language, yet they present many points of difference, and it does not required much penetration to suspect that the lesion cannot be situated in exactly the same area of the brain in both cases.

Take Case 1. This patient exhibits in a fairly typical form the so-called "sensory aphasia of Wernicke." This depends upon a lesion in Wernicke's zone in the left temporoparietal region, an area roughly comprising the angular and supra-marginal gyri and the first two temporal convolutions. This zone includes the two centres which on the sensory or preceptive side are essential for the production of language, namely the auditory word and the visual word centres. The auditory word or audito-psychic centre is located in the posterior part of the first temporal convolution, the visual word-centre in the angular and supra-marginal gyri. Destruction of both these centres entails, therefore, a complete loss on the preceptive side. There will ensue, therefore, as this patient shows :

(1) Word-deafness, *i. e.* inability to understand spoken language.

(2) Though speech is possible, only a jargon is produced, the patient not recognising it as such.

(3) Inability to name objects, though the use of the object may be known and the patient may be able to indicate its use by some pantomime.

(4) Word-blindness, *i. e.* inability to understand written or printed language. Hence he cannot read aloud, write from dictation, nor copy. In the case under discussion the paralysis of the right arm rendered such tests impossible, but we may safely assume that the patient could perform none of these functions. Again, since the power of recognising letters is lost, ordinary writing is interfered with, even if no paralysis be present.

On the other hand, there is in this patient no evidence of any real interference with the motor side of speech; he forms words perfectly; he can utter quite long sentences with words well articulated, but they are meaningless, a "jargonaphasia" as it has been termed. Unable to understand what is said to him, unable to express his own meaning either in oral or written language, such a person is in a most pitiable condition, and we need not be surprised to find him bursting into tears on apparently slight provocation and manifesting other signs of mental distress.

Case 2, on the other hand, presents a very different picture. Able to understand all that is said to him, able to read to himself, able to copy and to some slight extent to write spontaneously, he merely exhibits an inability to express his thoughts and desires in spoken language. The centre for the production of words is damaged. This is Broca's centre ; injury to it causes motor aphasia or Broca's aphasia. The centre is situated in the third left frontal convolution, and is closely connected with the centre for the production of written language in the second left frontal convolution, the so-called cheiro-kinæsthetic centre. In this second case it is to be particularly noticed how isolated is the defect, unaccompanied by any motor paralysis or any loss on the sensory side.

Such a case is, in my opinion, a strong argument against the views held by Marie and others. Space forbids any discussion of the arguments for and against the two views. I have, so far, adhered strictly to the generally accepted opinion as to the existence and situation of the various centres discussed. But a brief reference to Marie's hypothesis seems desirable. He says that there is really only one form of aphasia, that described in Wernicke's aphasia, and only one speech centre situated in Wernicke's zone; he does not admit the existence of any auditory word or visual word centre, but regards the whole region as one of "intelligence specialised for language." In his opinion the association of anarthria with Wernicke's aphasia constitutes the picture of Broca's or motor aphasia. To produce this defect, two lesions are necessary, says Marie, one in Wernicke's zone and one in a region which he calls the " quadrilateral." The limits of this quadrilateral are anteriorly and posteriorly vertical planes level with the anterior and posterior limiting sulci of the island of Reil, externally the surface of the island, internally the wall of the lateral ventricle. The weakest point in his argument is the fact that as yet, I believe, no lesion has been found in this area in any case presenting the symptoms of Broca's aphasia. In connection with these two opposing views it is interesting to notice that Dejaine, in a paper contributed to the International Congress of Medicine, adheres to the orthodox views, and does not support Marie in his contentions. There is one anatomical point to which I have not referred; it is that in the discussion of the situation of the lesions producing aphasia cortical lesions are meant ; lesions involving the depth of the subcortical white matter will not produce these phenomena in so restricted a form. Further, the close and complex nature of the connections between the various centres renders the occurrence of an absolutely pure or unmixed type of aphasia extremely rare.

THE PSYCHOLOGY OF DREAMS.

A Paper read before the Abernethian Society.

By M. N. PERRIN, B.C.

(Continued from p. 81.)

SHALL now proceed to some of the main characteristics of dreams, considering more especially those which are apparently spontaneous, as it seems probable that they will afford the most direct route to the normal activities of the mind during sleep. The first point, which strikes us when we consider a dream, is the vivid manner in which objects are presented; the faculty of observation seems to be intensified, and a vast amount of detail to be perceived in what seems to be a moment of time. Dreams are indeed sometimes so vivid, especially in childhood, that they are not infrequently confused with real events. Havelock Ellis states that in imaginative children, a rich and vivid dream-life may be the direct source of literary ability in later life. It seems possible, however, that both faculties may be due to the same cause.

This faculty of minute observation which is so marked in dreams has been called the power of "spontaneous attention," and has been contrasted with "voluntary attention," which is characteristic of waking life and depends largely on muscular activity and co-ordination. Spontaneous attention is no doubt present to some extent during waking life, though it appears to be inhibited by efforts at voluntary attention. In emphasising the importance of the absence of voluntary attention in the production of visual images, Leroy points out that even the after-image of a bright object in waking life is much more vivid when it occurs in a state of inattention. I have noticed, too, that greater success is to be obtained in that appalling game, in which one is shown trays covered with small objects, if no conscious effort at attention is made. This rapidity of visual perception may possibly account for the constant change, which is characteristic of dream imagery, giving a rapid series of mental pictures, which follow one another like the sections of a cinematograph film.

Most dreams, like a photograph, are monochromatic, and colour perceptions are seldom remembered on waking. The dreamer may even notice this defect at the time. This consideration makes the power of colour-perception, which is so marked in the dreams of mescal, all the more remarkable.

It is a matter of common experience that any one dream of a particularly vivid nature may be frequently repeated after longer or shorter intervals for years, even though no thought is given to the dream during waking hours. The dreamer is aware at the time that at each recurrence no detail is omitted, though on waking he may be unable to give an account of the dream.

As a child I used frequently to dream that I was falling down a deep well or lift-shaft, and that at successive stages a landing would lead on to the streets of some familiar district. At a certain depth the district in which I lived would appear, and I used to make a distinct effort to stop there, so that I might find my way home. After a time I got to know the order of these stopping-places, and was often successful in alighting at the right one, when I could proceed to further adventures. Each time the dream recurred the stopping-places were in the same order, and the panorama at each was as accurate as a map. Whether the intermediate stages were places I had been to when awake, or

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whether they were products of my imagination, I cannot say. At all events this was a very striking example of the continuity of dream memory, which was very much more perfect than ever it was in waking life.

Since then I have seen accounts of dreams beginning on each successive occasion at the point at which they left off before. In many cases the dreamer could not clearly remember the dream on waking, but it all came back to him subsequently during sleep.

In the recent account of a great mine disaster, it was stated that one of the victims was completely deprived of his memory, but that during sleep he frequently dreamed of crowds of men working in the dark with picks and shovels. The continuity of dream memory was thus undisturbed, while waking memory, even of the commonest things, and of the disaster itself, was completely blotted out. It therefore appears that man has two memories, one for sleeping, and one for waking thoughts, just as during sleep his power of spontaneous attention is increased, and that for voluntary attention in abeyance.

It has been stated that every act and thought, whether consciously perceived at the time, or not, is registered somewhere on the brain, never to be forgotten. We have normally a certain very limited faculty for recalling some of these facts by an effort of will, but by far the greater number are stored away in the inmost recesses of the brain, and are only at the disposal of our subconscious memory. We are aware of this often enough, when we try to remember a name and cannot do so. We say to ourselves, "Oh ! it will come to me soon"—and so it does, without any apparent effort on our part, either when we are thinking of something else, or in a dream.

A special form of lost or unconscious memories recurring in sleep is seen in those cases in which people when asleep can speak languages, which they have forgotten or have never consciously known when awake, such recollections being the remnants of knowledge acquired in childhood spent abroad. A similar explanation may possibly apply to those who, under the influence of religious excitement, "speak in tongues."

Many dreams, which seem to indicate clairvoyance or perception at a distance, may be explained when considered from this point of view. An instance is recorded of a maid-servant, who dreamed at night that a friend had been drowned while on a sea voyage. She had been at home all day, and had not read the papers for several weeks, nor had any of her friends spoken to her on the subject. On inquiry it was found that she had used a piece of newspaper to draw up the fire, and that while doing so her eyes must have caught the announcement of the disaster, which was found afterwards on the sheet she had used. The news was altogether of too great importance to be forgotten, if once realised.

The appreciation of time, which seems to be merely a

phase of memory, is a faculty which may be greatly intensified during sleep. Many people, by an effort of will, are able to wake at a given time, and with practice it is possible to hit off the desired time to the minute. Numerous explanations have been given to explain the process whereby the habit of a lifetime can apparently be broken at will during sleep, though none are satisfactory. It has been suggested, for instance, that the lapse of time is calculated by counting the pulse and by working out the ratio of pulse-rate to seconds during sleep. There seems to be little doubt that this power of waking to time is possessed by the majority of people, and that it is not a special gift. It is all the more remarkable when we consider that it is a common experience that a few moments of sleep may seem like hours, while ten hours of unconsciousness may seem like so many minutes, our limited waking powers time sense being completely upset.

The time sense is still more strongly developed in the sleep produced by hypnosis, when the dreamer will count many thousands of seconds, and perform a suggested act strictly at the time stated. In one example out of many given by Milne Bramwell in his work on hypnotism, a subject was hypnotised, and it was then suggested to him that he should perform a certain act in 2550 minutes from the time when the suggestion was given. He was awakened, and continued his ordinary life with no waking knowledge whatever of the command, and punctually to the minute he felt compelled to perform the act, which was a trivial and foolish one, being unable, when asked, to give any reason for doing it. Bramwell has one of the largest hypnotic practices in London, and, as I have met him personally and discussed his methods with him, I am able with some confidence to recommend his remarkable results to your serious consideration. Though in normal dreams this faculty is naturally not so striking, and though I am anxious not to press the hypnotic analogy too far, yet there seems to be no doubt that in normal sleep this phase of memory is very well marked, and it is evidence of a very definite poweralmost of a sixth sense-which only becomes manifest during sleep.

It has been found by experiment that dreams, which have been forgotten, can be recalled in hypnotic trance, and also that successive trances are bound together by a memory, which does not act during hours of waking. There is, therefore, an ever-active memory, which links together the various processes of subliminal thought and runs in a continuous stream through sleeping and waking life. Like an underground river, it comes to the surface occasionally, when the superimposed strata of waking consciousness are absent, in the form of dreams in sleep, and it disappears from view under the active processes of the day. Myers considers that the inspirations of genius, as well as the delusions of hysteria, are due to the sudden uprush into waking consciousness of this and other faculties, and it is

possible that Macaulay and others, whose memories are famous, possessed some power of removing the inhibitory influence of conscious attention, thereby enabling the hidden memory to show itself.

The next step in the consideration of dream psychology is an important one, as it strikes at the foundations of most of the theories of dream formation.

We have seen that dream processes show evidence of marked power of spontaneous attention and of ability for storing the impressions so gained subconsciously in the form of dream memory. The question now arises whether or not there is evidence of any original thought in dreams. Are the vivid pictures and imagery, which often differ so much from the ideas of waking life, the result of some spontaneous thought process, or are they all founded on past experience—experience which may have been acquired consciously or subconsciously at an earlier date? There is no doubt that a very large majority of the dreams recorded show immediate or remote waking experiences in a "manifest content," the origin of which is unmistakable.

Many dreams also can be shown to be symbolic representations of waking impressions, and Freud considers that not only is this so in *all* dreams, but that they are all the direct or indirect expression of a wish formed during waking life. Thirst, for instance, during sleep, often produces the dream experience of drinking large quantities of water. A medical student, working for his finals, dreamt one night that he saw the papers some days before the examination. Though all dreams do not show the wish fulfilment in such undisguised form, Freud makes them all conform to type by symbolical interpretation. He traces a parallel between dreams of this nature and the delusions of the insane, who see bright pictures of happiness, riches, estates, and the fulfilment of wishes, the denial or destruction of which served as the original psychic cause of the insanity.

While admitting that symbolism is an important characteristic of the dream processes, one cannot lose sight of the possibility that by so interpreting dreams we may not be begging the question entirely by substituting a number of arbitrary symbols for the real thoughts expressed in the dream. If we are unwilling to adjust all dreams to our preconceived theory by a substitution of symbols, we shall find that many bear no relation either to the organic exciting stimulus, or to past conscious experiences. Some may be ultimately explained as products of the subconscious memory, but there is still a remainder, which seems to present new thoughts and concepts entirely from without.

Stevenson, in his chapter on dreams in the collection of essays called *Across the Plains*, describes how by selfsuggestion before sleep he could secure dreams, which were not only of remarkable intensities, but also furnished him with the plots for some of his most striking romances. The plot for Dr. Jekyll and Mr. Hyde was derived, as he says, from "the little people who manage man's internal theatre." In other cases, mathematical problems are said to have been solved in sleep, their solutions not having been apparent during waking hours. Prof. Newbold records a case where a certain German professor was able to decipher in his sleep a Babylonian manuscript over which he had been puzzling by day for several weeks.

Other examples such as these might be found, and it seems that, if any reliance at all is to be placed on the testimony of those who are not actually our personal friends, dreams may open up a train of activity which has no parallel in waking life. As Myers says, the internal sensory perceptions of sleep may exceed those of vigilance in something the same way as the recuperative faculty of sleep surpasses the *vis medicatrix* of waking hours.

Finally, dreams sometimes occur in which external unseen events are portrayed at the time of their occurrence, or two independent people may have the same dream at the same time. Such dreams, if they exist, can only be explained by telepathy.

In *Phantasms of the Living*, a colossal work, published under the auspices of the Society for Psychical Research, hundreds of examples of such dreams are given, each of which has been subjected to the most minute scientific scrutiny. In this connection many here would doubtless be able to produce first-hand examples, though, failing this, it is impossible to disregard the opinions of such men as Professor Balfour Stewart, Lord Rayleigh, Mr. Balfour, Sir William Crookes, Alfred Russel Wallace, Sir Oliver Lodge, and of Prof. J. J. Thompson, Alec Macalister, and Henry Sidgwick of Cambridge, all of whom have been on the council of the Society, and with whose sanction the book was published.

Telepathic communication has been shown to exist to some extent during waking life. It is, however, in sleep and in hypnotic trance that its occurrence is most frequent. In *Phantasms of the Living*, 150 coincident dreams are analysed and concluded to be telepathic. Of these, 79 have represented or suggested death, and the definite character of this event forms a fit basis for statistical calculation. Each dream has been written down or in some way acted upon before the confirmation arrived, and in nearly every case full names are given.

In considering such dreams, the question arises as to what proportion of striking correspondences we are to demand before we consider that the hypothesis of chance is strained in accounting for them. With this end in view, the following letter was sent by the Society to 5360 people : "Have you ever had a dream of the death of some person known to you, which dream you marked as an exceptionally vivid one, and of which the distressing impression lasted as long as an hour after you rose in the morning?" 166 affirmative answers were received, or one twenty-sixth of the total number asked. As the persons asked were quite a promiscuous body, we may conclude that one twenty-sixth of the population of this country have had similar experiences. By mathematical calculation this was shown to be twenty-four times larger than the doctrine of chance would allow.

If we accept the validity of the mass of evidence before us, we are led to the inevitable conclusion that the human mind is susceptible to impressions of thought, which reach it by channels other than those of the special senses. The nature of this evidence makes it clear that the mind is more susceptible to such impressions during sleep.

Examples of thought transference under waking conditions are rare, though, as Lodge has shown, they may be conclusively demonstrated experimentally. In our consideration of dreams, therefore, we must include psychic as well as organic causes among the exciting factors, and we must broaden our conception of the dream process so that we can trace its affinities not only with the mental process of the individual himself, but also with the thoughts of others.

Considerations such as these, taken in conjunction with experiments during hypnotic trance, have given rise to the theory of dual personality, and it is the object of this paper to show that dreams are not merely reflex processes representing what remains of a mind already dulled by sleep, but that they are manifestations of a definite phase of personality; that they are the keynote to the subconscious, or that state, which occurs, when the higher centres are in abeyance, as the result of normal sleep or of hypnotic trance.

Sleep, the medium of dreams, cannot be considered from the purely negative aspect. It has a definite positive value, and is possessed of attributes at least as important as those of its counterpart in waking life. A few moments of sleep will suffice in some unexplained way to regenerate the vital faculties, which have been exhausted by day, while hours of lying down in darkness and silence would have no such result. The human mind is, therefore, a complex structure consisting of at least two alternating phases which, like a planet and its moon, are bound together by ties of action and reaction.

It is in the study of mental diseases of functional origin that the study of dreams, and through them the investigation of the hidden phases of our personality, is of the greatest value. Numerous examples are recorded, in which ideas first encountered in a dream, as in the historic case of Joan of Arc, have led to a conversion or marked religious change, so that from the moment of the dream onwards Mr. Jekyll has replaced Mr. Hyde or vice versa. Other dreams have been shown to be the starting-point of an insistent idea, or of a fit of actual insanity. They are analogous to powerful post-hypnotic self-suggestions, which the self that inspired them can be induced to countermand. Herein lies the importance of their careful study, for a complete knowledge of the causal ideas is necessary before any antagonistic treatment by suggestion can be of any avail. Paine gives an example of a dream in which a gendarme, impressed by an

execution at which he had assisted, dreams that he himself is to be guillotined, and is afterwards so influenced by the dream that he attempts suicide.

Hughlings Jackson once remarked, "Find out all about dreams and you will have found out all about insanity." Jastrow goes a step further, and considers that not only insanity, but all forms of delirium, including drug intoxications and the many manifestations of hysteria, are variants of dream consciousness.

It is well known that by means of suggestion during hypnotic trance the functions of many organs in the body can be modified. For instance, the subject may be made to blush, the skin may be rendered -anæsthetic, or sweating may be produced. Kraft-Ebing gives instances of dreams, which produced, possibly by some process of auto-suggestion, visible changes in the body of the dreamer, which changes persisted on waking. In one instance there was a definite patch of hyperæmia corresponding in shape and size with imaginary marks made by a character in the dream, and there was marked pain in this situation, though the details of the dream were forgotten. In subsequent hypnotic trance the memory of the dream was revived, and by suggestion based on this the pain and hyperæmia were removed. This subsequent removal of the signs and symptoms by suggestion based on the dream content certainly points to their being the effect rather than the cause of the dream.

If we are to accept the evidence before us, we have therefore still further proof of the close connection which exists between dream thought and bodily functions. The facts also point to a direct continuity between dream personality and the subconscious state of hypnotic trance, or that state in which the mind is most amenable to suggestion. It is not my purpose to enter into the many therapeutic possibilities of hypnotic suggestion. My aim has been merely to show that in dreams we may have one important channel of approach in the investigation of subconscious activities, the study of which may lead to a far more accurate knowledge of many functional nervous derangements.

ST. BARTHOLOMEW'S HOSPITAL EMPLOYEES' FIRE BRIGADE.

HE second annual competition took place on Saturday, October 27th, at 3 p.m. in the Hospital Square. Lieut.-Col. Fox, of the London Salvage Corp, kindly acted as Judge, assisted by Supt. Blyth, Chief Officer Webb and Fireman Kirby.

The events were as follows :

CHALLENGE CUP, 4 MEN (Surgery Team Holders).
(1) Surgery.—Tutton, Evans, Herbert, Wilson. 17³/₅ sec.
(2) Mr. Murray's team.—Pocock, Harding, Horn, Carter.
18 sec. Four teams competed.

FIVE-MEN PUMP DRILL.

(1) Surgery team.—Tutton, Evans, Herbert, Wilson, Peat. 34 sec. (2) Steward's staff.—Hassell, Ware, Scottow, Day, Herbert. $35\frac{1}{5}$ sec. Four teams competed.



THE WINNING TEAM.

ONE-MAN DRILL.

(1) Wilson. $12\frac{3}{5}$ sec. (2) Evans. $12\frac{4}{5}$ sec. (3) Ware $13\frac{1}{5}$ sec. (4) Tutton. 14 sec. Twelve men competed.

Mr. Latham addressed the men in the Library on behalf of the acting treasurer; Sir Lionel and Lady Cohen were also present, also several of the Governors. Mr. Hayes, Mr. Gask, and several of the Junior Staff were present.

Lady Cohen kindly presented the Cup and prizes.

THE CLUBS.

RUGBY FOOTBALL CLUB.

ST. BART.'S v. COVENTRY.

Played at Coventry on January 10th. For various reasons we could only raise a very weak team, Fiddian, Kitching, MacBryan, Eberli, Little, Savory, Jukes and Evans all being absent. However, they supplied us with three capable substitutes. A very interesting and exciting game resulted. Coventry being too good in the second half, and eventually winning by 16 points to 8. Wilson and Williams scored for the Hospital and Dill played an excellent game at full back.

ST. BART.'S v. CAMBRIDGE UNIVERSITY.

Played at Cambridge on January 19th. Barts.'s were well represented. MacBryan, owing to a dislocated shoulder, and Fiddian were unable to come. Cambridge were in great form, their backs being brilliant, the hard ground and dry ball being all in their favour. The forwards, well led by Mudge and Kitching, played a good bustling game and quite held their own. But whenever the backs got the ball they could do nothing right, being far too slow for the Cambridge backs; 23 points were scored against us in the first half and 24 in the second; thus we were well beaten by 47 points to 0.

ST. BART.'S v. R.N.C., GREENWICH.

Played at Winchmore Hill on January 28th. Bart.'s played well in the first half, scoring four times. Savory scored twice, Eberli and Davies each scoring a try. The forwards were good, especially in the loose, Mudge and Kitching being most prominent. In the second half Greenwich improved and scored twice, the final score being 18 to 11 in our favour.

ST. BART.'S v. OLD MILLHILLIANS.

Played at Winchmore Hill on January 31st under favourable conditions. Bart.'s did most of the attacking, thanks to the forwards, but the backs were continually dropping passes, and at half-time there was no score. It was not till well in the second half that we started to score, when we put on 14 points in a very short time. Higgins dropped a goal, and Kitching and Joyce scored tries, Williams converting both, Bart.'s winning, 14 points to o.

ST. BART.'S v. CHARING CROSS HOSPITAL.

Played on London Scottish Ground, Richmond, on January 12th, In this, our first appearance in the Inter-Hospital Cup Ties, Bart.'s played very badly, but managed to win by 14 points to 0. In the first half we played against a strong wind, but secured a 3 points lead from a try by Higgins, who put the finishing touch to a long dribble. In the second half innumerable passes were dropped, but eventually Williams scored from a cross-kick by Savory, and later Eberli and Mudge obtained tries, Williams converting one of the tries.

ASSOCIATION FOOTBALL CLUB.

ST. BART.'S v. ILFORD AVENUE.

This match was played at Ilford on Saturday, January 24th, and resulted in a win for our opponents by four goals to three.

Ilford Avenue opened the scoring about ten minutes after the start; but after some play, which was mostly in our half, Braun got away with the ball, and, breaking through their defence, scored for the Hospital. Shortly before half-time was called Braun scored again.

A short while after the interval Ilford Avenue equalised. After this there was some fast mid-field play, of which it must be said our opponents had the advantage, but the Hospital forwards soon broke away and Braun scored off a good pass from McFarland. However, it was not long before fitness began to tell, and as most of the Hospital team had not played since before Christmas, the pressure became too great for our defence, two more goals being scored by our opponents before time was called.

On the whole a win for the Hospital was hardly to be expected, as besides not being fit, we were without the services of Stretton and Jameson, the mainstays of the defence.

The following represented the Hospital :

R. G. Mack (goal); E. G. Dingley, G. C. Wells Cole (backs); E. M. Grace, G. M. Cowper, and R. H. Maingot (halves); A. O. Courtis, J. B. McFarland, L. Braun, T. B. Bailey, K. D. Atteridge (forwards).

CORRESPONDENCE.

ALPINE HEALTH RESORTS.

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

 S_{IR} ,—In reading Dr. Bernard Hudson's interesting article on "Davos-Platz as a Health Resort" in your November issue, I feel that he has, doubtless unintentionally, not quite done justice to a

sister resort when he characterises the absence of wind and presence of sanitary precautions as "practically unique" in Davos. In these matters Arosa has had the advantage of an elder sister's example, is equally particular in the matter of disinfection of rooms, and has even gone a little further in avoiding that slight morning and evening air-current which characterises all Swiss valleys over a certain length. The inhabitants of Davos are also ipso facto burgesses of Arosa, and H. B. M. Consul in Davos will be very welcome in Arosa at any time to witness these facts by ocular demonstration. His remarks on the value of sports to an alpine health resort are very well chosen. They prevent the atmosphere of invalidism which is otherwise inherent to a resort of health seekers, besides affording opportunity for "graduated labour" in an agreeable form.

I am, etc.,

AROSA, SWITZERLAND; November 8th, 1913.

EGBERT MORLAND.

THE BOOKSHELF.

REVIEWS.

GERMAN-ENGLISH DICTIONARY OF MEDICAL TERMS. Second Edition. Edited and Revised by MILTON K. MEYERS, M.D. (London : J. & A. Churchill.) Price 18s. net.

This is the second edition of the well-known Lang and Abrahams' Dictionary (now published as by Lang and Meyers), and it comprises, in addition to medical terms, a large number employed in the ancillary sciences, particulary chemistry, biology and pathology. Together with the additions made since the last edition the present volume contains over 50,000 definitions.

This admirable dictionary, which has several imitators, but so far as we are aware, no equal, is an absolute necessity to anyone desiring to read German scientific literature. Its comprehensiveness is such that it permits the most elementary student to obtain a clear if crude translation, whilst not even the laziest could complain that he is called upon to work out the meaning of any compound word. He is not told, for example, that *Schenkel* means thigh, *bein* means bone, and bruch means fracture, and then be left to reason for himself that Schenkelbein means femur and Schenkelbeinbruch fracture of femur. (Actually, sixty-seven words all compounded with Schenkel are included.) It is obviously futile to grope for omissions in any dictionary, even the largest, for it is always left to the compiler to establish his own criteria as to the inclusions. We have found omissions ourselves in this volume-why, for example, is the familiar colloquial, sich halten to take care of one's health, excluded ?-but nobody need cavil at the liberality of the authors. There is just one detail which we think might well be worth considering in subsequent editions. German literature abounds in abbreviations, such as d.h., s.u., s.o., s.d., ev., d.s., s.b., u.s.w., and so on. These could be easily collected, and their inclusion would be of distinct service to the beginner in German translation.

THE SURGERY OF THE STOMACH. A HANDBOOK OF DIAGNOSIS AND TREATMENT. By HERBERT T. PATERSON, M.A., M.C., M.B., F.R.C.S. Med. 8vo. Pp. xiv + 312. Illustrated. (London : James Nisbet & Co.) Price 12s. 6d. net.

The author tells us in his preface that his aim has been to give a practical account of the diagnosis and treatment of those affections of the stomach which are amenable to direct surgical interference. A work by so prominent an exponent of the art of gastric surgery as Mr. Paterson is bound to be authoritative, and one in which are embodied the opinions resulting from a very large clinical experience.

The first chapter deals with methods of investigation of gastric cases. The great importance of the examination of "test-meals" is insisted on. We note that in examining the abdomen, palpation should be practised "both before and after distension of the stomach with an inflating bellows," as in this way an otherwise impalpable tumour may sometimes be felt. The author has not obtained great assistance from the gastroscope, but he very properly insists on the value of an exploratory incision in a doubtful case of cancer.

The various operations on the stomach are described at length. With regard to gastrojejunostomy, Mr. Paterson, like most surgeons nowadays, usually performs the posterior operation, though he considers that in the ultimate results there is no difference between the two methods. The illustrations to this section are particularly good.

There is a good description of malignant disease of the stomach. The differential diagnosis is given at length. Mr. Paterson is strongly of opinion that with the routine use of the stomach-tube for diagnostic purposes in all cases of persisting indigestion, the number of inoperable cases of gastric cancer would be diminished greatly, the operation mortality reduced, and the number of cures proportionately increased.

Details for the use of the stomach-tube and of the examination of the material obtained by its use are given in an appendix. There is a good index and a useful bibliography. Though the volume is of moderate size, Mr. Paterson has written a full account of his subject, and a very fair statement of the present position of gastric surgery.

DISEASES OF CHILDREN. By JOHN MCGAW. Pp. 524. 105. 6d. net. (Baillière, Tindall and Cox.)

This excellent manual should prove of considerable value to both students and practitioners. The diagnosis and treatment of children's diseases is admittedly a difficult matter to those who have only been accustomed to dealing with adults, for here the eyes must be used more than the hands and the ears more than the tongue. The author has succeeded in conveying a succinct and clear idea of the way in which such difficulties should be overcome. The book is of moderate dimensions and price, but it covers the subject in a complete manner. In places it is concise almost to terseness, but this is no disadvantage as the text is always lucid. The chapters on diseases of the digestive and respiratory systems are especially to be commended, but we could have welcomed a longer chapter on diseases of the liver, which have been dealt with rather shortly. The plates and charts are very clear and well described.

EXAMINATIONS AND DEGREES.

UNIVERSITY OF CAMBRIDGE.

The following degrees have been conferred : M.D.-A. J. Clark, F. W. W. Griffin, J. P. Hill. M.B., B.C.-P. W. Ransom, W. B. Gourlay, H. A. Douglas. B.C.-J. P. Hill.

ROYAL COLLEGE OF PHYSICIANS.

J. W. Trevan, M.B.Lond., M.R.C.S., L.R.C.P., was admitted a member.

ROYAL ARMY MEDICAL CORPS.

In the examination for Commissions in the R.A.M.C., L. R. Shore took third place and S. M. Hattersley sixth.

INDIAN MEDICAL SERVICE.

In the examination for Commissions in the I.M.S., A. C. L. O'S. Bilderbeck took ninth place and B. C. Roy thirteenth.

NEW ADDRESSES.

ASPINALL-STIVALA, G., Nottingham General Dispensary (Broad Street Branch), Nottingham.

BUMSTED, H. J., Elmfield, 34, Leigham Court Road, Streatham, S.W. (Tel. 21 Streatham.)

BURKE, Capt. G. T., I.M.S., 11, Pembridge Mansions, Bayswater, W. (Home till October.)

COLLINGS, D. W., Grantbourne, Chobham, Surrey. EWEN, G. S., Ryde House, Richmond Bridge, Twickenham. (Tel. unchanged.)

FISON, I., Royal London Ophthalmic Hospital, City Road.

- HAMILTON, Capt. A. F., I.M.S., 114, Denbigh Street, S.W. (temporary)
- HASSARD, Lieut. Col. E. M., R.A.M.C., c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.

- HODGE, W. H. S., General Hospital, Nottingham. ILLIUS, Capt. J. W., I.M.S., c/o Surgeon-General with the Govern-ment of Madras, Madras.
- JONES, W. H., 43, Cambridge Street, Hyde Park, W. LEONARD, Major W. H., I.M.S., c/o Messrs. T. Cook & Son, Ludgate Circus, E.C. MASTERMAN, E. W. G., Iona, St. John's Road, Tunbridge Wells,
- (temporary). MORSE, C. G. H., "Toronto," Christchurch Road, Boscombe, Hants.
- NANKIVELL, A. T., Medical Officers' Department, Municipal Buildings, Poole. RANSOM, P. W., King Edward VII's Hospital, Cardiff. RIMINGTON, H., King Edward Holiday House, Sandown, Chelms-
- ford.
- SCOTT, W. H., Atherton Estate, Silian, Federated Malay States
- SLADDEN, A. F. S., 9, The Manor House, Marylebone Road, N.W. (Tel. Padd. 1469.)
- SNOWDEN, ERNEST, 21, New Cavendish Street, W. (After March 12th.) WITH, Lieut. P. A., R.A.M.C., R.A.M.C. Mess, Bangalore.

APPOINTMENTS.

- ASPINALL-STIVALA, G., M.R.C.S., L.R.C.P., appointed Assistant Resident Surgeon at the Nottingham General Dispensary (Broad Street Branch)
- FISON, J., B.C.(Camb.), appointed Second House-Surgeon to Royal London Ophthalmic Hospital. GILLIES, H. D., F.R.C.S. (Eng.), appointed Chief Assistant in the
- Throat Department, St. Bartholomew's Hospital, and Aural Surgeon to the Alexandra Hospital for Children.
- HODGE, W. H. S., M.R.C.S., L.R.C.P., appointed Assistant House-
- Surgeon to the Nottingham General Hospital. MORSE, C. H. G., M.R.C.S., L.R.C.P., appointed Hon. Registrar to the Boscombe Branch of the Royal Victoria and West Hants. Hospital, Bournemouth.
- RANSOM, P. W., M.R.C.S., L.R.C.P., appointed Gynæcological House-Surgeon at King Edward VII's Hospital, Cardiff. SCOTT, W. H., M.R.C.S., L.R.C.P., appointed Medical Officer to
- Consolidated Malay Rubber Co.
- WINTER, L. A., M.D. (Durh.), M.R.C.S., L.R.C.P., appointed Police Surgeon at Sheerness.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments, etc., have been announced since January 20th, 1914:

Staff-Surgeon H. B. Hill to the "Highflyer," and for Physical Training duties, to date February 14th, 1914.

Surgeon L. C. Murphy has been placed on the Retired List, February 12th, 1914.

ARMY MEDICAL SERVICE.

Surg.-Gen. H. G. Hathaway has been appointed a Companion of the Order of the Bath.

Col. W. G. Bedford, C.M.G, has been promoted to be Surgeon-General and appointed Deputy Director of Medical Services, South Africa.

Col. F. H. Treherne, V.H.S., has been transferred from Bangalore to the Meerut Division as Assistant-Director of Medical Services.

R.A.M.C.

Majors W. E. Hardy, J. E. Brogden and F. W. Begbie have been promoted to be Lieut-Colonels; Lieuts. G. O. Chambers and L. F. K. Way have been promoted to be Captains; and Lieutenant-on-Probation R. B. Price has been confirmed in his rank, and appointed to Queen Alexandra's Military Hospital, London.

At the recent examination for commissions in the Corps, at which forty-two candidates competed for twelve appointments, L. R. Shore (3rd) and S. M. Hattersley (6th) were successful.

At the termination of the Junior Course at the Royal Army Medical College last autumn, Lieut. R. B. Price obtained the Parkes Memorial, the Tulloch Memorial and the Herbert prizes, thereby repeating the successes of Lieuts. Dive and Biggar in recent years.

Major C. H. Hopkins has been transferred from the Half Pay to the Retired Pay List on account of ill-health.

Lieut.-Col. J. Girvin has been appointed to the Curragh; Lieut.-Col. O. R. A. Julian, C.M.G., to be Physician-Surgeon to the Royal Hospital, Chelsea; Major C. H. Hopkins to Devizes.

Lieut.-Col. B. J. Inniss has been transferred to India from Mauritius; Lieut.-Col. H. E. Winter has gone to India, as has Captain A. H. Hayes. Capt. T. H. Dickson has exchanged from Gibraltar to India.

BIRTHS.

- CANDLER.-On January 28th, at Shenley, Barnfield Road, Exeter, the
- CANDER. On January 20th, at Shenrey, Darmeter (Vod), Exercit, the wife of A. L. Candler, F.R.C.S. (Eng.), of a son.
 FORD. On January 31st, at Rushmere, Wimbledon Common, S.W., the wife of Frank C. Ford, M.B., of a daughter.
 GAUVAIN. On January 24th, at 57, Beaumont Street, W., the wife of H. J. Gauvain, M.A., B.C. (Cantab.), of 130, Harley Street, W., and Alter Hert for a solution of the strength o and Alton, Hants., of a daughter.
- ROPER .- On February 14th, at 5, Dix's Field, Exeter, the wife of Frank A. Roper, M.A., M.B., of a son.

MARRIAGES.

- NICHOLSON-DENTON.-On February 17th, at St. Cuthbert's Church, Ackworth, by the Rector, the Rev. J. L. Bouch, assisted by the Rev. W. Gell, Vicar of Pontefract, Cuthbert John, only son of Mr. and Mrs. Cuthbert Ismay Nicholson, of Nursteed Lodge, Devizes, to Jane Luis; youngest daughter of the late Mr. J. P. Denton, of Darlington, and niece of Mr. H. W. L. Fernandes, of Ackworth House, Ackworth.
- SIDGWICK-MILLER.-On February 17th, at the Parish Church, Wimbledon, by the Rev. Allan Bell and the Rev. J. Benson Sidg-Wick, of Ashby Parva, Leicestershire, father of the bridegroom, Capt. H. C. Sidgwick, R.A.M.C., to Marjorie Molyneux, only daughter of the late Robert Miller, of Wimbledon.

DEATH.

FENOULHET .- On February 16th, at Durban Hospital, Natal, South Africa, Dr. James Peter Fenoulhet.

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, Smithfield, E.C.
- The Annual Subscription to the fournal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., at the Hospital.
- All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVER-TISEMENT MANAGER, the Journal Office, St. Bartholo-mew's Hospital, E.C. Telephone: 1436, Holborn.
- A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price IS. post free) from MESSRS. ADLARD AND SON, Bartholomere Close. MESSRS. ADLARD have arranged to do the binding, with cut and sprinkled edges, at a cost of 1s. 9d. or carriage paid 2s.—cover included.



Bartholomew's





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

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APRIL IST, 1914

RIRSUF.

PRICE SIXPENCE.

CALENDAR.

Wed., April	1Examination for D.P.H. (Cambridge) begins.
Thurs., ,,	2Final Exam. Conjoint Board (Midwifery) begins.
Fri., ,,	3Dr. Garrod and Mr. Waring on duty.
	Final Exam. Conjoint Board (Surgery) begins.
Sat., ,,	4Oxford Lent Term ends.
Mon., ,,	6Second Exam. of Society of Apothecaries begins.
Tues., ,.	7Dr. Calvert and Mr. McAdam Eccles on duty.
Wed., ,,	8Oxford Easter Term begins.
	First Examination of Society of Apothecaries
	begins.
Fri., ,,	10.—Good Friday.
	Dr. Morley Fletcher and Mr. Bailey on duty.
Sun., "	12.—Easter Sunday.
Tues., ,,	14Dr. Herringham and Sir Anthony Bowlby on duty.
Fri., ,,	17.—Dr. Tooth and Mr. D'Arcy Power on duty.
Sat. ,,	18Cambridge Easter Term begins.
Mon., ,,	20D.P.H. (Conjoint) Examination begins.
Tues., "	21Summer Session begins.
	Dr. Garrod and Mr. Waring on duty.
Fri., "	24Dr. Calvert and Mr. McAdam Eccles on duty.
Tues., ,,	28Examination for Part II of Second M.B.(Camb.)
	begins.
	Dr. Morley Fletcher and Mr. Bailey on duty.
Fri., May	1Dr. Herringham and Sir Anthony Bowlby on duty.
Mon., "	4Examination for M.B., B.S.(London) begins.
Tues., ,,	5Dr. Tooth and Mr. D'Arcy Power on duty.
Wed., ,,	6Primary F.R.C.S. Examination begins.

EDITORIAL NOTES.



T is with very much regret and grief that we have to announce the death of Mr. Bruce Clarke, F.R.C.S., our late Senior Surgeon. He was in

fairly good health, and none would have expected this sudden termination of his great career at the comparatively early age of 64. But pneumonia followed an attack of influenza and he died at Eastbourne on Saturday last. It was only in our last issue that we published some of his reminiscences concerning the old theatre, and we had been hoping shortly for an article from his pen, but that now will never be.

The sad news comes just as we are in press, and it is impossible here to do adequate justice to his memory, but we shall, in our next issue, say more about him, for Mr. Bruce Clarke was here during the great transition of ancient to modern practice. He was one of the great men of St. Bartholomew's Hospital in more senses than one. *Requiescat* in pace.

Much surprise and interest has recently been aroused by the publication of a widely advertised *Family Encyclopædia* of *Medicine*, with which were associated the names of a number of distinguished members of the medical profession, including several members of the staff of this Hospital. It was evident from the manner of advertisement that some serious misunderstanding had arisen, and we therefore reprint the following authorised statement, which has already appeared in some other medical journals :

"We are informed that at a meeting of those members of the profession whose names have been associated with the recently published Family Encyclopædia of Medicine the following statement was unanimously agreed to: 'As prominence has been given to our names in the advertisements of a book entitled The Family Encyclopædia of Medicine we desire to state: (1) That we are in no sense responsible for the plan or the scope of the book in question, or for the manner in which it has been introduced to the public. (2) That our sole connection with it consists in our having obliged a fellow medical man by agreeing to correct, at his request, made to us individually and privately, certain articles which he had in preparation for a book on domestic medicine. (3) We never gave authority for the use which has been made of our names. We may add that we have received assurances from the editor and publishers of the book in question that our names will be removed from such future numbers as are not already in print. It is needless to add that in no case was there any pecuniary consideration.""

*

It is with the deepest regret that we record, in another column, the death of R. E. S. Waddington, which took place suddenly on February 26th, while he was on his way to this Hospital. We wish to extend to his mother our sincere sympathy in her loss.

The Annual General Meeting of the Abernethian Society was held on March 19th. The Secretaries' Report was read and approved, and a ballot was held for the office of President. The following were elected for the coming year:

Presidents : Mr. G. L. Keynes, Mr. C. W. B. Littlejohn. Secretaries : Mr. E. Brunton, Mr. P. H. Wells.

Committee-men : Mr. R. L. Kitching, Mr. J. B. Welch.

No nominations were received for the office of Vice-President, who will consequently be elected later in the year.

Considerable interest has been exhibited in many of the papers read before the Society during the past year, and the attendance at the ordinary meetings has averaged forty. There appears, however, to be a growing dislike among members voicing their opinions, and the discussions have suffered somewhat in consequence. The most discouraging feature during the session has been the small amount of interest shown in the Clinical Evenings. These are an old-established and essential part of the proceedings of the Abernethian Society, and it would be a pity if they should be suffered to die of inanition.

* * *

All Cambridge graduates will have felt some interest in the vote which took place in the Senate House on March 14th concerning the proposed application on behalf of the Medical School for the Government grant to which the School is entitled.

Opinion in Cambridge was very sharply divided, and there was a deluge of fly-sheets. The bogey of State interference was very persistently raised by the *non-placets*. The proposal, however, was approved in the Senate House, though the majority in its favour was not a large one. An annual grant of about \pounds_4600 will be the result, and it is clear to an outsider, uninfluenced by the tides of university politics, that the certain advantages by far outweigh the hypothetical disadvantages.

* +

The volume of *St. Bartholomew's Hospital Reports* for 1913 is just published, and this will be the last of the series to take the form to which everyone has been for so many years accustomed. It is proposed radically to alter its constitution; it will in the future be issued in parts at intervals of three or four months and will contain accounts, as far as possible, of the latest research which has been done in the various departments of the Hospital. It will be under the control of an editorial committee consisting of Dr. Andrews, Mr. Eccles, Mr. Gask, Mr. Harmer, Dr. Thursfield, and Dr. Williamson.

MEDICAL OUT-PATIENTS.

ROM April 1st the time-table of the Medical Out-Patient Department will undergo a re-arrangement. In future, the Physicians in charge of out-patients will attend at 10.0 a.m. daily, instead of in the afternoons. The times of attendance will be as follows : Monday : Dr. Horton - Smith Hartley. Tuesday : Dr. Langdon Brown. Wednesday : Dr. Drysdale. Thursday : Dr. Horder. Friday : Dr. Langdon Brown. Saturday : Dr. Thursfield.

The times of attendance in some of the special departments have also been altered so that they may fit in with this new scheme. Skin Department: Monday and Wednesday at 1.30. Ophthalmic Department: Monday, Tuesday, Thursday and Friday at 2.30. Throat, Nose and Ear Department: Monday and Thursday at 2.0; Tuesday and Friday at 9.0.

Students are advised to combine Medical Out-patients with the Skin Department and the Children's Department, and Surgical Out-patients with the Ophthalmic, and the Throat, Nose and Ear Departments.

THE SERUM DIAGNOSIS OF PREGNANCY AND OF VARIOUS PATHOLOGICAL CONDITIONS.

By R. L. MACKENZIE WALLIS.

INTRODUCTION.

BDERHALDEN'S work, extending over several years, has been mainly directed to the influence of foreign substances in the blood, and the reaction of the blood towards such substances. This reaction of the blood forms the basis of the tests devised by Abderhalden for the diagnosis of pregnancy. The blood produces specific ferments for every foreign substance, and these ferments we can detect outside the body by the application of suitable methods. These ferments therefore act as guards to the blood, and I propose to call them collectively the phylacozymes or guardian ferments. In order to comprehend the action of these phylacozymes we must briefly review the more minute processes of protein diges-

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tion which can be followed in the gastro-intestinal tract, and also *in vitro* experiments.

The pepsin in the gastric juice attacks the proteins in the foodstuffs in the presence of hydrochloric acid, breaking them up into albumoses and peptones. These latter substances are further attacked by the trypsin in the pancreatic juice, and the erepsin in the intestinal secretion with the formation of peptides and amino-acids. The proteins in the food are therefore reduced by ferments in the alimentary tract, and the resulting products-the amino-acids-constitute the "Bausteine" of Abderhalden. These "building stones" are absorbed into the blood-stream, and each cell takes from the blood amino-acids in proportion to its individual requirements. Over this absorption and distribution of amino-acids the liver exerts a protective influence, preventing any foreign elements from passing into the circulation by acting upon undigested protein. It also controls the quantity of these amino-acids entering the blood-stream. The lymphatic system likewise prevents the entrance of body-cells into the circulation. The existence of such defences makes it possible to keep the blood fairly constant in composition, and also protects the blood from invasion. Any foreign material entering the blood-stream at once excites the production of a specific ferment, which breaks up the foreign substances into the molecules originally entering into their formation. Physiologically the introduction of foreign materials from the alimentary tract produces ferment changes which have a special character according to the chemical nature of the body introduced. An example is the change which cane-sugar undergoes when introduced into the circulation through the intestinal tract. The cane-sugar produces an increase in the ferment invertin which destroys it. Another similar phenomenon is the observed increase of fat-splitting power of the serum after an excessive absorption of fat from the intestine. It will be seen, therefore, that not only does the foreign body give rise to ferment production, but the ferment so produced has a specific nature. Experimental work with these specific protective ferments indicates that they may be used not only for the diagnosis of pregnancy, but also for the diagnosis of various pathological conditions. The invasion of the blood-stream by chorionic villi, malignant tumour-cells, broken-down gland-tissue, bacillary proteins, and, in fact, any foreign cell, is sufficient to excite the production of ferments. The action of such ferments is to digest the foreign cells and return them to the blood in their original state, i.e. as the "Bausteine."

Foreign substances are known to produce anaphylaxis, and these are broken down and lose their individuality. The kidney tissue of a dog when introduced into the circulation of a second dog results in the production of a ferment capable of digesting kidney tissue. Therefore, even those substances which actually form part of the normal tissues when thrown into the circulation excite the formation of ferments which bring about their own cleavage.

Schmorl, Veit, and Weichardt have demonstrated that chorionic epithelium enters the circulation during pregnancy, but they did not state that this change took place during the first month of gestation. That chorionic villi are present in the fertilised ovum in the first month of pregnancy has, however, been proved by Peters, Stahl and Beneke, Brice and Teacher. With this knowledge Abderhalden evolved the two tests for the diagnosis of pregnancy. The presence of chorionic villi circulating in the blood of a pregnant woman as a foreign substance calls for the specific ferment. The serum of a pregnant woman should, therefore, be capable of digesting placental tissue with the production of amino-acids, and this was found by Abderhalden actually to occur. Two tests have been devised, known respectively as the optical test and the dialysation test, and have been subjected to a thorough examination by Abderhalden.

That placental tissue plays a prominent part in the production of a protective ferment has been proved conclusively by Abderhalden, by a number of animal experiments. The serum of a pregnant animal can be inactivated by heating to 60° C., thus demonstrating that the ferment is destroyed by exposure to this temperature. The serum of the foetal blood and foetal tissue, on the other hand, does not contain this ferment. An extract of human placental tissue in salt solution, and also human placental peptone, was injected into dogs, rabbits, and guinea-pigs, either intravenously or intraperitoneally, the blood of normal animals mixed with placental peptone being also used. In the case of the dogs, two injections of I grm. of placental peptone were given on successive days, the blood collected eight days afterwards, and the serum tested against placental peptone by the optical method. In every case a breakdown of the placental peptone had occurred. The rabbits received four intravenous injections of 2 to 3'5 c.c. of placental extract, and six days afterwards the serum, when tested, gave a similar result. The same changes occurred in guinea-pigs after injections of 0.6 c.c. of placental extract into a shin vein. These results conclusively proved that a ferment is present in the blood-serum of pregnant animals, capable of detection by the optical method. The presence of this ferment in the blood-stream was further demonstrated by dialysis.

A large number of investigators have since clearly and sufficiently proved the value and reliability of these tests for pregnancy, and an extensive literature has already accumulated upon this subject. The application of the tests to pathological conditions, particularly cancer, tuberculosis, and nervous diseases has also received attention.

THE OPTICAL TEST.

The growing placenta is regarded as the agent providing the foreign protein substances which excite the production

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of a protective ferment in the maternal blood-stream. Owing to its proteolytic nature we are enabled to recognise the breakdown products which are the essential factors in both the tests described. The materials necessary are, first of all, the blood-serum of the patient to be examined and a supply of fresh human placenta. The optical test requires the use of a good polarimeter capable of giving readings below o'o1°, and, in addition, special polarimeter tubes for maintaining a constant temperature. After some practice the readings are readily made and differences of rotation determined. The material used upon which the ferment is to act is a 5 per cent. solution of placental peptone. This is prepared by the digestion of placental proteins with acids, the hydrolysis being allowed to proceed to the stage of peptones and then arrested. The placental peptone is prepared as follows: Fresh human placenta is carefully washed free from blood with salt solution and thoroughly macerated. The residue is then treated with sulphuric acid and allowed to remain at the temperature of the laboratory The acid slowly hydrolyses the proteins for four days. present, and this change is on the fourth day arrested by the addition of several volumes of distilled water. The sulphuric acid is then removed by the quantitative addition of baryta water and the resulting dense white precipitate removed by filtration. This barium sulphate precipitate is ground up in a mortar with distilled water and the decanted and filtered extracts collected. The extracts must now be carefully freed from all traces of acid, or barium hydrate, as otherwise the hydrolysis would proceed further and the yield of peptone be diminished considerably. The extract is now concentrated in a large distilling flask heated over a water bath, and in order to prevent frothing the peptone mixture is introduced in small quantities at a time. A thick syrup possessing a yellow colour finally results, and this is dissolved up in warm methyl alcohol. The placental peptone may then be thrown out of solution by absolute alcohol as a fine yellow powder, which is readily soluble in water. For the polarimeter test a 5 per cent. solution of this peptone in salt solution is used, and this is placed in a sterile flask and kept sterilised ready for use. All the materials used throughout the work are also sterilised.

Into the polarimeter tube I c.c. of the placental peptone solution is placed, and I c.c. of the clear serum to be tested.

The remaining space is filled with salt solution, and the tube is now ready for insertion into the polarimeter. The solution always shows a lævo-rotation, and the actual rotation is noted. The tube and its contents are now placed in an incubator at 37° C., and at the end of one hour another reading made. The tube is replaced in the incubator and examined at intervals of from six to eight hours, the examination not extending beyond forty-eight hours in all. As far as possible it is advisable to use the same volume of serum in every test, and the size of the polarimeter tube must not be altered, as otherwise com-

parable results are not obtained. The splitting of the placental peptone into amino-acids produces an alteration in the optical activity of the solution, and the amount of rotation gives an indication of the activity of the ferment present in the serum. A difference of rotation below 0.05° is disregarded, the serum of pregnant women usually producing a rotation of at least 0.2° , and even higher.

THE DIALYSATION METHOD.

The optical method has been proved by Abderhalden to demonstrate the presence of a specific ferment in the blood of pregnant animals. The dialysation method has consequently been devised to detect the end-products resulting from the splitting of placental protein outside the body. For the dialysation test a preparation of placental tissue is required, and this is prepared in the following way : A fresh placenta from a normal case of labour is obtained and carefully cleaned with water or saline. The foetal surface and also the membranes are cut away, and the remaining tissue cut up in small pieces and washed in running tapwater until every portion is quite white. This washing is absolutely necessary, as the placental tissue must be quite free from blood before use. The pieces of tissue are then placed in a large basin containing about ten times their volume of distilled water, two drops of glacial acetic acid added and thoroughly boiled for ten minutes to coagulate the proteins present. The coagulated placental albumen is thoroughly washed with cold distilled water, and again boiled in the same volume of water as before. The filtered extract is now tested with the ninhydrin reagent to determine whether any dialysable substances are still present in the placental tissue, as these would produce a serious error and completely invalidate the test. The ninhydrin test is made upon 10 c.c. of the filtrate with 0'2 c.c. of a 1 per cent. solution of ninhydrin, the mixture being boiled for one minute. A positive test points to the presence of dialysable substances, but in most cases these are usually absent at this stage. The tissue is again washed in distilled water, and then heated with five times its volume of distilled water. In order to detect even smaller amounts of dialysable substances 5 c.c. of the water is tested with I c.c. of ninhydrin solution, the test being frequently positive with this amount. The distilled water generally contains small fragments of placental tissue, so that before applying the ninhydrin test to any sample of the washings it is first of all necessary to filter. When the ninhydrin test proves negative the placental tissue is placed in a glass vessel containing chloroform water and covered with a layer of toluol, and stored in a cool place until required. The tissue before actual use in a test is again subjected to boiling in five times its volume of distilled water until a negative ninhydrin reaction is obtained.

It is only in this way that we can exclude dialysable substances in the placental preparation which interfere with the