

## ROYAL COLLEGE OF PHYSICIANS AND SURGEONS.

The following were granted the *Diploma in Public Health*:  
F. A. H. Clarke, F. N. White.

## CONJOINT EXAMINING BOARD.

## First Examination, January, 1920.

*Part I. Chemistry.*—C. F. Ashby, W. A. Hervey, T. E. M. Jones, J. G. McMenamin, G. B. McMichael, G. R. Nicholls.

*Part II. Physics.*—C. F. Ashby, R. A. Foucar, W. A. Hervey, J. G. McMenamin, G. B. McMichael, G. R. Nicholls.

*Part III. Elementary Biology.*—R. J. Irving Bell, J. I. C. Doyle, G. P. Driver, F. F. Imianitoff, G. G. Stewart.

*Part IV. Practical Pharmacy.*—D. D. Anderson, V. Barkin, G. Dru Drury, A. W. Hart-Perry, A. Jephcott, F. R. L. Miller, A. J. Moody, C. A. Moody, G. R. Nicholls, K. S. M. Smith, R. W. Taylor.

## Second Examination, January, 1920.

*Anatomy and Physiology.*—S. J. Davies, R. R. Foote, J. Jackson, A. W. Marrison.

## Final Examination, January, 1920.

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

H. E. Archer, J. H. Bulcock, B. H. Cole, I. Frost, L. P. Garrod, J. V. Landau, S. F. Mahmood, M. A. W. Moor, R. E. R. Sanderson, F. P. Schofield, C. Shaw, G. M. J. Slot, S. D. Sturton, A. E. Sutton, C. J. L. Wells, J. S. White, D. W. Winnicott.

## APPOINTMENTS.

BLOUNT, D. A., M.R.C.S., L.R.C.P., appointed Administrator of Anesthetics to Westminster Hospital, Broad Sanctuary, S.W. 1.  
BRADLEY, E. J., M.B., B.C.(Cantab.), appointed Senior Resident Medical Officer, Bristol General Hospital.  
CHANDLER, F. G., M.D.(Cantab.), M.R.C.P., appointed Physician to Out-Patients, City of London Hospital for Diseases of the Chest, Victoria Park. (Corrected notice.)  
GRAHAM, G., M.D.(Cantab.), M.R.C.P., appointed Physician to Out-Patients, Great Northern Central Hospital.  
GRANGE, C. D'O'LY, O.B.E., M.B., B.S.(Lond.), F.R.C.S., appointed Assistant Surgeon to the Harrogate Infirmary.  
MOUNT-BIGGS, C. E. F., D.T.M.(Liverp.), M.R.C.S., L.R.C.P., Major R.A.M.C., appointed Protozoologist to the Royal Victoria Hospital, Netley, Hants.  
STURTON, S. D., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon, Royal Sussex County Hospital, Brighton.  
WOODFORD, A. W. G., M.B., B.S.(Lond.), appointed Hon. Registrar, Samaritan Hospital for Women, Liverpool.  
WOODROOFE, G. B., M.B., B.C.(Cantab.), appointed Certifying Surgeon under the Factory and Workshop Acts for Lostwithiel.

## CHANGES OF ADDRESS.

BRADLEY, E. J., Senior Resident Medical Officer, Bristol General Hospital, Bristol.  
CAZALY, Lt.-Col. W. H., I.M.S., Crab Hill Cottage, South Nutfield, Surrey.  
COLEMAN, FRANK, 131, Harley Street, W. 1 (next door). (Tel. Padd. 2953).  
DANKS, W. S., York Lodge, York Road, Sutton.  
DENNIS, G. W. P., Col. C.I.E., I.M.S., "South Lea," Milford-on-Sea, Hants.  
GAME, E., The Coppice Mental Hospital, Nottingham.  
GAUVAIN, SIR HENRY J., 37, Harley Street, W. 1 (Tel. Mayfair 6180).  
GILLON, G. GORE, 48, Brook Street, Grosvenor Square, W. 1.

HAWKINS, A., Palace Hotel, Montana-Sur-Sierre, Canton Valais, Switzerland.

HEERDEN, J. A. VAN, Darenth Industrial Colony, Dartford, Kent.

McCALL, H. D., Yorkersgate, Malton, Yorks.

MOUNT-BIGGS, C. E. F., Maj. R.A.M.C., Officers' Quarters, Netley, Hants.

PRITCHARD, H., 6, Wimpole Street, W. 1.

STURTON, S. D., Royal Sussex County Hospital, Brighton.

WIGAN, W. C., U.M.C.A., Mponda's, Fort Johnstone, Nyasaland.

WOODFORD, A. W. G., 4, Gambier Terrace, Liverpool (Tel. Royal 2320).

WRIGHT, A., Lt.-Col., C.B.E., R.A.M.C., The Castle, Cape Town, South Africa.

## BIRTHS.

BUTTERY.—On February 9th, at "Trevail," Dollis Avenue, Finchley, to Dr. and Mrs. Harold R. Buttery—a daughter.

DUGGAN.—On February 20th, at College Gates, Worcester, the wife of Norman Duggan, M.B., F.R.C.S., of a son.

HARKER.—On January 17th, at 18, Queens Road, Southport, to Dr. and Mrs. Thomas H. Harker, a daughter.

MACKENZIE.—On February 9th, at 1, Camden Terrace, Bradford, to Edith, wife of Colin Mackenzie, O.B.E., F.R.C.S.—a son.

STATHERS.—On October 28th, at Park Lodge, Brackley, the wife of Dr. Gerald Stathers—a son.

WOODRUFF.—On January 25th, at 6, Stratford Place, W. 1, the wife of Charles Reynolds Woodruff, of a son.

## MARRIAGE.

ROBINSON—MACDONALD.—On February 3rd, 1920, at Barnsley, at the Congregational Church, by the Rev. J. Wilson, Captain Christian Cathcart Robinson, R.A.M.C.(T.F.), son of the late Dr. Robinson, R.N., late of Folkestone, and of Mrs. Robinson, The Limes, Wye, Kent, to Jessie Leonora, second daughter of Mr. Allan Macdonald, Oaklands, 34, Huddersfield Road, Barnsley.

## DEATHS.

ALDERTON.—On February 22nd, 1920, at 82, The Grove, Hammer-smith, Thomas Ganton Alderton, I.R.C.P., eldest son of the late Thomas Alderton, Surgeon, of Reepham, Norfolk, aged 69.  
CLARKE.—In March, 1919, Walter James Clarke, M.R.C.S., L.R.C.P., of 47, Gravelly Hill North, Edrington, Birmingham.  
HEMBROUGH.—On January 13th, 1920, John William Hembrough, M.D., D.P.H.(Durh.), M.R.C.S., L.S.A., of Moothall, Newcastle-on-Tyne.  
HUMPHRY.—On February 5th, 1920, at Lensfield, Cambridge, from illness contracted while on service at the 1st Eastern Hospital, Laurence Humphry, Lt.-Col. R.A.M.C.T., M.D., F.R.C.P., Senior Physician to Addenbrooke's Hospital, aged 63.

## 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 ADVERTISEMENT MANAGER, the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: City 510.

## St. Bartholomew's Hospital



## JOURNAL.

VOL. XXVII.—No. 7.]

APRIL 1ST, 1920.

[PRICE NINEPENCE.]

## CALENDAR.

Fri., Apr. 2.—Dr. Tooth and Sir D'Arcy Power on duty.  
Tues., " 6.—Dr. Calvert and Mr. Waring on duty.  
Fri., " 9.—Dr. Fletcher and Mr. McAdam Eccles on duty.  
Tues., " 13.—Dr. Drysdale and Mr. Rawling on duty.  
Fri., " 16.—Sir Archibald Garrod and Mr. Gask on duty.  
Tues., " 20.—Dr. Tooth and Sir D'Arcy Power on duty.  
Fri., " 23.—Dr. Calvert and Mr. Waring on duty.  
Tues., " 27.—Dr. Fletcher and Mr. McAdam Eccles on duty.  
Fri., " 30.—Dr. Drysdale and Mr. Rawling on duty.  
Tues., May 4.—Sir Archibald Garrod and Mr. Gask on duty.

## EDITORIAL NOTES.

THE Bazaar held in the Great Hall on March 4th was in many ways superior to the bazaars of yesterday and to-morrow which we detest and avoid. The presence of the Queen-Mother lent to the ceremony a certain dignity in which other bazaars are apt to be sadly lacking. The genuineness of the cause prevented cynics from asking: "Is it all worth while?" The Earl of Granard's orchestra provided the element of beauty by performing with taste in a tent erected near the Fountain, playing music far above the average reached at bazaars.

Queen Alexandra was accompanied by the Princess Victoria, and was cheered as she stepped from her car to the hall door by a crowd of nurses, students and patients who had assembled in the Square. All who could claim to be there followed into the hall and watched the royal party visit each stall and purchase at each a suitable article. The Princess Beatrice, Princess Christian, and Princess Victoria Louise and the Duchess of Albany also attended in the course of the afternoon.

After Queen Alexandra had left the hall the tension became somewhat less acute, and buying and selling started in real earnest.

The Viscountess Sandhurst was responsible for the fruit and flowers stall, and Lady Bowlby, Lady Cohen, Mrs. Cohen and Mrs. Barris looked after provisions and sweets. Lady Moore, assisted by Miss Gask and Miss Murray Smith,

sold books. Fancy stalls were in the hands of the Matron and Mrs. Richard Gill. Mrs. William Lovell and Mrs. Grandage looked after the White Stall, Mrs. Douglas Harmer was in charge of the toys, Mrs. Ernest West sold at the "White Elephant," and Lady Lawrence sold baskets. Mrs. Tooth was at the "plain clothes" stall, Mrs. Jessop and Mrs. L. B. Rawling at the stall called "Bric-à-brac," and Mrs. Andrewes superintended the packing. Great pains were taken to procure and arrange the goods.

A happy relief from such feverish merchandise was the Library, set aside for tea. Mr. and Mrs. Frank Cohen generously gave tea for several hundred people, so that the shillings which were taken at the door were all profit. Tea was extremely well arranged by Miss Pemberton, Nurses' Home Superintendent, and gracefully served by a small army of nurses.

After tea people flocked to the concert in the Surgery which had been generously arranged by Mr. George Robey. The Surgery is not a good concert room, but the artistes did their parts bravely, and by the sale of tickets and programmes much money was procured.

About £3,200 has been raised, and it is hoped to hold a sale of the surplus wares in the autumn, the time and place of which will be duly announced.

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Mr. R. M. Vick, M.A., M.Ch.(Cantab.), F.R.C.S., has been appointed to the post of Warden of the College in succession to Mr. Girling Ball. Mr. Vick, it will be remembered, was at the Leys School and at Jesus College, Cambridge, and qualified in 1908. He was Luther Holden Scholar 1911-12, and later Demonstrator of Pathology at Bart's and Assistant Surgeon at the Metropolitan Hospital. He is now acting for Mr. Gask as Temporary Assistant Surgeon of the Hospital.

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Mr. M. Donaldson, M.B., B.Ch.(Cantab.), F.R.C.S., has been appointed Assistant Physician Accoucheur to this Hospital.

Dr. Adolphe Abrahams, O.B.E., has been elected Assistant Physician to the Westminster Hospital.

Major L. Bathe Rawling has been transferred from No. 1 to No. 4 London General Hospital as officer in charge of the surgical division.

Our congratulations to Temp. Lieut.-Col. R. J. Morris, R.A.M.C., on being awarded the C.B.E. (Military Division).

Capt. (Act. Major) J. M. Weddell, R.A.M.C., has received the medal of *La Solidaridad* (Third Class) conferred by the Government of the Republic of Panama.

We are pleased to note that Surg.-Lieut. H. C. C. Joyce, R.N., has been mentioned in despatches for services in Siberia.

It gives us much pleasure to announce that Dr. C. B. Heald has received the C.B.E. This honour was conferred as long ago as January 1919, and we regret that owing to an oversight the notice has not previously appeared in the lists we have published from time to time.

We take this opportunity of congratulating Dr. Heald on this award and also on the remarkable recovery he has made following the very serious aeroplane accident in which he was involved during his period of active service.

Owing to the enormous increase in the cost of production we have been compelled to raise the price of the Journal. Single copies will in future be 9d., the yearly subscription 7s. 6d., and five years' subscription 1½ guineas.

The Publication Committee regret having to take this step, which they have postponed in the hope that conditions would become more normal. Unfortunately this has not been the case, with the result that it has been found impossible to carry on without making these increased charges.

We understand that Mr. Harrison Cripps, Sir Anthony Bowlby and Sir D'Arcy Power retire from the Council of the Royal College of Surgeons of England in June this year, and that Sir Anthony Bowlby and Sir D'Arcy Power offer themselves for re-election. We hope that Bart.'s "Fellows" will put them both in at the head of the poll. Every vote should be recorded.

Elsewhere in this issue we are publishing an account of the Final Rugby Cup Tie which was decided at Richmond on March 11th. By this time the majority of our readers will know that Guy's were successful by the narrow margin of 2 tries (6 points) to *nil*, and the score alone will be sufficient evidence of the closeness of the game. It is not our intention here to say anything about the play, but we do wish to offer our heartiest congratulations to the

Bart.'s XV on their magnificent display. All rugger enthusiasts recognised in the early part of the season that Guy's were an unusually capable side and would take a lot of beating. It says much for the Bart.'s team that not until the game was over was the result at all evident.

On behalf of the Hospital we would like to say how delighted everyone was to see the King present. We agree with Guy's, his presence was indeed "a feather in the cap of the London hospitals."

Those who were most eager to congratulate Sir Archibald Garrod when they read that he had been recommended for appointment to the Regius Professorship at Oxford in succession to the late Sir William Osler, were the most sorrowful when they read the next day that the King had approved the appointment, and when they realised that what is Oxford's great gain must be our greater loss. Sir Archibald will be perpetuated in our memory by the monument he has chiselled out for himself in the shape of the Medical Clinical Unit. We wish him every possible success in his new sphere, and congratulate him most heartily on his appointment.

The Regius Professorship of Physic was founded at Cambridge University in 1540 and at Oxford in 1546, but at Cambridge no appointment was made until 1554. The Professors were originally the chief medical officers for superintending the education of the graduates and sanctioning their practice when they had arrived at a state of proficiency. Until the appointment of Sir Archibald Garrod to the Regius Professorship of Medicine at Oxford no St. Bartholomew's man has held the office, although at Cambridge the post has been held by Dr. John Haviland (1817-1851) and Sir George E. Paget (1872-1892), both St. Bartholomew's men.

Whilst printing this month's interesting essay on French war literature, we cannot agree with the author that England has produced no good book dealing with the war. *Fields and Battlefields*, by No. 31540 (H. Bagenal), reached, in our opinion, as high a standard as the French books mentioned, and since receiving the essay there has been published a book by Philip Gibbs called *Realities of War*, which we are convinced compares well with Henri Barbusse's *Le Feu*.

We have been interested in the programme of a concert got up in aid of Bart.'s by Dr. and Mrs. C. E. Reindorf, at no less a distance than the Gold Coast! The concert was performed at Accra and at Koforidua, and it seems to us very enterprising of Dr. and Mrs. Reindorf to raise so much enthusiasm for the hospital so far away in the antipodes.

Sir Robert Morant's death is a loss to this and all Hospitals. The appreciation of his services given by the

## FRENCH WAR LITERATURE.

Minister of Health (an old Bart.'s man) so aptly describes his attributes that we make no apology for inserting a part of it here.

"The tragedy of his loss would appal us all were it not for the unforgettable example of his dauntless courage. Those who really knew him loved him even for his foibles. There was nothing petty about him. When a course of action had been decided upon he pursued it; the doubts and questionings that had preceded its decision having been carefully examined and estimated were cast behind him; whether he agreed in all respects or not he went straight on when the course was decided, and that annoying habit of lesser men of bringing up again and again all sorts of pointless questionings was never his. A great reasoner himself, he respected reasoning in others, and his masterful manner did not arise from any love of domination for its own sake, but from what he felt to be the necessities of the case. He was ready enough to subordinate himself and modify his views, and he looked for a similar practice in others. The cause was the only thing that mattered to him."

It is with deepest regret that we have to record the death of Dr. Samuel West, who for so many years occupied such a prominent position in our Hospital. Elsewhere in this issue we print an appreciation of Dr. West together with his photograph, but in an editorial capacity we wish to take this opportunity of expressing our sympathy with his family—an expression of regret which we feel sure will be echoed by all Bart.'s men.

It is with much regret that we have to record the death of Dr. Francis Morley Newton, Resident Medical Officer of the Stoke-upon-Trent Union Hospital, which took place on February 15th from diabetes and influenza.

Dr. Newton, who was born in Huntingdonshire in 1876, was educated at Epsom College and qualified at this Hospital in 1905. After a period as House Surgeon at Bart.'s and Seamen's Hospital, London, he entered the Poor Law Service as Resident Medical Officer at the Nottingham Infirmary and afterwards at Stoke-upon-Trent, which appointment he had held for upwards of ten years. Dr. Newton had earned a reputation for great kindness and skill, and his death is much lamented in the district.

He leaves a widow and four children, and we understand that an application will shortly be made for the admission of the eldest one to Epsom.

## ROLL OF HONOUR.

We had hoped that it would not be necessary to make any further additions under this heading, and it is with much regret that we learn of the death of Capt. C. H. Backus, R.A.M.C. No details are yet to hand, but we would like to offer our sympathy to his relatives and friends.

HERE have been no books written in English which give any worthy account of the life of the soldier on active service. Some are farcical and others are by newspaper correspondents, whose work seems in some way to prevent simple and truthful representation. In France two books have been published which are of an altogether different quality. The first, *Le Feu*, by Barbusse, is a terrible piece of description. So far as my limited knowledge goes it is not in the least exaggerated, but the author's temperament has limited his vision, and the book is a story of horror unrelieved by any lighter moments. The second, *Les Croix de Bois*, by Dorgelès, is a wider, saner, and less awful account. While there is nothing in it so powerful as the closing scene in *Le Feu*, which can only be compared to some of the *Inferno*, it is a vivid and faithful account not only of the tragedy, but also of the comedy of the soldier's life. There is nothing in English to be compared with either of them, and those who wish humbly to realise what our army suffered in the country's cause must turn to these two books before they can hope to understand it.

Meanwhile it may perhaps interest you to see a passage taken out of *Les Croix de Bois*. I must explain that the chief speaker is not only a "copain," as the French soldier calls his mate, but also a Parisian, and "un type de Montmartre" where all Paris slang is invented. His language, therefore, is not that of the classics. He has been in hospital at the base, and has just returned to the front.

"Well! and how about the rear? Pretty comfortable?"  
"You bet. Three months' hospital in a hotel like a perfect palace. Not a ——— thing to do but get your feet washed; as much jam as you like; it's a good life. What? And us, it's nothing. You should see the English. They're worth seeing. The officers lardydah, the men all fresh buying everything they want, the boys in petticoats going on parade with their pipes. The women are all after them, take it from me. You can bet the chaps are not asking to shift sectors. And their wounded! It's worth seeing! A nobby blue suit, quite fetching, a white shirt and a red tie. Fetching, you bet, and clean. You wouldn't believe they'd been in it."

"And our chaps—many of 'em?"  
"A lot. At the hosper\* I was in it was always chock full. Only, us French, they dress in secondhand rags, tunics too large, coats too short, great-coats all shabby. To take the curl out of the Tommies I tell you you have

\* Part of French slang consists in putting meaningless terminations to words like our "rugger" and "soccer." The word here is "hostau." The word "Boches" coined before the war began as "Alboches," which was simply "Allemands" with one of these terminations in place of the real one.

to be a bit of a kid. . . . The men who have lost an arm, or have had a smashed head, they go off in parties, because their wound, that doesn't stop them walking. They can go and play. We others with sore paws, we make a different team. I'd got my two sticks, but the others had lost a foot or a bit of leg, and it makes you sick that tap of the crutch on the pavement, you can't think. The civils don't notice it now. Say they've got accustomed to it. The boys, they haven't got accustomed to it you may bet. I'd a pal who'd left the bottom of his face behind. He daren't show himself. He was ashamed."

Sulphart was bending down trying to read the future in the bottom of his mug. "And the war," he said, "When's that going to finish?"

Vienblé before replying gave a chuckle. "Ah! this waiting. They don't talk about it, I don't think. But at Panama\* they don't know there is a war. No one thinks about it except the old women who have got their kids at the front. The fluffs are on the prance more than ever. I came upon some duds who were getting twenty francs a day. Look here! A chap who had a little hole where he mended bicycles, he's a millionaire now and smokes cigars with collars on them that you daren't touch. And the cram in the cinema, in the bars, everywhere. You go and propagate in the Champs Elysées and see the mashers. They're all there, don't you worry. For that crowd it is as if the war was in Madagascar or China. You bet they don't worry about the winter campaign. It's a beano, I tell you, a regular beano!"

W. P. H.

### MEDICAL NOTES.

By Sir THOMAS HORDER, M.D.

(Continued from p. 56.)

#### ON ARTHRITIS AND FIBROSITIS.

(154) After getting a full account of the history of the present condition, and of the patient's past illnesses and habits, the investigation of a case of arthritis may be undertaken with advantage from three distinct points of view:

(1) *Detailed examination of the affected joints, muscles and fibrous tissues*—the number and kind of joints involved, the character of the swelling, the degree of effusion, the presence of enlarged bursæ, the extent of any limitation of movement, the features of the pain, the state of the muscles as regards atrophy, tenderness and spasm. (2) *The general condition of the patient*—temperament, mental attitude, state of nutrition, condition of heart, of kidneys, of skin, of bowels, temperature. (3) *A search for possible foci of*

\* Panama is Paris.

*bacterial infection*—teeth, nasal sinuses, prostate, cervix uteri, urinary and intestinal tracts, tonsils, bronchial tract. A consideration of (1) and (2) may lead an experienced practitioner to attach special importance to one or other of the possible sources of infection enumerated under (3), and may therefore help to reveal a causative factor of considerable value in regard to treatment.

(155) Cases of arthritis can be graded according to the degree to which bacterial infection is an ætiological factor. High in the list come cases of gonorrhœal arthritis, and those attributable to streptococcus, pneumococcus and meningococcus infection. Low in the list come the mono-articular cases of osteo-arthritis and the arthropathies. But even in these last-named cases the bacterial factor is in all probability rarely quite absent.

(156) In examining the teeth for a focus of infection in a case of fibrositis or arthritis it is not enough to exclude "pyorrhœa" (suppurating peri-odontitis). It is necessary also to exclude non-suppurating peri-odontitis or sub-infection of the apices of the teeth. Indeed, root infection in connection with dead teeth, whether crowned or not, is in more common causative association with arthritis than is mere pyorrhœa. The only trustworthy guide to the existence of root infection is a good radiogram of the apex or apices of the suspected tooth or teeth. Root infection is generally due to *Streptococcus salivarius*, a micro-organism of low virulence, capable of leading to chronic toxic absorption, with little or no pus-formation.

(157) Wasting of muscles in multiple arthritis may be far greater than is accounted for by any relative immobility of the joints concerned—a fact which goes to show that the disease is in most cases a general one and not limited to the joints.

(158) Gout may precede, may synchronise with, or may follow an attack of "septic" arthritis. As an ætiological factor in this condition gout should be specially considered when the patient is a man of plethoric habit and when involvement of the peri-articular tissues is a marked feature in the case.

(159) If residual joint swellings occur after an attack of rheumatic fever examine the patient carefully for a "septic" focus. A double infection may have been present from the first, or the rheumatic process may have sensitised the joints in respect of the focal infection. The secondary infection is, in most instances, streptococcal in nature.

(160) A recurrence of activity in an "arrested" case of multiple arthritis calls for re-investigation of all the possible sources of focal infection, and not merely of that one which appeared to be operating during the last attack.

(161) The pains of spondylitis are sometimes so diffuse, and are sometimes so remote from the seat of the lesion,

that their real origin may be overlooked for a long time. The absence of arthritic changes in the joints of the extremities—a fairly common circumstance—may contribute to mask the diagnosis. It is not unusual for the nature of the disease to be revealed in the first place by the patient's characteristic lack of poise and by the stiffness of his gait.

(162) In the majority of cases of chronic arthritis the causative factors are complex and multiple, not simple and single. For this reason, success in treatment turns upon the employment of a programme of treatment rather than upon the use of a single remedy. The patient's active co-operation is essential to progress. A desideratum almost equal in importance is steady persistence in neglecting to follow the ready advice of his friends.

(163) Voluntary movements of the affected joints are generally of much more assistance in the treatment of chronic arthritis than are the "passive movements" so commonly ordered. Habit, and the mental attitude of passivity so frequently seen in the subjects of arthritis, make voluntary movements irksome and painful, whereas passive movements are often tolerated. "Massage of the affected muscles and voluntary movements of the affected joints" constitutes the ideal physical treatment in most cases. The introduction of apparatus to assist the latter part of the routine is often of great help.

### POSSIBLE DEVELOPMENTS OF PROFESSORIAL UNITS.

By F. R. FRASER, B.A.(Cantab.), M.B., Ch.B.,  
F.R.C.P.(Edin.).

**A**T the present time there is a wide-spread desire for improvement in the teaching of the clinical subjects. This has arisen largely from the recognition that many medical men view the abnormalities from which their patients suffer in too rigid a manner. They are satisfied by the recognition of a known disease, by their ability to make a diagnosis in terms of nomenclature, and by their ability to treat in accordance with such a diagnosis. It is desired that they should be able to recognise the underlying causes of the abnormality, the extent to which these causes are able to bring about disturbances of function and of structure, the stage in the possible process at which their particular patient is, and the treatment necessary to prevent further changes and to encourage the patient to recover from the existing disturbance.

Experiments are now in progress to determine how the education of medical men in these respects may be improved

Such experiments are being made in many medical schools and in many countries, and consist essentially of efforts along two directions—of efforts to add to the sum of knowledge of diseases and diseased persons, and of efforts to impart more successfully to students and graduates that which is known.

Such an experiment is the formation of "professorial units" in the teaching hospitals. Experiments of this nature have been in progress for some years now in some of the medical schools in the Eastern States of the United States of America. And it has been my privilege to see something of these experiments and to take part in that of one of the schools. Existing local conditions must modify the formation of such a unit and also the scope of its activities, more especially at the start, so that the good of the old systems may not be lost by hasty reform and wholesale change. Much that seems good may be seen in each experiment and there is much that seems to require modification. Each school will—and it is right that it should—retain individual characteristics as the experiment evolves, but all seem to be working along certain general lines. There is, then, in view at present what may be termed an ideal scheme towards which the experiments point, and which might be attained if finance, tradition, vested interests and other local conditions would allow.

The presentation of such a scheme, even if recognised as merely a personal view of the experiments, can be of value as a basis of discussions, of plans, and of endeavour. The following scheme of a "professorial unit" is outlined for the teaching and investigation of clinical medicine. It is in operation in no single school, but contains points taken from several and points that so far are found in none.

The *personnel* of such a unit must include two classes of men—firstly skilled teachers of clinical medicine, and secondly, men trained in the methods used for the investigation of disease. The ideal situation for the ideal scheme is a small teaching hospital with 100-120 medical beds and an out-patient department. At the head of the unit is the professor or director, who directs the work in the wards, in the out-patient department, in the laboratories and in the lecture rooms, who supervises the care of the patients, and the investigation of disease. He should receive a salary, as it is necessary that he should devote his whole time to the hospital, but there is no reason why he should not also see a limited number of private patients provided he sees them in the hospital, and for that purpose he should have a consulting room in the hospital buildings. There are many arguments in favour of his seeing private patients, and there are many reasons for his devoting his whole time to the work in the hospital, and the provision of a consulting room for him in the hospital answers to a great extent the two demands. The limit of 100-120 beds is fixed mainly by the work incidental to that number of patients being sufficient for the powers of any man. His functions must be largely supervisory and advisory except in his teaching.

In addition to the director there should be three or four senior physicians who have charge of the patients in the wards. Each of these should be a specialist in one branch of medicine, such as the diseases of the respiratory system, digestive system, blood, etc., and they would be in regular consulting practice outside the hospital, giving only part of their time to the work of the unit. One of the senior physicians, however, should be the assistant director, and devote his time to the hospital in the same way as the director, receiving a salary, and seeing private patients in the hospital only. He would have specialised knowledge of the methods of investigating disease in one or more directions, and have teaching, clinical and administrative ability.

Of the standing of assistant physicians there should be three or four clinicians who would be the deputies of the senior physicians, and of them one would have the charge and direction of the out-patient department, while another should give his whole time to the hospital, have special ability in teaching, have knowledge of the special methods for the investigation of disease along one line at least, be the second assistant to the director, and receive a salary. The other assistant physicians, including the director of the out-patient department, would be in practice outside the hospital and give only part of their time to the unit.

These physicians and assistant physicians constitute the clinical staff, and there must also be at least three laboratory workers who would devote their time principally to laboratory work, but who would be encouraged to take an interest in the clinical side as far as possible. Of these one would be chemically trained, and another bacteriologically and serologically, and they would do the more elaborate routine work that the house-physicians could not undertake and engage also in original investigations. The services of the morbid anatomist and of the bacteriologist to the hospital would be to a large extent available for the routine work of the unit, and the unit laboratories should have accommodation for a few research scholars and graduates doing investigative work for these, and for students to do such of the routine work as is possible on their own cases.

The teaching would be entirely organised by the director and mainly in the hands of the director and his salaried assistants, but the other physicians would take their share in the more systematic instruction, each taking the subjects in which he has specialised. The director and his two assistants would undertake the bed-side teaching, the second assistant having peculiar charge of the work of the clinical clerks. The director cannot know so much about any given subject as the member of his staff who is working particularly on that subject, and so he would call on the aid of his assistants in teaching as well as in the treatment of the patients and the investigation of disease. He would have full use for teaching of all the material in the wards but would not attempt complete daily rounds, visiting the

patients in each ward with the physician in charge of it one day a week only, to give advice and to see what material is there and what work is being done. Once a week also he would visit selected cases with his laboratory staff and his assistants, consulting with them as to special methods of investigation and treatment. Much of his time must be given to administrative work, and he should have one laboratory worker available to assist him in any line of research he is specially investigating.

The assistant director should be interested in a special branch of medicine other than that of the director, and his duties should allow him more time for personal investigations and laboratory work. The second assistant would be interested in yet another branch, and his teaching duties would be less formal and bring him into more individual and intimate contact with the students at the bedside.

The duties of the assistant physician in charge of the out-patient department would be largely administrative, and he would arrange that all patients suffering from diseases of a certain system would report on a stated day in the week, on which day the clinician interested in that system would be in attendance for consultation and teaching. He would also organise the out-patient assistants, who might well be recruited from the younger graduates practising in the neighbourhood and supervise their work and afford them consultative advice.

The place of the house-physicians in the scheme must not be ignored. Much of their opportunities for teaching, such as the supervision of the clinical clerks, would be taken out of their hands, but the increase in the amount of work done on their patients would increase their duties and responsibilities, and there should be sufficient of them to make it possible that much of the laboratory work that has progressed beyond the stage of investigation to become regular routine may be carried out by them. The educative value of this is great, and it allows the senior members of the unit and especially the laboratory workers more time to devote to the work that is still in the stages of investigation.

In such a scheme the student learns not only the accepted principles of diagnosis and treatment and the methods employed, but also the limitations and fallacies in the principles and in the methods, and he further learns the possibilities of laboratories and methods of precision in the diagnosis of disease and the treatment of patients.

In adapting such a scheme to a larger hospital and medical school—for example, to a hospital containing 300 medical beds—it must be recognised that no director is capable of supervising the work along such lines of more than 100-120 beds. The establishment of two or of three such units to cover the whole number of beds, each independent in *personnel* and equipment, would be the best conceivable arrangement, but would be so costly that it is not seriously considered at the present time, and some other arrangement must be found that would allow of

## THE FRACTURED FEMUR.

(Extracts from a Paper read on February 26th, 1920, before the Abernethian Society of St. Bartholomew's Hospital.)

By W. ETHERINGTON WILSON,  
Chief Assistant to Mr. Eccles's Firm.

THE lessons learnt and taught during the war have considerably advanced and made many take an interest in the subject of fractures, particularly the fractured femur. Improved methods were imperative in these wounds of the thigh and shattering of the femur. One result was the advocacy of the Thomasknee-splint, by Sir Robert Jones, for the treatment of these troublesome cases.

The Thomas splint, it must be remembered, is not a wartime invention, for it has been in use since 1875, when it was first introduced by Hugh Owen Thomas, a Liverpool surgeon, in connection with diseases of the knee joint. The tremendous advantages of the splint were soon recognised, and the first battle of the Somme, at the end of 1915, saw many regimental medical officers carrying Thomas splints into action. Hundreds were ordered by the War Office and used in France and at home. Eventually its fame spread to eastern theatres also. Liston's long splint was now even denied a place as a first-aid piece of wood on the battlefield. This is as it should be, even in civil practice. It is just as easy to store away a Thomas splint for emergency in an ambulance as it is a Liston.

The special femur hospitals instituted on both sides of the channel were a necessity, and excellent results were obtained by the specially trained staffs of such establishments.

The name of Major Maurice Sinclair, R.A.M.C., stands out prominently in connection with the adoption of methods and ways and means of using the Thomas splint in connection with these fractures. It was perhaps unfortunate that two schools of femurs sprang up during the war, *i. e.* Sinclair and Pearson.

The outstanding feature of Pearson's method was the insertion of callipers into the soft tissues on either side of the femoral condyles, extension being obtained directly on the femur through these pincers by bags of shot.

Sinclair's methods, however, are simpler and are now generally used. The results of both schools were very good during the war.

(1) *Reasons for the widespread adoption of the Thomas splint in civil surgery.*—It is simple, comfortable, and good results are more easily produced. Wounds are more easily and efficiently dressed without the trouble of having to lift the patient and hurting him. Nursing is made easy. The patient has confidence and is able to move about in bed, lifting himself clear of the bed if necessary without help, without discomfort, and without disturbing the fracture.

approximate equality of opportunity for diagnosis and treatment of patients in all the wards.

This might be attained by a scheme such as the following: The staff of the professorial unit would be reduced, retaining on the clinical side the director and one assistant of the standing of assistant physician only, and reducing the number of beds under the unit to 50 or 60. The non-professorial units with approximately the same number of beds should have attached to each of them a salaried assistant with special laboratory training as well as clinical ability, who would undertake the more difficult routine laboratory work that the house-physicians could not carry out, and engage also in original investigations along the lines, if possible, of the specialty of the physician in charge of the unit, or of his deputy assistant physician. These laboratory assistants should all work in the clinical laboratories under the supervision of the director of the professorial unit, who would be also director of the clinical laboratories. As each would be trained in the methods of a different line of investigation of clinical medicine all would have the benefit of specialised advice on the different subjects, and there would be as little multiplication of apparatus, etc., as possible. It would be necessary that there should be at least two house-physicians solely for the ward work of each "firm" or unit, including the professorial unit, so that one of them could be employed on the ever-increasing methods of investigation that have become simplified and attained the position of routines, leaving the salaried assistants to the more elaborate procedures and the specialised investigations.

In such an adapted scheme the professorial unit would undertake part only of the teaching. It should be possible to arrange that each student should attend the teaching in the wards and out-patient department of the professorial unit, preferably after he has worked as clinical clerk in one of the other "firms," and the professorial unit should also undertake the preliminary training in history-writing and note-taking and the methods of clinical examination.

It must be remembered that the success of any scheme for the improvement in the education of medical men depends partly on the general level of education in criticism and precision, and in such subjects as physiology and pathology, of the students entering on the study of the clinical subjects. It must also be pointed out that the students who are well equipped in these respects are able under the present methods of teaching to attain to the standard to which it is desired that all should be raised.

The gross and crippling displacements to which the femur is liable owing to the surrounding powerful muscles, are easily seen, felt and corrected.

The Thomas splint may be used as a universal splint for any fractures of the lower limb, and is used in many diseased conditions. The limb can be treated intelligently because the splint does not demand that the thigh should be swathed in bandages and adhesive plaster and allowed to join up in the dark as best it can. Extension, a most important matter in fractures of the femur, is easily obtained and there is no myth about it.

Fracture-boards and uncomfortable beds become absolutely unnecessary.

Liston's long splint possesses no advantages over the Thomas, but has all the disadvantages on its side; it is not the easier method of treatment.

(2) There are three stages in the treatment of a fractured femur: The first is one of extension and manipulation of the fragments to obtain the best alignment possible, and sufficient callus is formed, in the straightforward simple fractures of the middle of the shaft, to maintain this position in six to eight weeks.

The second position, of two to three weeks' duration, aims at further hardening of the "cement" and obtaining knee movements. Thus the third position, of walking in a caliper splint, is prepared for, and in this stage further active hardening takes place, safe, firm, bony union being obtained in the two to four months advised for this position.

(3) Extension is obtained by *body-weight* and not by bags of shot. There is no fear of lack of extension by the method of hanging a man by his leg; the mistake is often on the side of overdoing it.

(4) The choice of a method for fixing the leg in the splint (the so-called extension) may be made from the following: Sinclair glue (or adhesive plaster strapping), two screws in the upper third of the tibia, two screws just above the femoral condyles, a pin through the tibia or femur, Sinclair calipers to the ankle or to the knee.

(5) Glue or tibial screws are to be recommended, especially the latter, its disadvantages being from the patient's point of view only, *e.g.* firstly an operation is required, and, secondly, the present-day fashions would not serve to hide the small scars. The two great points of screws are that they mean comfort to the patient and are a labour-saving device to the house-surgeon. Glue sometimes blisters or wants renewing; certain skins will not stand it at all. Half a turn of the screw-driver, and the use of the fingers removes the screw when their work is completed while the patient looks on. Sepsis need not be feared if the skin is unbroken and the strictest aseptic precautions taken during operation. Once inserted the dressing is never changed. A bead of "pus" about the sixth week need not be alarming. Two very important points in connection with their insertion must be mentioned: they must not be

screwed in at right angles to the bone but with an inclination downwards, and it is *most essential* to fix them home into the compact tissue of the opposite side.

(6) The amount of callus thrown out by a fractured femur varies in amount in different individuals and in different parts of the bone. More external callus is thrown out in the middle than at either end of the femur. Very occasionally a large mass of callus is palpable in a simple fracture and still the thigh bends on walking. This occurs in cases of feeble or non-union where one fragment is prevented from forming bone by torn periosteum, etc., falling across the end of the bone, and, becoming adherent, produces a limiting membrane. The opposing fragment in an attempt at union produces an excessive amount of callus. Unlike simple fractures, the new bone-formation in fractures complicated by prolonged sepsis is excessive in amount, irregular and ugly.

(7) A sequestrum lying in a cavity lined by new bone-formation sometimes keeps the latter in a softened condition so that bending occurs on walking, or even while the limb lies between sandbags in bed. The effect of sequestromy is an immediate hardening of the softened bone. Other causes of bowing of the thigh after fracture are non-union, frail union, walking too early, or discarding the caliper too soon. If a femur is going to bend it can do so in bed after the removal of the splint, *i.e.* walking is not the only necessary factor producing deformity. The causes directly producing such a result are therefore two—the weight of the body and the pull of the powerful muscles of the thigh. The directions of angulation or bowing most often seen are backward or outwards, the lower fragment being responsible for the former and the upper for the latter.

(8) Malunion of fractures in the lower third of the femur are more serious than those in the upper third of the shaft. *The backward sagging of the lower fragment must not be allowed.*

The unaccustomed strain which comes to be thrown on the knee-joint, in time, produces the crippling.

(9) Hence, bend the bars of the Thomas slightly, keep the lower fragment hoisted well forwards by the supporting sling, obtaining a forward curve to the femur. The upper fragment looks after itself in this matter.

(10) Some fractures of the upper third of the shaft and great trochanter require abduction; to this end the Sinclair net bed is of the greatest service. The net bed combines abduction of both limbs with extension by body-weight, and brings the lower to the abducted and flexed upper fragment. Fractures of the neck of the femur are also treated by abduction.

(11) In malunited fractures with shortening, osteotomy, through the *plane of union* (Mr. Harold Wilson), reproducing the original fracture as far as possible, has yielded very good results. Surprising lengths can be added to the limb. The results of thirty cases of osteotomy for malunion

showed an average gain of  $2\frac{1}{2}$  in. in length. The great majority of these were repatriated prisoners of war from Germany with various degrees of shortening from two to seven inches.

*Summary of Methods of Treatment for Malunion* (see *Lancet*, January 17th, 1920):

(a) Deformity with much overlapping of fragments (*i.e.* shortening): Osteotomy through the plane of union.

(b) No deformity, but much overlapping ( $> 2$  in. or more): Osteotomy through the plane of union.

(c) Recent case of deformity with little or no overlapping. (i) Moulding into position, (ii) or actually cracking the bone across without open operation.

(d) Old case with firm union and deformity with little or no overlapping: (i) Refracture without open operation, (ii) open osteotomy.

(12) Following osteotomy most of the compound fractures, *i.e.* gunshot-wound cases, although healed for periods varying from three to ten months, suppurated. The flow of pus was profuse and foul-smelling, the *B. proteus* apparently being chiefly concerned. This state of affairs was entirely limited to prisoners from Germany and testified to the contamination allowed through neglect. The latent organisms apparently laid low in bony cavities which were sometimes demonstrable during operation. No ill-results accrue if proper drainage is provided for. Sequestromy and osteotomy may be done at the same sitting.

(13) The German methods of treating fractured femora during the war were very crude—at times barbarous. Sir Anthony Bowlby's investigation into their methods reveals some extraordinary ways and means practised by this "kultured" nation.

(14) Successful sequestromy does not often result in one operation, if the mouth of a sinus is merely enlarged and the bone that can be felt fished out. Another cause of a persistent sinus is a cavity in the femur with seven-eighths of the bony wall present.

(15) The most important cause of a knee-joint with limited movement is found in compound fractures with scarring of the all-important quadriceps muscles.

(16) The correct result of a simple fracture of the femur is either no shortening, or a quarter of an inch on the long or the short side.

(17) Of the first 183 cases of fractured femora treated in the femur wards of the 1st London General Hospital, shortening occurred in 118 (75 were 1 in. or under), lengthening occurred in 22 (up to  $\frac{3}{4}$  in.), no shortening occurred in 43.

These results are very satisfactory when it is considered that they include all cases, the large majority of which were gunshot wounds with sepsis, loss of bone and other complications.

(18) Complications met with in simple and compound fractures of the femur were discussed, namely, malunion,

stiff knee-joints, sepsis, secondary hæmorrhage, frail union and non-union.

(19) Frail union may be defined as that condition in which the fracture has only partially united by callus or bone, with the result that the femur is liable to bow, bend or break when stress and strain is applied to the limb. During the war the great cause of frail union was gross loss of bone. Some successful bone-grafts of the femur are also examples of this condition. The ideal treatment is reinforcement by a bone-graft.

(20) The common cause of non-union is the intervention of soft tissues, commonly periosteum, between the ends of the fragments. It is important to diagnose the condition early and operate, and the results are good. If left for months the ends of the bone lose their power of bone-formation to some extent and union only occurs after a long period, sometimes not at all. Non-union may be fibrous, or there may be actually no union of the bony ends at all owing to deformity or the burying of a fragment in muscle.

The treatment consists in the early removal of the cause by open operation, and the freshening of the fractured surfaces, possibly wiring temporarily to prevent a gap being formed.

The plating of femurs is seldom justified nowadays.

## EXPERIENCES IN RUSSIA.



ALTHOUGH we are now in the year 1920, England's policy with regard to South Russia appears to remain undecided, and pending a decision our Mediterranean Fleet is standing by. Owing to this we have been brought into close contact with some of the products of the war, especially with refugees, who, as a natural result of the privations they have suffered, have become widely infected with disease.

At Odessa, early this month, there was an extensive epidemic of typhus, to check which the authorities appeared to be taking no definite steps. The Bolshevik army was some 150 miles distant. There was no shortage of food in the town, and even the poorer people were able to clothe themselves adequately. But resistance and vitality were considerably lowered because, added to the facts that the temperature often varied as much as 40° F. in a few hours and that a 20° frost was not uncommon, coal was almost unobtainable.

The typhus itself was of a mild type, its death-rate in the local hospitals being only 4 per cent. The typical rash occurred in the majority of cases, but the mental symptoms on which text-books lay stress were usually absent. Treatment as carried out by the local doctors did not differ from that suggested in standard English text-books.

The disease was transmitted through lice (*a*) as a venereal disease, and (*b*) from lice picked up in the local "droschkies" or sleighs. As hot water was more scarce than vodka the pediculi met with but little opposition. A short lecture was given to all ratings before they went ashore, and up to my leaving Odessa no instance of the disease had been noted amongst our own men.

At Novorossisk one found a very bad state of affairs. Overcrowding, lack of fuel and lack of personal cleanliness were prominent features, and, moreover, the food supply was inadequate. Conditions became worse when numbers of refugees began to arrive from the northern villages where the Bolshevicki were making a rapid advance. Each refugee had to be considered as a case of "contact with typhus"; but the Russian hospitals being already taxed to their utmost capacity, isolation of all the contacts was impossible.

To crown all a Russian ship arrived with 5000 troops and civilian passengers aboard, among which were found 100 definite cases of typhus. One case having been sent to hospital from this ship, every precaution was taken to prevent spread in the Fleet, and as the incubation period is regarded as twelve days and we have now been "clear" for nearly three weeks we have reason to believe the precautions taken were adequate.

Temp. Surgeon L. D. PORTEOUS, R.N.  
H.M.S. "CONCORD," NOVOROSSISK  
January 19th, 1920.

### THE WOUNDED SOLDIER AT ST. BARTHOLOMEW'S HOSPITAL.

A.D. 1657.

By LEONARD MARK, M.D.

**T**HERE is at the Hospital a quaint and picturesque relic of bygone days which now ornaments the Steward's Office, and although prevented by its position from being familiar to most of the students, yet cannot fail to attract their attention during some part of their career.

It is a figure 4½ ft. in height, carved in wood and painted, representing a cripple with his right arm in a sling and with a crutch held under his left arm, with which he keeps his weight off his left leg, which is slightly bent up with the heel off the ground. He wears a broad-brimmed hat and a long tunic reaching down to the knees, which might be part of a uniform, fastened in at the waist by a belt with a large buckle.

It is generally spoken of as "The Wounded Soldier," and the most generally accepted tradition at the Hospital is that it is the original sign which in the early seventeenth century stood outside the soldiers' ward.

This figure shows considerable artistic merit, is boldly

carved in a block of wood, and there is much finished work about the face and beard as well as in the folds of the clothing.

In the Office there is also another figure, supposed to be that of a sailor, which may have been placed over a doorway



THE WOUNDED SOLDIER.

outside the ward for sailors. This one is very inferior in design and workmanship. It is only a half-length figure, and is not carved in wood. It is obviously the work of a different artist and of much poorer technique.

Of the date at which these figures came into existence there is no record, but the JOURNAL of the Hospital of June 1st, 1657, contains the following entry: "The two carved figures in the cloister are also to be painted in oil whatever colour the Governors order" (see Sir Norman

### SCIENTIFIC PROSE AND THE SCIENTIST.

By H. O. LEE.

**I**N modern literature the influence of science is paramount. The poet sets himself to investigate life in a scientific spirit; the novelist and dramatist try to arrive at a true criticism of the existing social order rather than to present a gratifying tale in a manner that is equally gratifying. And not only does the modern artist look at events from a scientific standpoint. The actual prose of the best contemporary writers is itself scientific, in the sense that it eschews ornament and aims almost entirely at accuracy and economy of statement, preferring actual harshness to a false suavity of style. Truth is the supreme end of modern literature and the informing principle of the method by which it is produced; while the philosophical theory on which it all rests is the theory that the beautiful can be reduced, or at any rate subordinated, to the true. Literature is enslaved by science; and we are confronted by the curious paradox of an age of science in which prose is, as a rule, written more exactly and concisely by the novelist and the essayist than by the scientist himself. Masterpieces of scientific writing have been produced by literary men like Thomas Hardy. But would it be true to say that so far the scientists, as such, have produced many literary masterpieces? Mathematical philosophy has unbent: Mr. Russell's work can be admired for its rhythm and form by those who have little or no understanding of its meaning. Similarly, Mr. J. M. Keynes, in his book, *The Economic Consequences of the Peace Treaty*, has shown that economic controversy can rise into the realm of literature. But the pure scientist dislikes being asked to produce books which one could read for their sheer literary charm.

The modern public derives its knowledge of psychology and genetics chiefly from novels, and the novel is regarded largely as a medium of instruction. No doubt in every case far more reliable information on whatever may be the topic is given in scientific text-books; but the mere fact that psychological and sexual novels are constantly appearing shows the public which demands this information to demand also that the information, though itself scientific, should be presented in literary form. Why should the demand not be respected? Literature has already become perhaps excessively scientific. Why should articulate science hesitate to become a little more literary? It is the ambition of the ordinary man in our age to know something of science. The discoveries of psychology have had as profound an effect on the whole thought of this generation as the work of Darwin and the discoveries of the geologists had on the thought of the second half of last century. The modern psychological novel is the result not so much

Moore's *History of the Hospital*, vol. ii, p. 314). This entry helps one to a solution of the question, as it shows that the figures had already been in their places for some time in 1657—the year before Cromwell's death—and that it may have been the date on which they required their first coat of paint.

The figure was exhibited at the London Museum at Kensington Palace in 1912.

It was thought that more note might be taken of this figure, and that if some small reproductions of it could be made many friends of the Hospital would like to possess one. The opportunity came when the Bazaar was to be held on March 4th. Some charming figurines in plaster-of-Paris have been produced by the Art and Book Company of Ashley Place, Westminster; and Mr. J. H. Bartlett, who took the matter in hand, and whose generosity is equal to his artistic talent, presented the original small carving in boxwood as his donation to the Hospital. From this the casts are being reproduced in plaster, to be sold for the benefit of the Hospital. A good number of them were quickly bought at the Bazaar, and it is hoped that the sale of them will go on and bring in contributions to the Hospital, where, during the past few years, one of the most familiar sights has been that of a wounded soldier.

[Small reproductions of "The Wounded Soldier" will be obtainable by Students from the Library and by others from the Office. The price is to be 7s. 6d. each.—Ed.]

### A SHROPSHIRE SURGEON.

Vide "A SHROPSHIRE LAD," NO. VIII.

**A**REWELL, trephine and stomach-pump!  
Farewell! to ruddy gore;  
Herbert, watch my latest jump,  
For I shall jump no more.

The clock strikes in the cold grey square,  
By now he may have died  
Who yesterday was wake and ware,—  
Whose head I opened wide.

The Sister thinks me long away,  
'Tis time my fast were broke:  
We watched him sleep till rising day—  
Maybe he'll not be woke.

O! here's a bloody hand to shake,  
And O man, here's good bye;  
No more we'll cut for cutting's sake,  
My bloody hands and I.

D. W. W.

of the introspective Russian novel as of the theories of Freud and Jung, and there has never been a time when science, in all its branches, was of more interest to the general literary public than it is now. But, whatever may be the literary merits of individual works, the authentic scientists as a body appear still to write almost solely for scientists, incipient or mature, and to write with such a style that the public, even if it were able to understand the statements made, would be effectively repelled by the manner itself from reading more than a few pages.

Aristotle has always been famous for his obscurity. The obscurity is purely verbal. He has also been reproached for his rugged, colloquial style; but the style is not half so anarchic as the style of the average outstanding modern scientist. And, moreover, Aristotle's works as they have come down to us are either notes written by Aristotle for his lectures to students of philosophy or notes taken by those students from Aristotle's lectures. It is not probable that they were meant in the first place for publication; they were simply the rough material of Aristotle's addresses to his students. No Greek would deliberately have published his own work in that confused form. It is difficult to see what advantage modern scientists will gain by successfully competing with Aristotle in his worst defects. Any truth, however esoteric, can be better expressed in good prose than in bad prose; any theory, however profound, will have a greater effect if it is properly set out. During the last century a popular belief existed that to play the piano was effeminate. We are now faced by the opinion that to write in a literary manner is unworthy of the scientist. And we are oppressed by an over-scientific literature, because the scientists themselves produce too few books which are written in readable, even though technical, English. When more than one or two scientists give in, literature will be able to return to its proper tasks. Till then the pseudo-scientific novel will exercise its baleful influences unchecked, and the public will continue to imagine that the function of literature is to supply it with the information which it can elicit from the scientists only in dubiously attractive forms, and that the business of the artist is to make himself the scientist's mouthpiece.

## OBITUARY.

SAMUEL HATCH WEST, M.D.(Oxon.), F.R.C.P.

**H**IS death at the age of 71 of Dr. Samuel Hatch West has caused so many of his contemporaries to write and speak in appreciation of him that even those who never knew him have found themselves drawn towards him, wishing that they too had been privileged to glean from his teaching and to warm themselves in the glow of his personality.

The career of Dr. West was varied and distinguished. From Queen's Scholar of Westminster he went on to gain first-class honours in Natural Science at Oxford, and was awarded the Radcliffe Travelling Fellowship. After graduating M.B. from St. Bartholomew's in 1875 he made steady progress and was elected a Fellow of the Royal College of Physicians of London in 1885. His many other appointments and achievements need not all be catalogued here, but one may mention that in 1887 he was appointed Assistant Physician and in 1903 full Physician to this Hospital, from which post he only retired in 1913.

At Oxford he rowed in his college boat, and all his life he was fond of outdoor sport and country pursuits. He had musical talent, and his beautiful and well-trained voice was in great demand at every students' smoking concert and at the Annual Concert in the Great Hall. This annual concert and the Musical Society of the Hospital owe their existence to his enthusiasm.

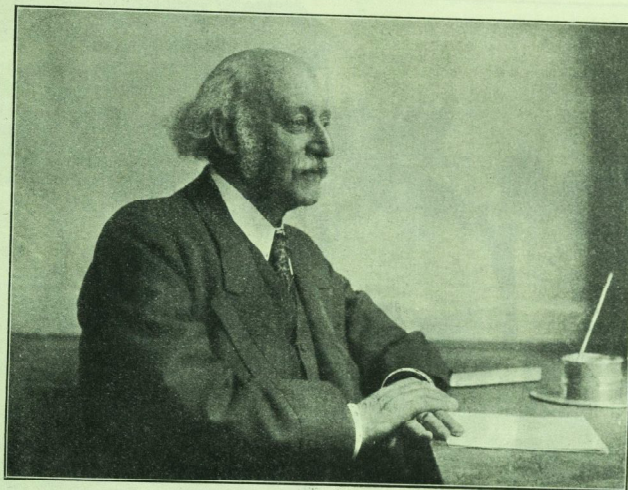
When Dr. West was on the Junior Staff he followed the custom of the time and took in resident pupils. As a teacher of medicine he attracted large followings when he went round the wards, and there was no dearth of clinical clerks on his firm. Dr. Calvert writes: "He was devoted to his wards, and he never allowed, as some are inclined to do, the scientific aspect of the case to interfere with the personal interests of the patient." A doctor writes: "As physician Dr. West was essentially the clinician, for though he came to the bedside thoroughly conversant with scientific methods, and in particular with an exceptional knowledge of chemistry, he avoided the shallows of ultra-scientific application of those methods."

Sir Norman Moore, after mentioning "the pleasure to hear him sing," concludes: "Dr. West was an excellent colleague, and as years went on I came to have a greater and greater regard for him." Sir Dyce Duckworth writes: "His (Dr. West's) work was always quietly done, he was never fussed or hurried. His contributions to chemistry and clinical medicine were founded on wide reading and large experience. His two volumes on *Diseases of the Chest* must remain classical, and hold a place of their own. The *Lettsomian Lectures*, delivered before the Medical Society of London, are most valuable and helpful

in describing important phases of renal disease." And again, "I am the poorer for the loss of one of the kindest, most able and most accommodating of colleagues."

Dr. Andrewes thought very highly of Dr. West, who had been intimate with him ever since being his house-physician immediately after qualification. A junior colleague at the Victoria Park Chest Hospital writes in the *Lancet* that, when applying to his senior for assistance in difficult cases, he "never failed to be impressed by Dr. West's clinical acumen, his breadth of view and the soundness of his

apply the term "Royal." The initiation of the Special War Emergency Fund was due to his foresight, and one of his last acts was to obtain £10,000 for it from the National Relief Fund. The Guild, or Ladies' Branch, dates from 1910, and has done valuable work. In 1913 Dr. West arranged a Festival Dinner at which more than £3000 was contributed. Only the officials can realise the amount of time and energy sacrificed by their colleague for so many years, and can understand how greatly the Fund benefited by his devoted and untiring services.



DR. SAMUEL HATCH WEST.

advice." Good fellowship, social attractiveness and wide human interests, combined in Dr. West with ability, energy and devotion to medicine, made possible that life of distinction and useful work for which he will long be remembered.

Perhaps the most useful of his work, and certainly that for which he will chiefly be remembered, was that in connection with the Royal Benevolent Fund. In 1893 he became Financial Secretary, in 1899 Treasurer, and in 1917 he succeeded Sir John Tweedy to the presidency, so that he was keenly interested in the Fund for over a quarter of a century. He was so much the leading spirit that the Fund has often been spoken of as "West's Fund." The yearly income rose from £3625 to over £7000 during Dr. West's term of office, and it was he who obtained permission to

Dr. West was on the sub-committee of "Music in Wartime," which did so much to find work for musicians whose affairs were disturbed by the war.

Dr. West married a daughter of Sir Edward Frankland K.C.B., F.R.S., and had three sons and three daughters. The memory of him is the consolation for their great loss.

## INTER-HOSPITAL RUGBY CUP-TIE FINAL.

## GUY'S v. ST. BARTHOLOMEW'S.

The above match was played at Richmond on March 11th. His Majesty the King honoured the occasion by his presence, and before the game commenced commanded both teams to be presented to him. Mr. Potter Irwin refereed in his usual businesslike way. The first half of the game was divided very definitely into two parts. During the first part, lasting about a quarter of an hour, the Guy's forwards got possession of the ball in every scrum and let it out fairly briskly. Their backs, thus well served, attacked continually and always looked dangerous. After about fifteen minutes they

A few comments on the play of the Bart's team may not be out of place here. The forwards were excellent both in the tight and the loose, except during the first quarter of an hour. The only fair criticism is that their feeling was slow at times. Where all did so well any mention of individual names is superfluous. The halves did well, both in attack and defence. The three-quarters defended splendidly, and if their attack was not quite all that was expected it must be remembered that they were up against a very strong opposition, who gave no quarter if the least mistake was made. Smuts at full back was a model of coolness and skill. He played a perfect game in every way and saved the situation many times. In conclusion I must apologise for this rather sketchy account of the game, and plead in excuse that it was written at short notice and some days after the match.



THE KING SHAKING HANDS WITH THE TEAM.

scored far out. The try was not converted. During this period the tight work of both packs of forwards was relatively poor, and the ball came out from any part of the scrum. The second part of the first half the Bart's forwards got the ball time after time and their feeling was fair, but unfortunately the backs never looked dangerous. The second half also fell into two periods of similar length to those in the first half, but in reverse order. During the first of these, lasting about half an hour, Bart's had by far the greater share of the ball, but, with the exception of one strong run by Thomas, the backs were unable to make much of their opportunities. During this part of the game Guy's unfortunately lost one of their three-quarters owing to a broken collar-bone. During the second period, lasting till time was called, Guy's suddenly began to get the ball again and let it out to their backs. About ten minutes before the end this led to their scoring a second try, which was also unconverted. There was no further score, and Guy's were left winners by 2 tries (6 points) to nil. His Majesty the King was good enough to present the Cup to the Guy's Captain after the match.

## REVIEWS.

DIABETIC DIETING AND COOKERY. By P. J. CAMMIDGE, M.D. (London University Press.) Price 10s. 6d. net.

In the preface to this volume the author writes: "The most important factor in the permanent success of the treatment (of diabetes mellitus) is careful education of the patient." The two main difficulties which the practitioner has to face in educating the patient are, first, to explain clearly the nature of the malady and the principles underlying modern treatment, and second, to supply the patient and his cook with a simple but effective method of choosing and cooking the right food both in quality and quantity. These difficulties are overcome for the possessor of this latest book of Dr. Cammidge, in which is shown in a clear and simple manner how any patient, granted some intelligence and the services of a

"born cook," can live quite happily on a varied and interesting diet, and yet not over-reach the limit of his sugar tolerance. In the first two chapters diet in health and in diabetes is discussed. The third chapter deals with practical tests for sugar in urine and blood, and the fourth with treatment of complications. Then follow "Aphorisms and Precepts for Diabetics," and an extremely useful chapter on cookery with original work on the "effects of heat and moisture on foods." After 189 receipts there is an appendix, which greatly adds to the value of the book. It shows the protein, fat and carbohydrate values per ounce and per average serving of almost every food, arranged in alphabetical order. The book is both sound and practical.

MANUAL OF SURGERY (ROSE AND CARLESS) FOR STUDENTS AND PRACTITIONERS. By ALBERT CARLESS, C.B.F., M.B., M.S., F.R.C.S. Tenth edition. (Baillière, Tindall & Cox.) Pp. xiii + 1562. Price 30s. net.

The latest edition of this, in many respects, most comprehensive and most clear of all text-books on surgery, surpasses its predecessors in the fact that it has been brought thoroughly up to date. It is five years since the last edition made its appearance, and during that time surgery has been very much on its trial. Old methods have been scrapped, new methods introduced, and no doubt many of these will fall into disuse in civilian practice. All that should be told in a standard work on surgery is included in the new edition, and its value thereby greatly enhanced. The chapter on compound fractures is especially good, as also is the revised chapter on the treatment of infected wounds. The X-ray photographs on art paper, now included for the first time, are a valuable addition.

We would especially commend the index, which is unusually complete, a feature which writers of text-books on modern surgery would do well to emulate.

The whole volume is excellently arranged and splendidly printed. It is an essential part of the student's library, and we know of no better book on this all-important subject.

A MANUAL OF MIDWIFERY. By T. W. EDEN, M.D., F.R.C.P., F.R.C.S. Fifth edition. (J. & A. Churchill.) Pp. viii + 747. Price 24s. net.

The latest edition of this well-known volume does not materially differ from the previous edition. The sections dealing with the management of labour and the management of the infant have been re-written, and the value of the book enhanced accordingly. We are convinced that writers on midwifery would do well to pay more attention to this latter important subject, which often receives the barest notice in text-books.

We are not quite sure that the author is altogether wise in recommending the use of pituitrin in the second stages of labour, although we are prepared to admit that it is a debatable point.

As in previous editions the book is exceedingly well illustrated.

MEDICAL SCIENCE: ABSTRACTS AND REVIEWS. (Medical Research Committee.) Vol. i, Nos. 4, 5 and 6 (January, February, March, 1920).

The last three numbers of this periodical contain a wide range of collected material referring to medical and allied sciences, the reviews being particularly useful to those who may be too busy to hunt out information and put it together for themselves. Many of us are unfortunately in that position, and a periodic digest of this kind is very helpful.

The January number contains two reviews of especial interest. The first deals with no less than forty-three papers upon tuberculosis in its various aspects, among which morbid anatomy and treatment may be mentioned. The relations existing between tuberculosis and influenza are discussed, the lighting up of latent tuberculosis by influenza, and the increased mortality from influenza in tuberculous subjects. The differentiation between certain cases of tuberculosis and hyperthyroidism by adrenalin (which produces a temporary exacerbation of symptoms in the latter) is of interest and importance.

The second review, on syphilis, draws attention to a number of important subjects—prophylaxis, a discussion of the criteria of cure, infant mortality from syphilis, and the use of adrenalin in the prevention and cure of complications in the course of arsenical treatment. An interesting observation in the course of arsenical treatment, a persistently positive Wassermann reaction in the blood in spite of a vigorous treatment may be due to refection from the cerebro-spinal fluid. He advocates examining the latter in all such cases, and a special method of intrathecal treatment is described.

Other reviews deal with the morbid anatomy and mechanics of falls from great heights, the suprapubic and perineal routes for prostatectomy, and the bacteriological abstracts deal with such subjects as influenza, gas gangrene, typhus and rabies.

The February number reviews recent work on respiratory diseases, notably McCalleum's work on secondary pneumonia from the Rockefeller Institute, poisoning by mustard gas and its results, and some accidents following thoracentesis. A review on cardiovascular diseases gives some interesting information on congenital heart disease, especially subaortic stenosis, upon aortic regurgitation, and upon D.A.H. and functional tests for venous clots.

In the February and March numbers are two allied reviews upon the surgical treatment of empyema thoracis, and the surgical treatment of bronchiectasis and pulmonary abscess. Various methods of draining and treating the pleura are discussed, but if one may judge from figures, the greatest importance seems to rest upon the nature or origin of the empyema. Thus Eggers (Camp Jackson, South Carolina) performed the ordinary resection of rib and drainage with an average mortality of 27 per cent. Of these the cases following primary pneumonia gave a mortality of 12 per cent., those following secondary pneumonia 35-39 per cent., but streptococcal empyema 62 per cent.

In the treatment of bronchiectasis and pulmonary abscess a number of cases are given to illustrate operations of four main types:

- (1) Mobilisation of ribs without opening the pleura.
- (2) Exposure of the lung and search for the abscess.
- (3) Ligation of the branch of the pulmonary artery supplying the diseased lobe.
- (4) Excision of the diseased lobe.

Among the neurological abstracts in the February number are two dealing with nervous symptoms following preventive inoculation with typhoid vaccine, and one on the possible infective origin of disseminated sclerosis (by Marinesco) which attract attention.

The March number contains a very interesting review, by Dr. J. D. Rolleston, upon diseases of the liver, and in particular on the differential diagnosis of acute yellow atrophy and spirochetosis, from clinical and from pathological aspects. The account given of the blood changes in the two conditions is especially useful, but the numbers of platelets found by one author appear to have been misquoted, for they are given in millions instead of thousands per cubic millimetre.

Another review in this number, upon alimentary diseases, contains a suggestive account of the treatment by hydrochloric acid of a case of secondary anaemia due to achylia gastrica. The author regards the remedy as a disinfectant of the upper part of the small intestine, which should be sterile, but in such cases has become infected.

Other reviews deal with typhus and dysentery and unredressed obturator dislocations of the hip.

## RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

- BROWN, W. LANGDON, M.A., M.D. (Cantab.), F.R.C.P. (Lond). "A Presidential Address on Hunter, Gaskell, and the Evolution of the Nervous System." Delivered before the Hunterian Society on February 25th, 1920. *Lancet*, March 20th, 1920.
- CUMBERBATCH, E. P., M.B. (Oxon.), M.R.C.P. "The Posterior Nerve-roots of the Spinal Cord." *Ibid.*, March 6th, 1920.
- ELLIOT, Lt.-Col. R. N., I.M.S. (ret.), M.D., D.Sc., F.R.C.S. "A Lecture on the Diagnosis of Glaucoma." *British Medical Journal*, February 28th, 1920.



- FORBES, J. GRAHAM, M.D., D.P.H. (Cantab.), M.R.C.P. (Lond.) (with R. F. LUNN, L.R.C.P.E.). "Galyi in the Treatment of Post-malarial Anemia." *Lancet*, February 28th, 1920.
- GOW, A. E., M.D., F.R.C.P. "Intravenous Protein Therapy." *British Medical Journal*, February 28th, 1920.
- GROVES, ERNEST W. HEY, M.S., F.R.C.S. "On the Treatment of Ununited Fractures, with Especial Reference to the Use of Bone-grafts." *Bristol Medico-Chirurgical Journal*, December, 1919.
- MYERS, CHARLES S., M.D., Sc.D. (Cantab.), F.R.C.S. "Treatment of a Case of Narcolepsy." *Lancet*, February 28th, 1920.
- ROLLISTON, SIR HUMPHRY, K.C.B., M.D., F.R.C.P. "Dyspeptic and other Referred Symptoms Associated with Disease of the Gall-Bladder and of the Appendix." A British Medical Association Lecture. *British Medical Journal*, March 6th, 1920.
- RYLAND, ARCHER, F.R.C.S. (Edin.). "Digital Retraction of the Epiglottis during Indirect Laryngoscopy." *Journal of Laryngology, Rhinology and Otolaryngology*, March, 1920.
- SCOTT, SYDNEY, M.S. (Lond.), F.R.C.S. (Eng.). "Vertigo; especially in Respect of its Surgical and Medical Treatment." *Lancet*, March 6th, 1920.
- SEWELL, COL. E. P., C.M.G., D.S.O., R.A.M.C. (and Brevet-Major A. S. M. MACGREGOR, O.B.E., R.A.M.C. (T.F.)). "An Anti-Malaria Campaign in Palestine." *Royal Army Medical Corps Journal*, February, 1920.
- WHITE, C. F. ORR, B.A., M.R.C.S., L.R.C.P. "An Undiagnosed Disease, Probably of an Infectious Nature." *Practitioner*, January, 1920.

## EXAMINATIONS, ETC.

UNIVERSITY OF CAMBRIDGE.

The following degrees have recently been conferred:  
 M.D.—C. R. A. Thacker, H. A. Douglas.  
 M.B., B.Ch.—F. D. Marsh, F. H. Young.  
 B.Ch.—R. Stansfeld.

## APPOINTMENTS.

- ABRAHAM, A., O.B.E., M.D. (Cantab.), M.R.C.P., appointed Assistant Physician to the Westminster Hospital; and Special Officer (Medical) for the Treatment of (Discharged) Sailors and Soldiers at St. Bartholomew's Hospital.
- BARNES, H. W., M.B., B.C., D.P.H. (Cantab.), appointed Assistant Medical Officer of Health for Camberwell.
- BINNS, C. C. H., M.B., B.C. (Cantab.), appointed Certifying Surgeon under the Factory and Workshop Act, for Leicester, East.
- DONALDSON, M., M.B., B.C. (Cantab.), F.R.C.S., appointed Assistant Physician-Accoucheur to St. Bartholomew's Hospital.
- FISON, W. J., M.D. (Cantab.), appointed Assistant Ophthalmic Surgeon to the Harrogate Infirmary.
- FORSYTH, J. A. C., M.Sc., M.B., Ch.B. (Vict.), F.R.C.S. (Eng.), appointed Surgeon to Out-patients, Royal Waterloo Hospital for Children and Women.
- NICOL, W. D., M.R.C.S., L.R.C.P., appointed Fifth Assistant Medical Officer in the London County Asylums and Mental Service.
- WOOD, W. V., M.C., M.R.C.S., L.R.C.P., appointed Medical Officer for the Yatton (Somerset) District.
- WOODFORD, A. W. G., M.B., B.S. (Lond.), appointed Honorary Registrar to the Samaritan Hospital for Women, Liverpool.

## CHANGES OF ADDRESS.

- BAKER, T., 25, Western Parade, Southsea, Hants.
- BARNES, H. W., Medical Officer of Health, Town Hall, Camberwell, S.E. 5.
- CANE, M. H., "Homewood," Peterston-super-Ely, Glam.
- CHRISTOPHERSON, J. B., 29, Devonshire Place, Portland Place, W. 1.
- DRUITT, A. E., Farmside, Kingswood Avenue, Watford. (Tel. 253 Watford.)
- FRASER, F. R., 69, Platt's Lane, Hampstead, N.W. 3. (Tel. Hamp. 7918.)
- GIBBONS, H. B., 24, Allen House, Allen Street, Kensington, W.
- HANCOCK, F. T., 31, Harley House, N.W. 1.

- JOYCE, H. C. C. Glyn Rhodda, Penlyne Road, Whitechurch, Glam.
- MART, W. T. D., 109, Bungeave Road, Sheffield.
- MILES, W. P., 35, Gloucester Terrace, Hyde Park, W. 2. (Tel. Padd. 7242.)
- MURRAY, E. G. D., The Field Laboratories, Milton Road, Cambridge.
- MYERS, C. S., 30, Montague Square, W. 1.
- SOLTAU, H. K. V., Wentworth House, Ilfracombe, N. Devon.
- SPEENCE, D. L., "The Limes," Melksham, Wilts.
- TAYLOR, C. R., Wayland House, Horsforth Avenue, Bridlington.
- THOMPSON, W. FARRER, Woburn, Beds.
- WALLIS, R. L. MACKENZIE, 24, Upper Berkeley Street, W. 1. (Tel. Padd. 2708.) and 55, Townshend Road, N.W. 8. (Tel. Hamp. 2007.)
- WARE, A. M., 10, Queen's Gate Terrace, S.W. 7. (Tel. Kensington 455.)
- WATSON, F. E. G., Baldock, Herts.
- WEIR, H. H., 15, Westbourne Terrace Road, W. 2.
- WHITE, C. F. O., South Lodge, Old Town, Bexhill-on-Sea.
- WOOD, W. V., Henley Lodge, Yatton, Somerset.

## BIRTHS.

- BURNE.—On February 19th, in Singapore, the wife of T. W. H. Burne, M.B., of a son. (By cable.)
- CANE.—On March 13th, at "Homewood," Peterston-super-Ely, Glamorganshire, to Dr. and Mrs. Maurice H. Cane—a daughter.
- DAVID.—On March 5th, at Fernbank, Dinas Powis, Glamorgan, Betty (*née* Gallie), wife of Dr. T. W. David, of a son.
- FRANKLIN.—On February 5th, 1920, at Indore, Central India, the wife (*née* Carver, late Sister Rahere) of Major G. D. Franklin, O.B.E., I.M.S., of a son.
- HAMILL.—On March 20th, at 1, Weymouth Street, Portland Place, W., the wife of P. Hamill, M.D., D.Sc., F.R.C.P., of a son.
- HOYLE.—On February 26th, at Crowland, Llandaff, the wife of Dr. William Evans Hoyle, of a daughter.
- STOTT.—On March 12th, at 53, Addison Avenue, W. 11, to Dr. and Mrs. Arnold W. Stott—a daughter.

## MARRIAGE.

- DINGLEY—BRADSHAW.—On March 10th, at St. Margaret's, Westminster, Major E. Gordon Dingley, elder son of Allen Dingley, F.R.C.S., of St. Norbert's, Cheam Road, Sutton, Surrey, to Mollie, youngest daughter of the late Cornelius Bradshaw, of Tebworth, Bedfordshire.

## DEATHS.

- EVANS.—On March 15th, 1920, suddenly, at 17, Albion Street, Hull, Thomas Melancthon Evans, M.R.C.S., aged 82.
- MATURIN.—On February 24th, 1920, at Hartley Wintney, of apoplexy, Henry Maturin, M.R.C.S., L.R.C.P., aged 77.
- NEWTON.—On February 15th, 1920, Francis Morley Newton, aged 45.
- RAWLINSON.—On February 11th, 1920, at the Colonial Hospital, Trinidad, of typhoid fever, Frederick Juland Rawlinson, F.R.C.S., of St. Mary's, Selsea, and late of Bognor, Sussex.
- WEST.—On March 2nd, 1920, at 15, Wimpole Street, W. 1, Samuel Hatch West, M.D., F.R.C.P., dearly-loved husband of Margaret N. West, aged 71.

## 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 7s. 6d., 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 ADVERTISEMENT MANAGER, the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: City 510.

## St. Bartholomew's Hospital



## JOURNAL.

VOL. XXVII.—No. 8.]

MAY 1ST, 1920.

[PRICE NINEPENCE.]

## CALENDAR.

- Mon., May 3.—Clinical Lecture (Special Subjects), Mr. Hamner.
- Tues., „ 4.—Sir Archibald Garrod and Mr. Gask on duty.
- Wed., „ 5.—Clinical Lecture (Surgery), Sir D'Arcy Power.
- Fri., „ 7.—Dr. Tooth and Sir D'Arcy Power on duty.  
Clinical Lecture (Medicine), Dr. Tooth.
- Mon., „ 10.—Clinical Lecture (Special Subjects), Mr. Elmslie.
- Tues., „ 11.—Dr. Calvert and Mr. Waring on duty.
- Wed., „ 12.—Clinical Lecture (Surgery), Sir D'Arcy Power.
- Fri., „ 14.—Dr. Fletcher and Mr. McAdam Eccles on duty.  
Clinical Lecture (Medicine), Dr. Drysdale.
- Mon., „ 17.—Clinical Lecture (Special Subjects), Mr. West.
- Tues., „ 18.—Dr. Drysdale and Mr. Rawling on duty.
- Wed., „ 19.—Clinical Lecture (Surgery), Sir D'Arcy Power.
- Fri., „ 21.—Sir Archibald Garrod and Mr. Gask on duty.  
Clinical Lecture (Medicine), Dr. Morley Fletcher.
- Mon., „ 24.—Bank Holiday.
- Tues., „ 25.—Dr. Tooth and Sir D'Arcy Power on duty.
- Wed., „ 26.—Clinical Lecture (Surgery), Sir D'Arcy Power.
- Fri., „ 28.—Dr. Calvert and Mr. Waring on duty.  
Clinical Lecture (Medicine), Dr. Drysdale.
- Mon., „ 31.—Clinical Lecture (Special Subjects), Mr. Rose.
- Tues., June 1.—Dr. Fletcher and Mr. McAdam Eccles on duty.
- Wed., „ 2.—Clinical Lecture (Surgery), Mr. McAdam Eccles.

## EDITORIAL NOTES.



LONG with the summer term there has come a full programme of every kind of activity both with regard to work and to games. The Surgery is full in the morning, the dissecting room is full, the refectory is overfull, and in the afternoons it is difficult to decide which department or ward to patronise. As for games, it is not

easy to understand how they allow any time for afternoon work at all. A complete cricket programme has been arranged, and some good cricket is promised. A tennis tournament is at present in progress whose object is to single out the good racquets. The Athletic Club has been restarted, but no sports will be held this year. Swimming already claims enthusiasts, and the report on the boxing tournament shows that the Boxing Club is going well.

The Debating Society holds no more meetings till the October term. The Secretary of the Dramatic Society (F. H. K. Green) will be glad to hear of men desirous of becoming members, but it should be remembered that, owing to question of rehearsals, none but the extremely keen should join. Experience shows that rehearsals tend to cut down seriously the number of original members. The Rifle Club is formed, but as very few men make use of the range (open week-days, except Wednesday and Saturday) the finances are very low. Only if men interested in the range will shoot more regularly will this Club be able to continue existence. The Golf Club is also formed and in full swing. The Christian Union was recently addressed by Dr. Gloyne on "The Ideal Doctor."

If the various secretaries would prepare notes of their societies and clubs, to be ready by the 20th of each month, it would be possible to have a full report each month in the JOURNAL.

At an ordinary Committee meeting of the Royal College of Physicians held on March 29th, Sir Norman Moore was re-elected President.

A Re-union Dinner of all the Ladies and Gentlemen who had served the 1st London (City of London) General Hospital, including its Sections and Auxiliaries, will be held on "View Day," Wednesday, May 12th, 1920, at 7.30 p.m., in the Wharnclyffe Rooms, Hotel Great Central, Maylebone Road, N.W. 1, to be followed by an informal dance. Evening or mess dress will be worn. Tickets, price one guinea, can

be obtained, before May 7th, from the Hon. Secretary, Lieut.-Col. W. McAdam Eccles, 124, Harley Street, W. 1.

\* \* \*

The late Mr. Francis Wakefield Russell Skey, of Maida Vale, left £2000 to St. Bartholomew's Hospital.

\* \* \*

Col. Sir George Hastings, M.D., V.D., has been appointed Esquire of the Order of St. John of Jerusalem.

\* \* \*

#### CIVILIAN WAR HONOURS.

The King has appointed the following to the Civil Division of the Most Excellent Order of the British Empire for services in connection with the war, to be dated January 1st, 1920:

*Knight Grand Cross (G.B.E.):* A. E. Shipley.  
*Commander (C.B.E.):* R. C. Ackland, E. Laming Evans, F. W. Edridge-Green, A. Granville, W. S. A. Griffith, G. P. Newbolt, F. J. Walker.

*Officers (O.B.E.):* L. A. Bais, L. S. Barnes, D. L. Beith, F. Belbein, H. Bott, A. G. Francis, W. Turner, C. M. Hewer, E. S. E. Hewer, A. Hill, A. Lyndon, H. Marshall, A. Miles, E. J. P. Olive, L. J. Picton, R. W. Quennell, T. W. Shore, J. Sterry, J. Valerie, J. A. T. White.

*Members (M.B.E.):* II. D. Dutler, H. L. Dowsing, H. W. Gardner, J. Tredale, J. W. Lloyd, J. O. March, J. W. Priest, F. Scorer, E. R. Williams, Richard Williams.

These war honours lists must eventually cease, but we are glad to know that in each list published there has always been a fair proportion of Bart.'s men.

Our congratulations are due to Mr. Geoffrey Bourne on his being appointed Physician of the East London Hospital for Children.

\* \* \*

The following have been nominated to Junior House Appointments commencing May 1st:

#### House-Physicians—

F. E. S. Willis.	Dr. Tooth.
G. Slot.	Sir Archibald Garrod.
F. P. Schofield.	Dr. Calvert.
A. J. Copeland.	Dr. Fletcher.
E. P. Hicks.	Dr. Drysdale.

#### House-Surgeons—

E. A. Fiddian.	Sir D'Arcy Power.
E. I. Lloyd.	Mr. Waring.
B. G. Melle.	Mr. McAdam Eccles.
R. E. R. Sanderson.	Mr. Rawling.
S. L. Higgs.	Mr. Gask.

H. G. E. Williams	Resi.
F. P. Young	Extern Midwifery Assistant.
R. S. Scott	Ophthalmic Department.
H. M. Wharry	Throat Department.
H. W. Toms	Venerical Department.
W. S. Lunbridge	Orthopaedic Department.

## THE SIMULATION OF DEATH.

By B. H. SPILSBURY, M.B., B.Ch.

**D**EATH the inevitable claims from the student of medicine a consideration which it does not always receive: to the dying, medical art can render the last service of making easier the passage, and medical science enables its exponents to recognise with certainty the presence of death.

No great experience of the death chamber is required to discover how diverse are the modes of dying; to the many who are dying death comes abruptly, the sudden muscular relaxation and the cessation of respiration announcing the change even to the inexperienced observer.

There are some, however, to whom the approach of death is more gradual; these pass from sleep to death and the watcher by the bedside may fail for some time to recognise the presence of death.

This mode of dying is expounded ably by a modern writer on "Euthanasia."\* "Some pass away in sleep. In natural healthy sleep respiration becomes slower, the pulse weaker and less frequent, the circulation generally feebler. The difference in these respects between the waking and the sleeping states is to the dying person often the difference between life and death. The circulation, already reduced to the lowest ebb compatible with life, is yet further reduced by sleep, and with this reduction the patient dies."

Shock or severe injury to one of the vital organs may produce complete and final arrest of the vital functions: there is a sudden passage from vigorous life to death. But in cases of shock death may be apparent only, the vital functions not having been arrested completely, or if completely, for a brief period only, and restoration occurs naturally or requires prompt treatment if the arrest is not to be final.

These are but three of the many forms of death, but they will serve as illustrations of its varying characters.

Electrocution provides many examples of apparent death due to shock, and it is to be feared many cases also in which apparent death has become real owing to lack of prompt treatment.

In a discussion on "Electrical Accidents" at the Royal Society of Medicine in 1912 it was pointed out that death is often apparent, and that immediate performance of artificial respiration, continued in some cases for a considerable time, had restored to life many who appeared to be dead, and that artificial respiration should be continued for two hours at least before abandoning hope of resuscitation. A case was cited in which a medical man had pronounced an electrocuted workman to be dead; his

\* *Euthanasia*, by William Munk, 1887.

fellow-workmen continued to perform artificial respiration and succeeded in restoring consciousness.

It is evident, therefore, that in cases of electrocution the respiratory function is arrested, probably by the action of the electric current upon the respiratory centres, and that paralysis of the centres may be so prolonged as to require artificial maintenance of the respiratory function for a considerable time if life is to be preserved.

But what is the condition of the circulatory system in such a case? Paralytic vaso-dilatation and a rapid fall of blood-pressure due to the action of the current upon the nervous system is a probable effect, and, like the effect upon the respiratory function, may persist for a considerable time; but it is not credible that the cardiac function, if it be arrested by the passage of the current, continues in a state of arrest for more than a very short period, to be measured probably by seconds.

Cohnheim showed how cessation of the circulation through a part of the heart of a dog produced by ligation of a large branch of one of the coronary arteries, brought about complete arrest of the heart's action within a period of two minutes, the cardiac muscle having been rendered functionless by the short period of ischaemia.

It is also well known how rapidly the medullary centres respond to a sudden change in the amount or quality of the blood passing to them, and it is certain that no artificial respiration would succeed in restoring cases of electrocution unless the circulation through the respiratory centres was maintained.

In cases of electrocution, therefore, a careful examination of the heart itself will enable a medical man to distinguish apparent from real death; but the dividing line is bridged so readily that artificial respiration must not be interrupted even to allow of examination of the heart.

The same reasoning applies to other conditions of simulated death, and it can be stated as an axiom that careful examination of the heart, continued for a length of time sufficient to allow for a possible brief cessation of the heart's action, will enable a medical man to distinguish unerringly between death and the simulation of death.

The absence of the pulse in a distal artery such as the radial is no safe criterion of the cessation of the circulation. In severe haemorrhage the absence of the pulse is not inconsistent with recovery, and the pulse may be imperceptible in conditions of marked vaso dilatation accompanied by a considerable fall of blood-pressure. It is from a reliance upon this observation that error is most likely to arise.

There is no doubt that amongst the general public, especially the better educated, are many who distrust the capability of the medical man to distinguish death from conditions which simulate it, and who, from a dread of live-burial, leave instructions that an artery shall be opened, or the heart removed, or some other method employed to

ensure that death has occurred, forgetting that a medical man who performed such an operation, if he should prove to have been mistaken, would be in a very awkward predicament.

It would go far towards removing doubt and abolishing the dread of live-burial if it were made compulsory for a medical man, before giving a certificate of death, to view the body and to satisfy himself as to the certainty of death by a careful examination.

The following cases show the need of careful examination when a medical man is summoned to a person who is supposed to be dead.

The first case is that of an old woman, *æt.* 73, a domestic servant, who was found unconscious in bed, apparently dead. She had been feeble for some time and frequently retired to bed after a morning's work. On the day before she was found she complained of feeling unwell and returned to bed after breakfast, remaining in bed for the remainder of the day.

The medical man who was summoned found marked rigidity of the whole body; the exposed parts were cold. The first impression was that she had been dead for some hours, but he thought that he could detect a faint radial pulse, and on auscultation of the heart he found that it was beating slowly and feebly. Respiration was also present, but was slow and very shallow. An injection of camphor beneath the skin was seen to undergo absorption. The doctor remained with the patient until death, which occurred about an hour later.

The post-mortem examination showed an enlargement of the heart with dilatation of all its cavities and with hypertrophy of the left heart-wall. The myocardium was very diseased, fatty degeneration, brown atrophy, fibrosis, and myomalacia all being present. The mitral valve was incompetent and the cusps thickened, contracted, and partly calcified. There was advanced arteriosclerosis.

The kidneys were reduced in size, their combined weight being  $7\frac{1}{2}$  oz. There was advanced chronic interstitial nephritis and arteriosclerosis. Each kidney also contained several large recent infarcts, one alone occupying about a quarter of the kidney. There was a recent infarct in the spleen. The bladder was empty. There was ulceration in the *cæcum* and altered blood was present in the large intestine. There was a small psammoma attached to the dura mater covering the left petrous bone.

Death had resulted from the combined effects of the cardiac and renal conditions, terminal infarction of kidneys already very diseased determining the onset of rapidly fatal uræmia with marked muscular rigidity as one of the symptoms.

The second case is that of a middle-aged soldier who slipped in the street at night and fell, striking his head slightly upon the ground. He did not complain of any ill-effects and retired to bed. In the middle of the night he

was found unconscious and appeared to be dead. No doctor could be obtained for about two hours. When one arrived he found that the right arm and leg were rigid, and concluding this condition to be *rigor mortis*, he pronounced death to have occurred several hours previously.

At the autopsy there was a slight abrasion at the outer extremity of the left eyebrow where the head had struck the ground in falling. The skull was everywhere extremely thin, and there was a fissured fracture on the left side extending from the base in the middle fossa upwards to the vertex, and crossing the middle meningeal artery about half an inch external to the foramen spinosum.

The artery was torn where the fracture crossed it and a large extradural hæmorrhage along the line of the fracture had caused death from cerebral compression.

With a skull so abnormally thin, the fall in the street accounted satisfactorily for the fracture.

It is an open question whether the rigidity of the right limbs, from which the doctor concluded that death had taken place, was not an ante-mortem phenomenon due to cerebral irritation caused by the hæmorrhage rather than a very unusual manifestation of *rigor mortis*.

Faulty methods of teaching are perhaps responsible in part for this tendency on the part of a medical man to look for signs of death rather than for manifestations of life when he is called to a case of apparent death.

## DIAGNOSIS OF GASTRIC AND DUODENAL ULCER.

(A Paper read before the Fellowship of Medicine.)

By HERBERT CARSON, F.R.C.S.

**I**F recent years, many far-reaching advances have been made in the diagnosis of abdominal conditions, and in none has a greater advance been made than in the diagnosis of stomach disorders. I have chosen this well-worn subject for my address, because I have noted a tendency on the part of late graduates to believe that, with modern methods, the diagnosis of stomach conditions can be made with ease and certainty, and I feel it my duty to point out that there is no royal road to success, and that the diagnosis of these ulcerations is still a matter of great difficulty. Of course we have advanced a long way since the days when gastric ulcer was diagnosed after hearing the patient's statement and looking at the tongue, but in spite of the X rays and elaborate chemical examinations of the stomach contents and of the feces, we must depend on the detailed history of the case and the subjective symptoms for much of our evidence.

Here is an obvious source of error, for so many intra-

abdominal diseases give rise to similar symptoms, and unless the patient is an acute observer—and very few are—the history and the account of symptoms may be more confusing than helpful. Particularly is this the case in such disorders as gastric and duodenal ulcers, hyperchlorhydria, appendicitis, cholecystitis, and even in some cases of viscerotoposis.

Then, too, there is but little to be gained by manual examination of the abdomen. Another source of error is that we do not know what the cause of gastric or duodenal ulcer is. Is it primary or is it due to a septic embolus from some focus elsewhere? Is appendicitis or intestinal auto-toxæmia an antecedent? Is hyperchlorhydria essential or not for the occurrence of gastric or duodenal ulcer? Is dental caries a primary cause, a contributory cause, or a result?

There is no absolute answer to any of these questions in the present state of our knowledge, and it is obvious that the diagnosis of a disease is particularly difficult when one does not know where to look for the causative factor.

I think if we all followed our cases up and conscientiously compared the operative findings with the pre-operative diagnosis we should be surprised to find how often we had been misled.

It is a system we all ought to adopt, and is really no more than auditing our accounts.

Here are my own results for twelve months' work at the Prince of Wales's General Hospital. Excluding certain cases where a mistake was impossible, I made a provisional diagnosis of gastric or duodenal ulcer in 43 cases which I operated upon. Of these 43 cases 16 proved to be gastric ulcer (3 of them cancer cases), 13 were duodenal ulcer, 11 were chronic appendicitis, and 3 were cholecystitis. Thus in this series 14 or one-third of the suspected cases proved to have no gastric or duodenal lesion.

### METHODS OF DIAGNOSIS.

What means have we at our disposal for investigating these cases? We have (1) the history of the case with the signs and symptoms which have been observed by the patient or the medical attendant before we see the case; (2) the examination of the patient; (3) chemical examination of the stomach contents and of the excreta; and (4) X-ray examination of the alimentary tract.

Let us take these one by one and see what help they give us in making our differential diagnosis.

### HISTORY OF THE CASE.

*Duration.*—The first question, "How long have you been suffering with this trouble?" is very variously answered. Some patients say they have had more or less indigestion all their lives, others date back but a few months. Summing up my experience I find that on the whole cancer cases give the longest history, which makes one think that cancer

follows a pre-existing ulcer. Next come *duodenal ulcers* with a history averaging ten years; next *cholecystitis* averaging about five years; then *chronic appendicitis*; and lastly, with an average of two and a-half years, *gastric ulcer*.

I do not mean to say, of course, that one does not come across cases with a very much longer and very much shorter history; but this is the average in my experience.

*Intermission.*—When you ask whether they are troubled continuously or have occasional free intervals, one gets answers of great value in differential diagnosis. It used to be thought that *intermissions* were a sign peculiar to duodenal ulcer, and in fact intervals of complete freedom from all discomfort do occur in, at any rate, a small majority of cases of duodenal ulcer. It is very common to hear, "Oh yes, I have attacks lasting six weeks or so and then I get quite well perhaps for six months or more." One looks on it as typical of duodenal ulcer, but what is the answer when one audits one's accounts? One finds that *intermissions* are the rule in cholecystitis, they occur in 50 per cent. of chronic appendicitis, and occasionally, but rarely, in gastric ulcer. Only cancer cases have no intermissions.

*Pain.*—When asked what is their chief symptom, all these patients say "pain," and one investigates the character, the site, and the relation of pain to food, and, if it occurs, to vomiting. Nearly all patients say it is a dull ache rather than an acute pain, and I am inclined to think varies with the chronicity of the ulcer.

So many of the cases have a long history, and there is no doubt of the fact, explain it how we may, that the longer the history the duller the pain. The greatest pain, I think, putting aside gall-stone colic, among the dyspeptics is experienced by those suffering from *hyperchlorhydria*, the curious disorder associated with over-work, mental worry, irregular meals, cramping occupations, such as tailoring, and absence of holidays. It is really a misnomer to call this disorder hyperchlorhydria, for excess of hydrochloric acid is not by any means invariable, but it is an accepted term and we may leave it at that.

*Site.*—The site of the pain is not of much value. Nearly all cases, whether they are gastric or duodenal ulcer, chronic appendix or cancer, complain of epigastric pain. In some cases of gastric ulcer, especially of saddle ulcer with adhesions to the liver or pancreas, the pain radiates round by way of the left hypochondrium to the back; in appendicitis the pain often radiates to the right iliac fossa, and yet affects the left hypochondrium more often than any other dyspeptic type; in cholecystitis it may be situated in the right hypochondrium, but more usually radiates from the epigastrium by way of the right hypochondrium to the back or right shoulder.

I do not think one can with certainty diagnose the exact position of the ulcer in the stomach by the site or varieties of the pain.

(To be continued.)

## THE EARLY TREATMENT OF RHEUMATIC HEART DISEASE.

(A paper read before the Abernethian Society.)

By GEOFFREY BOURNE, M.B.(Lond.), M.R.C.P.

**M**EDICINE in a hospital like St. Bartholomew's seems bound, on casual inspection, to be placed at some disadvantage when compared with surgery. Surgical diagnosis is often straightforward; a broken arm or an acute abdomen are both usually easily discovered. Surgical treatment is, as a rule, so eminently satisfactory—the broken arm may be easily set, and the acute abdomen is opened and explored. After four weeks the former patient's arm is as strong as before, and in four days the abdominal case may be lying in bed with normal temperature and pulse and the duodenal ulcer sewn up. Surgical chronic cases are few; either they are hidden in a septic ward or they are transferred to the physician.

Medical diagnosis, on the other hand, is usually far less obvious, and frequently is not made at all. Medical cases, partly owing to chronicity, respond less well to treatment. In a medical ward here cases are often admitted largely for teaching purposes. Text-book signs and symptoms often appear late in a disease; this is so in *tuberculosis*, *Banti's disease*, *phthisis*—to mention three examples.

These facts are especially true in dealing with diseases of the heart.

Mitral and aortic stenosis or regurgitation, paroxysmal tachycardia, auricular flutter, auricular fibrillation, pulsus alternans—these are all expressions of a chronic condition which has had its commencement months or more frequently years before.

Treatment of the above conditions when they have manifested themselves is very necessary, even when we admit that it would have been better to have caught and treated their early causes.

Nobody can deny the benefit these cases receive by rest in bed and regulated diet. Digitalis, moreover, in auricular fibrillation is one of the best examples of successful drug treatment.

These, however, though temporarily successful, are merely efforts to caulk an unseaworthy ship. Though for a time the water may be kept at bay, yet when a storm arises they cannot prevent the final wreck. How then are we to treat these cases?

The logical procedure is to catch them early before the acute inflammatory process has died down to one of fibrous chronicity. Acute disease is usually more amenable to treatment.

The earliest signs of rheumatic heart disease are found as tonsillitis, slight joint pains, growing pains, chorea. These are complained of in childhood, usually between the ages of from 5 to 15.

Rheumatic fever proper, with its abrupt onset, high pyrexia, excessive perspiration, characteristic joint swellings, is rare in children.

Though it is often associated with cardiac lesions and frequently increases them, it rarely is their first cause. The more attention, therefore, must be paid to the minor manifestations above mentioned, for these, though apparently of slight importance, result in intractable, even incurable, heart disease. Lastly, well-established heart lesions are found without any history of rheumatic symptoms at all.

Before discussing the treatment of rheumatic heart disease, it is right to say a few words regarding its known pathology.

There are three theories as to its cause:

(1) It is caused by no particular organism, but may be caused by almost any pyogenic organism. This theory can hardly stand, for suppuration in rheumatic fever is unknown, abscesses are never formed in joints or elsewhere during its course, and the specific action of sodium salicylate is not accounted for.

(2) It is caused by an anaërobic bacillus. This was the claim of a French school of observers, but other people have been unable to repeat their findings. Diphtheroids, moreover, as is seen in the case of general paralysis of the insane and lymphadenoma, which diseases have been attributed to them, are noted scapegoats.

(3) It is caused by the diplococcus of Poynton and Payne. These observers have produced in animals various lesions similar to those of rheumatic fever by the injection of an organism which they name the *Diplococcus rheumaticus*. They claim to have isolated this from the endocardium, pericardium, pleura, peritoneum, pia mater, synovial membranes and nodules, of cases of rheumatic fever and of chorea. They describe it as being a small micrococcus,  $5 \mu$  in diameter, found usually in pairs or in short chains. They pay no attention to its sugar reactions.

Rosenow has obtained a similar organism from the blood, tonsils, and periarticular tissues of cases of rheumatic fever, and by injection of it into animals has caused cardiac and arthritic lesions similar to those of rheumatic fever. Thus the pathological evidence is strongly in favour of there being a streptococcal element present in cases of rheumatic fever, which are accompanied by endo-, peri- or myocarditis.

#### CLINICAL EVIDENCE.

Typical uncomplicated rheumatic fever runs a definite course of about six weeks. The onset is fairly abrupt, the fever is high, and the duration is fairly constant. Before the introduction of treatment with sodium salicylate these characteristics were clear. At the present time, with the administration of adequate doses, they are masked by the drug's action. The temperature within forty-eight hours falls to the normal level or below, and remains there. Joint swellings and pains subside. Omission of the sali-

cyate, however, brings a relapse, the pyrexia and symptoms reappearing. Since the excretion of sodium salicylate by the kidneys is rapid, dosage should be frequent as well as adequate. Twenty grains, prescribed with 40 gr. of sodium bicarbonate, is in most cases effective if given every two hours.

In those cases of rheumatic fever where cardiac complications are present, whether these be suspected during life from the presence of dilation of the heart, tachycardia or developing murmurs, or whether they be subsequently found post-mortem, the temperature falls within forty-eight hours, but not to the normal level. Flickerings of the temperature curve appear even though sodium salicylate in adequate doses be given. This fact would suggest that in rheumatic fever, as in scarlet fever, more than one infective process is at work. Pathological, experimental and clinical evidence are all suggestive of this.

The labelling of an organism as the *Streptococcus rheumaticus* by Poynton and Payne, and the assertion by them that this was the specific cause of all rheumatic lesions, naturally has invited criticism. Failure to establish the entity of this organism has to some extent discredited the streptococcal factor in acute rheumatism, for other observers have failed to find this specific germ.

Now there are several suggestive points with regard to this *Streptococcus rheumaticus* of Poynton and Payne. Poynton and Payne's organism has the sugar reactions of *Streptococcus salivarius*. These authorities, however, deny the value of sugar tests as a means of classifying streptococci.

Holder, taking a *Streptococcus salivarius* from normal saliva and a *Streptococcus faecalis* from normal faeces, produced in rabbits cardiac lesions apparently identical with those produced also in rabbits by Poynton and Payne with their rheumococcus.

Gordon has obtained in pure culture from pericardium, endocardium and myocardium of cases of rheumatic carditis an organism culturally and morphologically identical with *Streptococcus salivarius*.

I have brought here this evening a section from the heart of a case of acute rheumatism showing that characteristic lesion of the disease, an Aschoff's node. From that muscle in pure culture Dr. Gordon grew a *Streptococcus salivarius*. There is thus considerable evidence to prove that in cases of acute rheumatism a secondary infection, presumably streptococcal, is at work, and that this infection is the cause of the cardiac complications.

It has been necessary to enter into this subject at some length, for only by investigating first causes shall we arrive at good final results. Moreover, it is necessary to marshal the evidence well before advancing upon the theory of vaccine treatment for cardiac rheumatism.

I have here a list of all male cases of acute rheumatism admitted to this hospital under the care of Sir Wilmot

Herringham and Dr. Drysdale for one year. In this list you will see the importance of early and if possible of preventive treatment for these cases.

We must remember also the signal success of prophylactic vaccine treatment for typhoid fever and must aim at success in other conditions.

No.	Age.	Complaint.	Cardiac lesion.
1	5	Swelling of both knees (pain), pain in neck	Dilatation of heart.
2	6½	Pains in joints	Heart natural.
3	9	Swelling and pain in left foot and ankle	Soft systolic murmur at apex conducted to axilla; this had disappeared on discharge.
4	9	Joint pains	Systolic apical murmur slightly conducted toward axilla.
5	9	Pains in joints	Systolic mitral murmur.
6	12	Pain in back and legs	Double mitral murmur.
7	13	Pains in ankle	Systolic murmur at apex.
8	14	Pains in joints for years. Chorea 6 years ago	Double mitral murmur.
9	14	Sore throat. Swelling of legs	Pericardial friction; went out with slight systolic murmur.
10	14	Chorea "lasting 2 years." Temperature irregular for 13 weeks + sodium salicylate. Re-admitted twice, and died	Double mitral murmur.
11	16	Pains in joints 2½ years	Systolic mitral murmur, friction.
12	19	Joint pains	Double mitral murmur, friction and aortic regurgitation.

(a) In the two youngest cases there was no evidence of heart infection.

(b) The next three had mitral regurgitation only; the signs in one case disappeared.

(c) All the last five had either mitral stenosis or pericarditis, both of these being serious conditions.

(1) We learn from this that it is in young children who have had joint pains or chorea, and who have as yet no cardiac trouble, that prophylactic treatment should be tried.

#### TREATMENT.

Any attacks of sore throat, pains in joints, or chorea, should be treated by prolonged rest in bed; sodium salicylate in adequate doses must be given.

The condition of the heart, as shown by dilatation, pulse-rate and reaction, the development of murmurs, must be carefully watched and treated by prolonged rest in bed after signs have disappeared.

(2) In cases who have besides the joint symptoms definite evidence of endocarditis, sodium salicylate must be pushed, not with the idea of preventing endocarditis so much as of preventing the manifestation of the primary rheumatic fever with which the added heart infection is so frequently associated.

It must be confessed that although rest in bed for six to

twelve months with adequate salicylate administration has in some cases resulted in an apparent cure, yet in most cases the temporary improvement gives way to a relapse sooner or later.

Doctors' children will in this way recover, because the seriousness of the condition is realised.

Hospital patients can rarely be kept in sufficiently long, for obvious reasons.

In private practice it is hard to persuade even educated parents that their child, who looks so well, must not get up. Sometimes without the rest in bed the child recovers, as it were, to spite one.

It must be confessed therefore that the present treatment of rheumatic heart disease is unsatisfactory.

If, gentlemen, you have come here to-night in the belief that I had private information from our leading newspapers concerning specific cure for diseases of the heart, you will be disappointed. It is with the object of drawing your attention to the subject rather than of providing you with a solution of it that I have chosen this for my subject, for only by being completely dissatisfied can we hope to evolve any more satisfactory line of treatment.

Let us recapitulate the matter.

(1) The present treatment is unsatisfactory.

(2) The evidence, both clinical and pathological, of a secondary streptococcal infection is strong.

It would seem therefore that there is hope in specific treatment.

Let us first try to isolate the correct organism from tonsils, throat, blood, or from post-mortem material.

We shall expect to find a streptococcus.

Let us then try the effect of vaccines on patients.

I ask you therefore, gentlemen, to view your cases of rheumatic carditis from this standpoint, and to attempt to find a solution, as regards treatment, along these lines.

Vaccines, it would seem, should be made and given for prophylaxis in those cases which are especially liable to cardiac complications, namely, children with joint pains, recurrent tonsillitis or chorea.

Secondly they should be given for treatment, sensitised vaccines in acute, unsensitised in chronic cases.

A search should be made in the throat, blood, joints or elsewhere, in order to attempt to isolate the causative organism; for an autogenous vaccine will always yield the best results.

I should like to emphasise the statement that these remarks must not be taken as being final; they are merely made with the object of emphasising the present unsatisfactory conditions of treatment of rheumatic heart disease, and with the idea of indicating what would appear to be the direction along which progress should be made into the unknown territories of research. Our clinical and pathological signposts all point to the same quarter.

We must expect failure at first, but the direction seems to

be mapped out for us by unmistakable landmarks. It is only by long search that we may expect to find the path.

Finally we must be careful not to reject those golden rules of treatment already laid down for us by many years of ripe experience.

New theories are always tempting, but they should not cause us to forsake methods already tried and trusty without mature consideration and very good reason.

#### FORTY CASES OF SPINAL ANÆSTHESIA IN GYNÆCOLOGICAL SURGERY.

By GLYN MORGAN, M.R.C.S., L.R.C.P.

**D**URING the past few months spinal anæsthesia has been used on some forty occasions in this Hospital for abdominal operations in gynæcological and obstetrical cases. Whilst recognising that an analysis of such a small number cannot give a true estimate of the value of the method, it is thought that the results obtained and the conclusions drawn therefrom are worthy of record.

*Technique.*—The following is a rough outline of the technique employed. The patients were prepared as for general anæsthesia. One hour and a-half before operation a subcutaneous injection was given, consisting of morphinæ tart. gr.  $\frac{1}{2}$  and scopolaminæ hydrobrom. gr.  $\frac{1}{30}$ . Following this the patient's bed was screened, the eyes were bandaged and the ears were lightly plugged with cotton-wool. A second injection was given three-quarters of an hour before operation of morphinæ tart. gr.  $\frac{1}{2}$ , atropinæ sulph. gr.  $\frac{1}{30}$ , and scopolaminæ hydrobrom. gr.  $\frac{1}{30}$ . By these injections the fears and anxieties of the patient were allayed and a condition of drowsiness and indifference produced. Immediately before operation the patient was placed in the left lateral position, the skin was anaesthetised with novocaine, and 1 c.c. of a 10 per cent. light solution of stovaine was given intrathecally in the interval between the second and third or third and fourth lumbar vertebrae. About 1 c.c. of cerebro-spinal fluid was allowed to escape through the needle before this injection was given.

Almost at once tingling and formication commenced in one or both legs, followed by a feeling of numbness, and within three to five minutes sensation below the level of the costal margin was completely lost or considerably blunted.

The operations performed were:

Wertheim's hysterectomy . . . . .	4 cases.
Panhysterectomy . . . . .	2 "
Sub-total hysterectomy . . . . .	18 "
Operations on tubes and ovaries . . . . .	12 "
Cæsarian section . . . . .	4 "

The great majority of these operations were carried out

with the patient in the Trendelenberg position. The light solution of stovaine, which is practically isotonic with, and has nearly the same specific gravity as normal cerebro-spinal fluid, was used, and no respiratory difficulties were encountered, though danger from this cause is said to be very real when the heavy solution is used.

In three cases not included in the above list, attempts at spinal injection failed altogether. In four instances, after apparently successful injection, analgesia was insufficient and a general anæsthetic was required throughout the operation. In 14 cases a little general anæsthetic had to be given in addition, either at the beginning because of nervous excitement on the part of the patient or else at the end of long operations. Complete and undisturbed anæsthesia was produced in the remaining 22 cases and lasted on the average for about fifty minutes.

*Advantages during operation.*—The advantages of spinal anæsthesia that were noted during the operation itself were:

(1) The unpleasant subjective symptoms liable to occur during the induction stage of general anæsthesia were avoided.

(2) Perfect relaxation of the abdominal muscles was obtained, and this, together with the production of shallow respiration and a contracted condition of the intestine, greatly facilitated all operative procedures.

(3) Respiratory embarrassment did not occur.

(4) The spinal anæsthetic minimised any tendency to shock, which might have been expected as the result of the intra-abdominal manipulations.

(5) Hæmorrhage was lessened, and secondary hæmorrhage did not appear to be favoured.

The only disadvantages found were vomiting, which occurred in five cases during operation, and occasionally slight restlessness.

*After-effects.*—After operation, the patients were usually drowsy, and beyond perhaps the giving of drink, generally required no attention for several hours. The character of post-operative symptoms varied greatly, both as regards kind, and time of onset. In the majority of cases amnesia was complete, and in several cases it was found difficult to convince the patient some hours afterwards that any operation had been done. In a few instances the patient, though feeling no pain, was conscious of the handling of the tissues, the clicking of instruments, and so forth. It is interesting to note here that three patients, who had on a previous occasion received a general anæsthetic, were unanimously in favour of spinal anæsthesia.

Objectionable after-symptoms were completely absent in sixteen cases. It is worthy of remark that most of the after-symptoms recorded occurred in those patients who had been carried to the operating table after spinal injection, whilst those who received the injection on the table and were not handled afterwards were comparatively free.

Patients of the neurotic type seemed to suffer to a greater extent from after-effects than those of a more phlegmatic temperament.

Post-operative vomiting was lessened, or altogether absent, nausea and thirst were diminished, and general malaise was reduced. The most frequent complaint was headache, usually occipital, and of transient nature. In four cases, however, this was severe, and persisted for forty-eight hours or longer. Complaints of indefinite tinglings, numbness or pain in the legs and back for the first few days were noted in eight cases. One patient experienced severe neuralgic pains in both arms for several days. Another patient, who at the time of injection complained of a sharp stabbing pain down one leg, later developed temporary paralysis of this leg, but presumably this was the result of injury to the cauda equina by the needle. Increased tendency to the formation of bed-sores was shown in two instances. A more serious after-symptom that occurred was paresis of the bladder or rectum. Catheterisation for longer than twenty-four hours was required in seven cases, and, in four of these, needed to be continued for longer than a week. This appeared to constitute a serious disadvantage of the method. Incontinence of feces occurred in two instances. In twelve cases vomiting took place, mostly commencing after the first twelve to eighteen hours. Except in one instance, where vomiting persisted at intervals for eight days, this symptom was slight, and easily yielded to simple remedies. Post-operative distension was infrequent. In all cases post-operative shock was markedly diminished.

It is not proposed to consider in detail the indications for and against spinal anæsthesia. Extremely nervous people are not suitable subjects, neither are alcoholics. The method gives bad results when used in advanced septic states. Stovaine causes vaso-motor paralysis in the area of anæsthesia, and hence is especially indicated in all conditions associated with a high blood-pressure such as eclampsia, nephritis, arterio-sclerosis, etc. Of the four Cæsarian sections in the series, two were performed for eclampsia, one for threatened eclampsia, and one for advanced cardiac disease complicating pregnancy. Uterine contraction and retraction in these cases was not materially influenced. Spinal anæsthesia should not be used in cases where dangerous hypotension is present from shock, hæmorrhage, or other cause. Stovaine is slightly irritating to the kidneys though less so than ether or chloroform.

In forming an opinion as to the value of spinal anæsthesia, one is bound to compare it, for safety and efficiency, with general anæsthesia. The production of anæsthesia to a higher level than that of the costal margin is unsafe, owing to the dangerous fall in blood-pressure occasioned by dorsal or cervical injections. Statistics of large numbers of cases show that, even with the modern improved technique of administration, the mortality of spinal is slightly greater than that of general anæsthesia.

Consideration of the small number of cases under review would lead one to the following conclusions:

(1) Spinal anæsthesia, employed as described above, proves a valuable alternative to general anæsthesia.

(2) A perfect technique is required in order that the best results may be obtained, and safety to the patient secured.

(3) In a certain small proportion of cases, in spite of all care as to detail, failures occur, and general anæsthesia needs to be substituted.

(4) The method has a particular field in which it is the anæsthetic of choice, and the employment of it is strongly indicated.

(5) From the operator's point of view it is more uniformly satisfactory than general anæsthesia.

(6) The administration is not unpleasant to the patient, and in most cases the latter is much more comfortable after operation than when general anæsthesia has been employed.

(7) The subsequent nursing in successful cases is much simplified, and only when complications arise is any anxiety given.

(8) If the occurrence of the more annoying after-symptoms produced in some cases could be avoided, the method would provide an almost ideal form of anæsthesia in all operations below the costal margin.

I am indebted to Dr. Williamson, Dr. Barris, and Dr. Donaldson for permission to publish these notes.

#### SOME SPECULATIONS UPON THE POSSIBILITIES OF THE VITAMINE "FAT-SOLUBLE A" IN PREVENTION AND CURE.

By H. M. WHARRY, M.R.C.S., L.R.C.P.

##### INTRODUCTORY.

**T**HE most powerful influences in normal diet, as at present known, are the "accessory factors" or vitamins, among which the fat-soluble A has a peculiar interest.

This vitamin is necessary for growth, but not so much for increase in size as for maintenance of quality. Its absence from the food of children produces rickets. Its presence in the body is to a certain extent a quantitative necessity, in that more is needed to maintain the qualitative growth of a rapidly growing animal than of one more slowly growing. So that it is the bulky child which is more likely to develop rickets than one smaller.

Unlike the other vitamins, fat-soluble A is stored in the body to a considerable extent. The fatty tissues absorb it

when it is supplied in the diet, but are liable to give it up again when it is needed by the body, and in rickets the fatty tissues have usually parted with their store.

In the lower world the vitamine is found more readily in animal fats than in vegetable oils. But this is owing to faulty methods of extraction of the oils from vegetables. The vitamine in animal fat has been obtained by the animal from eating vegetables whose oil contains the vitamine.

So great is the influence of this vitamine in growth that it may be surmised that it has other effects both in childhood and in adult life of as great importance.

The absence of the vitamine water-soluble B from the diet produces a fatal disease known as "beri-beri." The absence of the vitamine with antiscorbutic properties produces scurvy. Both these diseases end in death if the vitamine is withheld, but are readily curable on administration of the vitamine.

It may justifiably be expected that the absence of the fat-soluble vitamine from the food may produce equally fatal results, which we come across every day without realising their significance or cause.

#### RECENT INVESTIGATIONS.

It has been shown recently in a series of brilliant experiments by J. C. Drummond and others that if rats are starved of this vitamine the animals become peculiarly liable to bacterial disease of a severe type, which inevitably terminates in death if the vitamine is continuously withheld.

The organ most liable to infection in the lower animals is the eye, and a conjunctivitis develops which ultimately destroys the cornea if not treated by internal administration of the vitamine. This treatment cures the disease in a few days in as complete a manner as the water-soluble B. vitamine cures fowls suffering from the polyneuritis due to deficiency of the anti-beri-beri factor.

If the rats remain untreated, however, death from bacterial infection of the lungs follows inevitably at an early date.

The blood of rats starved of the vitamine shows also a great deficiency of agglutinating power when compared with that of the normal animal.

#### DEFICIENCY OF THE VITAMINE IN THE DIET IN NORMAL TIMES.

The prevalence of rickets among children has recently been shown to be much wider than is usually known. In fact 90 per cent. can be taken as an indication of the usual shortage of the vitamine in the diet of human beings, adults usually eating less fats than children. And that deficiency of the vitamine has other and more serious effects in children than rickets may be shown by the fact that of children dying before four years of age, 90 per cent. showed post-mortem signs of rickets. Now the majority of deaths in children are from infectious disease.

Adults do not show signs of rickets if the vitamine

shortage occurs after puberty, but show signs of loss of resistance to infection. It is the experience of every medical man to come across many cases where people succumb to infection—general or local—with surprising ease, where resistance is extremely poor and recovery extremely slow. These cases occur more frequently in towns than in the country, and the patients are as often bulky and flabby as thin or weak, and evidence of the deficiency of their diet in fats is not far to seek.

#### DEFICIENCY OF THE VITAMINE DURING THE LATER STAGES OF THE WAR.

The extreme poverty of the diet of most people in England, Scotland, Wales, Holland, France, Belgium, Germany and Austria in fats and fatty foods during the later years of the war has been too notorious to be laboured. And the terrible effect of this shortage is only too plain, and is in close accordance with the results of the set experiments performed on rats.

Starting in the southern part of the Western Front, the influenza, complicated by septic pneumonia, spread rapidly to Spain, where it found thousands of victims among a population whose fatty diet consists almost entirely of vegetable oils, which, as above mentioned, are usually prepared by methods which do not allow of the inclusion of the vitamine. The whole of Europe was soon ridden by the disease, the greatest number of victims being in Germany, where the cry for fats was louder than in any other part.

Spreading throughout the world, as it attained greater virulence, the disease found its greatest number of victims among the black population, which, consuming carbohydrates to the exclusion of animal fats or even oils, furnished victims in hundreds of thousands.

Even in normal times the liability of the carbohydrate-eating coloured races to succumb readily to infectious disease is a matter of notoriety.

The deficiency of fatty foods preceded by a long time the outbreak of the epidemic, which is fully in accordance with the experience afforded by the experiments on rats. These, after being completely starved of the vitamine, yet survive on their own store for over one hundred days, and then suddenly succumb.

If the shortage of fats is the predisposing cause of the high mortality of this epidemic of influenza, as there is reason to suppose, it is possible to predict with confidence that, as the world consumption of fats regains its normal quantity, the danger of a repetition of this terrible epidemic on so destructive a scale will recede and eventually disappear entirely. Severe influenza epidemics have occurred before, and it is not suggested that the outbreak is due to the causes stated. But it is suggested that the high mortality and the sudden succumbing of thousands of people to rapidly fatal broncho-pneumonia may find an explanation in these facts.

The popular belief that fat food would mitigate the influenza thus finds some scientific basis. Comparable with this explanation, and in close accordance with it, lies the fact that children suffering from rickets, due to absence of the vitamine, show also a high percentage of deaths from broncho-pneumonia, which is well recognised as one of the common complications of, or even as part of, the rickety diathesis.

#### DEFICIENCY OF THE VITAMINE AS A PREDISPOSING FACTOR IN INFECTIONS OTHER THAN THE EPIDEMIC.

There is no reason to suppose that because long infections have been prominent both in rats and human beings as a result of the vitamine deficiency, that localised infective processes do not follow from the same cause.

The conjunctivitis of rats is a case in point. Moreover, the vitamine has a constitutional effect, and if it is deficient, every tissue of the body must share in the general debility and poverty of resistance to disease which takes place, and which is probably seated in the blood. Of interest in this connection is that patients bedridden from tuberculosis, and under general treatment with fatty food and, notably, cod-liver oil, often recover, and do not usually develop any untoward secondary infections.

On the other hand, patients bedridden from other causes, and not so treated with fatty foods or cod-liver oil, often develop urinary troubles of an infectious and very serious nature—i. e. *B. coli* infection of the urinary tract sometimes leading to death from nephro-lithiasis and pyonephrosis. This has been noticed principally in soldiers, and may be partly due to the general deficiency of the normal diet in fats as a result of the war.

#### VITAMINE THERAPY AS A METHOD OF TREATMENT.

The success of the treatment of beri-beri and scurvy by the administration of foods containing a high value of the vitamins involved has been one of the greatest medical triumphs of recent times, and there seems to be every reason to hope that the same may be found in the case of the fat-soluble vitamine in infectious disease. Its value is already shown in rickets and tuberculosis in the empirical administration of cod-liver oil; cure in rickets is complete. Tuberculosis, however, cannot be taken as a fair test, since it is the most stubborn and resistant of all infectious diseases, but even then has been defeated by the vitamine. Cod-liver oil is one of the richest sources of the vitamine.

But there are other food-stuffs equally useful. Butter, cream, eggs, fat meat, fat fish, fish oils, liver, kidneys, heart, cabbage, lettuce, spinach, linseed and millet are also fruitful sources.

#### LOCAL ADMINISTRATION.

Evidence, but not conclusive, has been advanced to show that the effect of the fat-soluble vitamine is on the cells of

the tissues, in contra-distinction to the others which appear to act through the ductless glands. It is then possible that infected wounds or ulcers may with advantage be treated by the local administration of oils containing the vitamine.

In this connection the treatment of wounds by oil in Bible history attains a new interest.

#### CONCLUSION.

It is scarcely necessary to point out that in this vitamine we are in possession of a powerful clinical force, the value of which both in preventive medicine and as a curative factor appears to be very great.

But the extent of its power has yet to be ascertained by practical experience in the conscious administration of the vitamine.

It seems justifiable to hope that it will be as successful in the treatment of infectious disease as are the other accessory factors in the case of beri-beri and scurvy.

*N.B.*—(a) The identity of the fat-soluble A and the antirachitic factor is not conclusively proved, but the distribution of the two is so similar that for practical purposes they are inseparable.

(b) No typical pathological lesion other than those of rickets or loss of resistance to infection has been found in either puppies or rats.

(c) The blood of rats starved of the water-soluble B vitamine also shows a deficient power of agglutination. But in this case beri-beri is present to a greater or lesser extent.

TABLE.		
Class of foodstuff.	Individual foodstuff.	Value in fat-soluble A.
Fats	Butter	+++
	Cream	++
	Margarine (from animal fat)	++
	Margarine (from lard or oil)	0
	Salad oils or frying oils	0
	Hardened fats (lard, etc.)	0
	Mutton and beef fat	1
	Fish liver oils	+++
	Herring, salmon or cod oil	++
	Liver, kidneys or heart	++
Meat and fish	Lean meat	?
	"Fat" fish (herring, salmon)	++
	"Lean" fish (cod, haddock)	0
Cereals	Millet, linseed	+
	Wholemeal bread	+
	White bread	0
Vegetables, etc.	Cabbage, lettuce and spinach	++
	Carrots, beans, peas, potatoes	+
	Bananas, nuts	+
	Oranges, apples	+
	Miscellaneous	Cheese (from whole milk)
	Cheese (from skimmed milk)	0
	Egg yolk	+++
	Dried eggs	+++
	Meat extracts	0

#### REFERENCES.

(a) "Report of British Medical Research Committee on Vitamines."

(b) *Bio-Chemical Journ.*, 1917-18-19.

[We hold no brief for the interesting speculations collected by Mr. Wharry and expressed in this article.—Ed.]

## AN ANCIENT CUSTOM.

(Reprinted from "The Hospital Gazette.")

**T**HE interesting ceremony of installing His Royal Highness the Prince of Wales as president of St. Bartholomew's Hospital was performed on Thursday, February 19th, in the Great Hall of the Hospital, in the presence of a large number of Governors and others connected with that ancient institution. The Prince was received on his arrival at the Hospital by the Treasurer, Lord Sandhurst, who conducted His Royal Highness to the great hall, where he was accorded a hearty welcome. Before his installation as President the Prince was made a Governor, the charge for which office was read by the clerk to the Governors, and was as follows.

"Your Royal Highness having been elected and chosen a Governor of St. Bartholomew's Hospital, it is your duty and charge to acquit yourself in that office with all faithfulness and sincerity, endeavouring that the affairs and business of the said Hospital may be well ordered and managed, and promoting the weal and advantage of the poor, wounded, sick, maimed, diseased persons harboured in the said Hospital. To this end your Royal Highness is now admitted a Governor of St. Bartholomew's Hospital."

Lord Sandhurst then handed to the Prince his wand of office as a Governor—a green staff bearing the arms of the Hospital.

The charge of the President was then read by the clerk as follows:

"Having been elected president of this hospital your Royal Highness is to be received as its chief ruler and governor. Your Royal Highness is to convene general courts at such times as you may deem necessary, or to be required by resolution of the House Committee, or by requisition in writing signed by 13 governors at least. And your Royal Highness is to preside at the same, as well as at committees, and on all other occasions when you may think proper to attend."

The Prince, having signed the roll of Governors, then assumed the chair amid enthusiastic applause. He then signed the minutes, and proceeded to hand the charges to eleven new Governors, after which he addressed the court as follows:

"My Lords, Ladies, and Gentlemen,—There being no other business, we will adjourn the court; and I should like at the same time to say what a privilege it is to take up the office of President, and I am looking forward to seeing something of the Hospital for myself. Thank you very much for your kind reception."

Thus concluded a ceremony which, as since the year 1867 the presidency has been held by a Prince of Wales, is happily rare.

The office of President came into existence soon after the

re-foundation of the hospital by Henry VIII. It will be recalled that the Hospital, originally founded in 1123 as an adjunct to the Priory, was closed at the time of the dissolution of the monasteries, its revenues reverting to the Crown. On the solicitation of the citizens of London a new hospital was created by letters patent of June 23rd, 1544, but the management proving unsatisfactory, the citizens again appealed to the King, with the result that, by letters patent of April 26th, 1547, the Hospital was re-founded, with an endowment from the Crown of 500 marks conditionally upon the same sum being raised annually by the city.

The original charge of a governor was as follows:

"It may please you to understand, that yee are here elected and chosen, as fellow governours of this Hospital, to continue by the space of two years: By all which time according to such laudable degrees and ordinances as have been; and shall be made by the authority of the Lord Maior chiefe Patron hereof, in the name of the City, and the consent of the governours for the time being, all your other business set apart as much as you possibly may: ye shall endeavour your selves to attend onely upon the needfull doings of this house, with such a loving and careful diligence, as shall become the faithfull Ministers of God, whom ye chiefly in this vocation are appointed to serve; and to whom for your negligencies or defaults herein ye shall render an accompt. For truly ye cannot be blameless before God, if after you have set hand to this good plough, and promised your diligence to the poor, ye shall contrarywise turn your head backward, and not perform the succour that Christ looketh for at your hands, and hath witnessed to be done to himselfe, with these words: Whatsoever ye do to one of these needy persons for my names sake, the same ye do unto me. And contrarywise, if ye neglect and despise them, ye despise me. We therefore require and desire every of you on Gods behalfe, and in his most holy name, that ye endeavour your selves to the best of your wits and powers, so to comfort, order, and govern this house, and the poor thereof, that at the last day ye may appear before the face of God, as true and faithfull Stewards, and disposers of all such things, as shall for the comfort and succour of them, (during the time of your office) be committed to your credite and charge. And this to do wee require you, faithfully to promise in the sight of God, and hearing of your brethren. And so doing we here admit you into our fellowship."

The original charge of the President was as follows:

"The President of this Hospital, is chiefe Ruler and Governour of the same, under the Lord Maier, who hath authority from time to time, to convocate and call together all the Governours for matters concerning the maintenance, and good ordering of the poor, and to demand of every of them, the account of their doings in their severall offices; and with the assent and consent of the said Governours, to grant Leases, and Fees, and make necessary decrees, and ordinances."

A. H. COUGHTREY.

## THE SILVER SCALPEL.

An Absorbing Adventure of Herlock Shomes.

**I**T was a cold, cheerless morning in late November. My friend and I were seated on either side of a blazing fire in our sitting-room in Candlestick-maker Street. He was reading, and I was casually glancing through some notes I had taken on "The Case of Father Featherstone's False Teeth," which, as will be remembered, he had brought to so sensational a termination. Suddenly Shomes spoke. "Our next client," he said, "will be a young man wearing spectacles and a fair moustache."

"How do you know that?" I cried. Wonderful as I knew my friend to be, I could not believe that he was gifted with psychic powers.

Shomes smiled one of his rare smiles.

"There is a mirror over the mantelpiece, and a window in yonder wall!"

"Well, yes. But why—?"

"The principle of the periscope, my dear Dudson!"

At that moment our visitor was announced. He accorded exactly with Shomes' description, and gave his name as "Mr. Herbert Marshall." He seemed greatly agitated and needed to be refreshed with brandy before he could begin his story.

"You are, I perceive, a medical student in your second year," said Shomes.

"What! How—?"

"My dear sir, nothing could be more simple. Upon your right index-finger is the characteristic stain of hæmatoxylin. In the toe-cap of your left boot I observe a slit which can only have been caused by a fair-sized scalpel's having been dropped, point downwards, upon it!"

"Why a scalpel?" I ventured.

"Because," answered Shomes abruptly, "no other instrument could have caused such an incision. You have read my monograph on *Knives and How they Cut*, Dudson, and should have remembered that simple fact!"

Somewhat piqued by his retort, I drew another bow.

"But, Shomes," I said, "if this gentleman will forgive my putting the question in his presence, how do you know that he is in his second year?"

"Because, my dear fellow, anatomy, as you, a medical man, should know, is one of the subjects studied during one's second year. A single glance at Mr. Marshall is sufficient to convince me that he is cramming for an anatomy examination to take place within one month from to-day!"

The student leapt to his feet and advanced towards Shomes with outstretched hand. "Right every time!" he cried enthusiastically. "Oh, Dr. Dudson," he added, turning to me, "your friend is a positive magician! How does he do it?" he asked, as if he expected me to be ready with a full explanation of my friend's every remark.

I smiled feebly and shook my head. To our great joy Shomes himself then proceeded to explain.

"When you entered this room, Mr. Marshall, my friend Dr. Dudson, sitting where he is now, very naturally turned his head towards the door. In the fraction of a second during which you were traversing the mat I observed you to glance anxiously at his well-defined sterno-mastoid as if desirous of recollecting the precise attachments of that muscle. None but he whose mind was completely filled with anatomy would think of doing such a thing on entering, for the first time, a room containing two strangers. This put me on the track. If my suspicions needed further confirmation, I found it in the fact that, while I was pouring out your brandy, you were nervously running over the surface markings of your own wrist. Er— I believe I was right in my observations?"

"Perfectly!" gasped the young man.

"And I may say that it is in connection with this forthcoming examination that you have called upon me to-day?"

"Precisely!"

"Thank you. Then let us hear your story in full."

Briefly, it was this: He was a student at St. W.'s Hospital, and was "up" for an examination in practical anatomy, not merely within a month, as Shomes had said, but during the following week. He was not, he said, a really skilled dissector—in fact, at the Hospital, he was rather notorious for his nerve-cutting properties.

But he was always to be relied on when using a certain instrument. This was a curious, old, silver-plated scalpel which had descended to him from his grandfather, and which that famous surgeon had used in performing the operation to which he had given his name.

His father, in turn, had used it with great success throughout all his anatomy examinations, and now he, the son, was desirous of doing the same.

But, on looking through his box of instruments the day before, he had discovered that the heirloom was missing. Horrified, he had hunted high and low without result, and finally, on his father's advice, had called on Shomes, of whose detective capabilities he had heard such wonderful reports. "If you can find it," he said, "I shall at least have a chance of passing, but, if not, I am, without doubt, doomed to failure!"

Shomes remained silent for some seconds, then—"Can you describe the instrument in question?" he said.

The student could and would: It was about five inches long with a slightly bent handle. It had formerly been covered with silver-plating, but this had gradually worn off in many places—particularly on the blade, where patches of rust were distinctly visible. The point itself had been snapped off long ago, and there were three distinct notches in the edge—the result of various accidents.

Again Shomes spoke:

"Was it sharp when you had it last?"

"Not at all," replied the young man.

"Good!" said Shomes. "That is all the information I require. Wait a moment, though, one more question. Are you prepared to spend a good deal to ensure the successful prosecution of this search?"

"Money," replied the student, "is no object. I am only too willing to lay out any amount in the good cause. 'The silver scalpel,' as we affectionately call it, is a talisman which our family cannot afford to lose. And—(here he lowered his voice to a mysterious whisper) "it is the only knife with which I do not cut nerves!"

I had fairly expected that Herlock Shomes, the great criminologist, would refuse to undertake so paltry a commission. But perhaps the idea of a medical student to whom money was no object appealed to him; possibly he was moved by the extreme earnestness of the young man; possibly—but no, Shomes was not the sort of fellow to take up a case simply because he was offered a large fee. I had wronged my friend in the thought and felt sorry for it. Be that as it may, instead of saying that "his time was fully occupied," or that "he was going abroad," or any polite lie of that sort, he turned to Marshall and said calmly, "Your scalpel will be in the room, sir, at eleven o'clock on Monday morning. Can you come round here to fetch it at that time?"

Needless to say he could.

A month had elapsed. During that time Shomes had been extremely busy on cases of the utmost importance, and I had not dared to broach the question which had so long been hovering on my lips. At last, one evening when we were sitting alone and he seemed in a talkative mood, I took the plunge: "How and where," I asked, "did you find the silver scalpel?"

"You know my methods, Dudson," he replied, "and should be able to answer that question for yourself. The instant Marshall entered the room I observed that he was of a nervous and excitable disposition. That gave me my first clue. I then, as soon as he had gone, took a cab to St. W.'s Hospital and proceeded with my search there. I crept unobserved into the little room where students keep their dissecting-coats and carefully went through the pockets of each one."

"And you found Marshall's scalpel in someone else's pocket?"

"On the contrary, I found it in his own!"

"What?"

"The agitated young man had searched through every one else's pockets but had omitted his own!"

I laughed heartily.

"Have you told him this?" I cried.

"I may possibly do so to-night," said Shomes.

"To-night?"

"Yes, I have asked him to share our box at the Opera.

It's Pridski's 'Orange Girl,' you know, and I want him to hear Dantino's rendering of the tenor songs. Strange that you should have mentioned his case this evening!"

It certainly was.

"Oh, by the way, Shomes," I said, as I started upstairs to change, "has he heard the result of his exam. yet?"

"He has!"

"And—he has passed?"

"With honours!" replied Shomes, taking up his violin.

F. H. K. G.

### ABERNETHIAN SOCIETY.

At a General Meeting of the above Society the following members were elected as officers:

Presidents: Mr. Lloyd, Mr. Verney.

Vice-Presidents: Mr. Zerolo, Mr. Vinter.

Secretaries: Mr. Billingham, Mr. Prance.

Extra Committee: Mr. Andrewes, Mr. Weatherall.

T. F. ZEROLO }  
N. S. B. VINTER } Hon. Secs.

### THE INTER-HOSPITAL BOXING COMPETITIONS.

These were held for the first time since the war at the People's Palace on the evening of April 20th. Thanks to the excellent arrangements made by E. C. T. Clouston, of the London, who acted as secretary to the United Hospital Boxing Club, the competitions were a great success. The Hospital was represented in three weights only, namely bantam, feather and welter, but two out of the three entries reached the final, and were then only beaten by quite a narrow margin of points. H. C. J. Ball, who was to have represented the Hospital in the light-weights, was unfortunately delayed by a motor-cycle breakdown, and did not arrive in time to weigh in at the time agreed upon. He was therefore not allowed to compete. H. A. M. Whitby (feather-weight) was three-quarters of a pound over weight on the morning of the fight, but was given until 5 p.m. to make the weight. He succeeded in getting down to weight, but unfortunately weakened himself a good deal in doing so. He started off well, but was unable to maintain the necessary pace, and was beaten on points after a sporting fight. V. Barkin (Bart.'s) defeated H. E. Beasley (U.C.H.) in the semi-final of the bantam-weights, but was defeated in the final, after putting up a very game fight, by S. P. Meacock of Guy's. There was not very much to choose between the two, but Meacock made better use of the straight left, which was probably the chief factor in securing him the verdict. T. M. Marcuse, after defeating E. A. Levisseur (Guy's) in the semi-final, fought a very close bout with R. A. Vaughan-Jones (London) in the final. There was very little in it throughout, and the judges disagreeing at the end of the third round, the referee ordered an additional round of two minutes' duration, which went in favour of Vaughan-Jones. The latter fought in a very plucky manner throughout, taking some very heavy punishment in the gamiest possible way. Perhaps Marcuse was a little unlucky not to have secured the verdict on his showing in the first three rounds.

On the whole, Bart.'s has every reason to be satisfied with the performance of its representatives, and the prospect for next year is distinctly good considering that the club only got into actual working order last January. Of the other bouts, the best contests were seen in the light, heavy and middle-weights, in which the boxing reached quite a high standard.

Score: (Four points for winner, 2 for runner-up at each weight.) London 18, Guy's 16, Bart.'s 4, Thomas's 2, U.C.H. 0. London thus retains the cup.

### REVIEWS.

THE PRINCIPLES OF ANATOMY AS SEEN IN THE HAND. By Prof. F. WOOD JONES, University of Adelaide. With 2 plates and 123 text-figures. (London: J. & A. Churchill.) Price 15s.

This new work, by one of the younger generation of British anatomists, naturally invites some comparison with the only other book in the English language, so far as we know, devoted to the hand—Sir Charles Bell's *Bridgewater Treatise*, published nearly a hundred years ago. While the style of the early Victorian suggests that of the Georgian resembles more the modern high-speed "dread-nought," harder to the touch, full of new contrivances, and ever ready to launch a torpedo attack on any derelict theory or practice which, in the author's opinion, blocks the channel of anatomical progress or fouls the clear waters of anatomical principles; he dearly loves an argument and never fails to conduct it with entertaining vivacity. From first to last this is a fascinating and instructive book, from which it opens to the artistic anatomy of Rembrandt (*inter alia*), with the latest researches on the sympathetic system, with which it closes. The intervening chapters, in which all aspects of the hand are treated in systematic order, are full of enlightening references to paleontology, comparative anatomy, embryology, the dissecting room, practical medicine and practical surgery; the width of view and wealth of detail shown throughout stamp the author as a worthy disciple of the best traditions of British anatomy. The fortune of war, which transferred him for a time from academic to clinical work, is reflected in many important observations—in particular, on the inaccuracies and limitations of text-book teaching as revealed by a close study of

Though here and there some revision is needed and some condensation would not come amiss, we have nothing but praise for the text and its clear and accurate illustrations. We heartily recommend this work not only to the unfortunate, young or old, who has found enthusiasm for anatomy hard to come by, but also to the student who has already enjoyed some vision of the wood beyond the trees; for both, we feel sure, will be kindled by the enthusiasm and skill with which Prof. Wood Jones has employed one small member of the human frame to make clear the principles on which is based the proper study of the whole.

ELECTRIC IONISATION. By A. R. FRIEL. (Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd., 1920.) Cloth, pp. 76. Price 8s.

When first we saw the slimmest of this volume we were startled at the price. Further examination, however, proved that it is a precious gem well worth the modest sum asked for it.

The colour of the cover is pleasing, and the letterpress is well printed on good paper. The diagrams are simple and clear. It contains, tersely put, all the essential principles of ionisation, theoretical and practical. The order of the sections is well chosen, and the wording is such as to be acceptable to both the arrogant intellectuality of the fourth year student and the rather tempered mentality of a general practitioner.

DISEASES OF THE NOSE AND THROAT. By HERBERT TILLEY, B.S., F.R.C.S. (H. K. Lewis & Co., Ltd.) Fourth edition. Pp. xx + 844. Price 25s. net.

This volume forms a complete treatise of the diseases of the nose and throat. The information is complete and up-to-date, and especially commendable in this respect are the accounts of hay-fever, its pathology and treatment, and of endolaryngeal and tracheal investigations by the bronchoscope. Though a book of this character is chiefly concerned with surgery, medicine and medical treatment, largely in the diagnosis and treatment of some faucial and laryngeal conditions, namely the condition of the throat in the acute specific fevers and acute laryngitis in adults, and the special forms of this disease in children. It is pleasing to note the fulness and detail with which the medical aspect of the question is discussed, and the prominence given to medical methods of treatment. This feature is one of the many good points which distinguish the work from others on the same subject.

Attention has been called to a mistake in a prescription on p. 73, the dose stated being double that intended. This slip is the only one of the kind, and does not detract from the general excellence of the work.

Other commendable features of the book are the clear and readable style and the excellent diagrams, especially useful being those of instruments used in special operations. The diagrams of laryngoscopic appearances form a very complete atlas of the diseases of this region of the body.

### RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

- ARMSTRONG, RICHARD R., M.D., M.R.C.P. "A Case of Cervical Caries simulating Cerebellar Tumour." *British Medical Journal*, April 10th, 1920.
- AUDEN, G. A., M.A., M.D. (Cantab.), F.R.C.P. (London), D.P.H. "Provision for the Abnormal Child in Educational Organisation." *The Medical Officer*, March 27th, 1920.
- BROUGHTON-ALCOCK, W., Capt. R.A.M.C. (S.R.). "Mixed B. paratyphosis A and B Inoculations with Serum-treated Bacilli." *Journal of the Royal Army Medical Corps*, March, 1920.
- CHANDLER, F. G., M.D. (Cantab.), M.R.C.P. "Oxygen and Air Replacement of Fluid in the Pleural Cavity." *Lancet*, April 3rd, 1920.
- FEILING, ANTHONY, M.D., M.R.C.P. (and E. WARD, M.D., F.R.C.S.). "A Familial Form of Acoustic Tumour." *British Medical Journal*, April 10th, 1920.
- GARROD, SIR ARCHIBALD E., K.C.M.G., M.D., LL.D., F.R.S. "The Schorstein Lecture on the Diagnosis of Diseases of the Pancreas." *Lancet*, April 3rd, 1920.
- HANSCHKE, H. M., D.S.C., M.R.C.S., L.R.C.P., D.T.M.&H. (Camb.). "Phagedæna of Hunterian Chancre following Treatment with Novarsenbenzol." *British Medical Journal*, April 10th, 1920.
- HORDEK, SIR THOMAS, M.D., F.R.C.P. "Medical Notes." *Practitioner*, April, 1920.
- JORDAN, ALFRED C., M.D. (Cantab.), M.R.C.P. (London). "Radiology in Chronic Intestinal Stasis." *Lancet*, April 3rd, 1920.
- SCRIPTURE, E. W., M.D. "The Nature of Epilepsy." *Proceedings of the Royal Society of Medicine*, 1920, vol. xiii (Section of Psychiatry).
- SEWELL, E. F., Col., C.M.G., D.S.O., R.A.M.C. (T.F.), (and Brevet-Major A. S. M. MACGREGOR, O.B.E., R.A.M.C. (T.F.)). "An Anti-malaria Campaign in Palestine." *Journal of the Royal Army Medical Corps*, March, 1920.
- STAWELL, R. DE S., O.B.E., M.B., F.R.C.S. "Fibroids Complicating Pregnancy: Hysterectomy: Recovery." *British Medical Journal*, April 10th, 1920.
- VARRIER-JONES, P. C., M.A. (Camb.), M.R.C.S., L.R.C.P. (and Sir G. SIMS WOODHEAD, K.B.E., V.D., M.D., LL.D.). "Poultry-farming: An Occupation suitable for Consumptives." *Lancet*, April 3rd, 1920.
- WILLIAMSON, HERBERT, M.B., B.Ch. (Cantab.), F.R.C.P. (London). "A Note on the Value of Blood Transfusion before Operation in Severe Secondary Anæmia." *Lancet*, April 17th, 1920.

### APPOINTMENTS.

- BOURNE, G., M.B. (London), M.R.C.P., appointed Physician of the East London Hospital for Children.
- CANE, L. B., M.D. (Cantab.), appointed Hon. Physician to the Peterborough Infirmary.
- HADFIELD, G., M.D. (London), appointed Pathologist to the Bristol General Hospital.
- HOWELL, B. WHITCHURCH, M.B., B.S. (London), F.R.C.S., appointed Surgeon to the Royal Surgical Aid Society, Salisbury Square, E.C., and Assistant Surgeon to the Queen's Hospital for Children, Hackney Road.
- LESCHER, F. GRAHAM, M.C., M.R.C.S., L.R.C.P., appointed Assistant Physician to the Derbyshire Royal Infirmary.
- SKEGGS, B. L., M.R.C.S., L.R.C.P., appointed House Physician, Metropolitan Hospital, Kingsland Road, E. 8.
- SMITH, NORMAN F., M.B., B.Ch. (Oxon.), appointed a Medical Inspector under the Sudan Government.
- SMYTHE, G. A., M.D. (Cantab.), appointed Medical Referee to Ministry of Pensions, Winchester Area.



## EXAMINATIONS, ETC.

UNIVERSITY OF LONDON.

First Examination for Medical Degrees.—March, 1920.

(For Internal and External Students.)

Pass List.—R. Bolton, G. E. Harries, E. B. Pollard, H. N. Seymour-Saacs.

Second Examination for Medical Degrees—Part I.—March, 1920.  
(For Internal and External Students.)

Pass List.—D. D. Anderson, E. J. Blackaby, D. A. Briggs, T. S. Cochrane, R. S. Coldrey, J. R. Collacott, E. R. Cullinan, Trevor Davies, T. D. Deighton, John Elgood, G. E. Ellis, J. W. Joule, J. F. L. King, R. A. F. Klaber, N. F. Laurence, James Maxwell, H. V. Morlock, R. T. Payne, J. W. Poole, R. D. Reid, D. J. Rose, A. J. D. Smith, R. W. Taylor, Percy Thwaites, H. B. White, L. A. Willmott.

Second Examination for Medical Degrees—Part II.—March, 1920.  
(For Internal and External Students.)

Pass List.—G. L. Broekelhurst, E. A. Coldrey, S. S. Cruden, D. C. Fairbairn, P. C. C. Garnham, C. F. Harris, J. P. Hosford, R. Hunt Cooke, B. L. Jeaffreson, Reginald Keene, H. C. Killingback, A. C. Maconie, H. Summers, B. M. Tracey, A. H. C. Visick, R. H. Wade, A. Walk.

CONJOINT EXAMINING BOARD.

First Examination.—March, 1920.

Chemistry.—R. J. I. Bell, R. A. Foucar, H. B. Howell, S. Jenkinson, J. E. C. Morton.

Physics.—R. J. I. Bell, H. B. Howell, J. E. C. Morton.

Elementary Biology.—C. F. Ashby, R. N. Aston, H. C. J. Ball, W. F. D. Beaton, G. H. Burcombe, P. H. Diemer, A. J. Enzer, R. A. Foucar, A. W. Gardner, W. A. Hervey, A. R. Hill, H. B. Howell, A. H. Kyanston, G. B. McMichael, J. E. C. Morton, K. C. L. Fiddle, W. E. H. Quennell, A. E. Ross, E. J. H. Roth, A. D. H. Simpson, W. C. Stuart-Low, C. H. Wight, H. A. M. Whitty, Z. M. Yusuf.

Practical Pharmacy.—H. C. J. Ball, R. J. I. Bell, H. Cooper, L. A. Daly, A. C. Dick, J. L. C. Doyle, R. C. Drake, G. P. Driver, G. Elliot, W. R. E. Harrison, W. A. Hervey, T. B. Hodgson, J. D. Hunt, F. F. Imianitoff, D. D. Kenny, C. de W. Kiteat, W. Laing, E. Liston, D. Maximos, J. G. McMenamin, E. W. Morgan, T. L. Ormerod, W. E. H. Quennell, E. J. H. Roth, M. H. Samy, R. W. Savage, P. B. Skeels, G. G. Stewart, A. E. Strawbaun, H. H. D. Sutherland, H. A. M. Whitty.

Second Examination.

Anatomy and Physiology.—N. E. D. Cartledge, A. W. Hart-Perry, E. Obermer.

## CHANGES OF ADDRESS.

BALL, W. GIRLING, 77, Wimpole Street, W. 1. (Tel. Mayfair 1311.)

BRISCOE, J. R., 40, Quantonk Road, Weston-super-Mare.

BROCKMAN, R. ST. L., 64, St. George's Road, Victoria, S.W. (Tel. Victoria 5740.)

BURKITT, F. T., "St. Kilda," The Ridgway, Wimbledon Common, S.W. 10.

CAME, L. B., Minster Precincts, Peterborough.

CHAMBERS, E., "Rosedene," 27, Beresford Road, Chingford, Essex, E. 4.

CHANDLER, F. G., 86, Harley Street, W. 1. (Tel. Mayfair 3560.)

DOUGLAS, H. A., 12, New Road Avenue, Chatham.

DYER, W. B., Surg.-Comdr. R.N. (retired), c/o Dr. S. B. Green, Westbury-on-Trym, Bristol.

MAWER, P. U., 22, Weymouth Street, Portland Place, W. 1. (Tel. Mayfair 2246.)

PAIN, A., Thorney, near Peterborough.

RUSSELL, H. BEDFORD, G., 80, Harley Street, W. 1. (Tel. Mayfair 3560.)

SKEGGS, B. L., Metropolitan Hospital, Kingsland Road, E. 8.

STONE, DUDLEY, 86, Harley Street, W. 1. (Tel. Mayfair 3560.)

WALKER, KENNETH M., 86, Harley Street, W. 1. (Tel. Mayfair 3560.)

WARD, R. OGIER, 86, Harley Street, W. 1. (Tel. Mayfair 3560.)

WAY, L. F. K., Military Hospital, Hemel Hempstead, Herts.

## BIRTHS.

ADAMS.—On April 6th, at a nursing home in Chiswick, to Dr. and Mrs. J. Wroth Adams—a son (John Peter).

CANTI.—On March 31st, at "The Gables," Wedderburn Road, Hampstead, to Dr. and Mrs. Canti—a daughter.

CHAMBERS.—On April 19th, at a Nursing Home in London, the wife of Capt. G. O. Chambers, M.C., R.A.M.C., of a son.

HORSFORD.—On March 28th, to Dr. and Mrs. Cyril Horsford, of 24, Harley Street—a daughter.

JONES.—On March 28th, at Coleford House, Coleford, near Bath, Somerset, the wife of Philip T. Jones, M.R.C.S., L.R.C.P., of a daughter.

MACKIE.—On April 11th, 1920, at 62, Worrall Road, Clifton, Bristol, the wife of Major F. P. Mackie, Indian Medical Service—a son.

MESSITER.—On Good Friday, at 3, Ednam Road, Dudley, the wife of Cyril C. Messiter—a son (Ian Cassan).

NICOL.—On April 7th, at a Nursing Home in Dublin, Norah (née Mayberry), the wife of Surg.-Lieut. W. D. Nicol, R.N., of a son.

ORR-EWING.—On April 17th, at Heathfield, Broad Clyst, Devonshire, to Gladys Mary (née Ross), wife of Archd. Orr-Ewing, M.A., M.B.(Cantab.)—a son.

PINNOCK.—On April 12th, the wife of Dudley Denham Pinnock, F.R.C.S.—a son.

PRIDHAM.—On April 12th, at the Nursing Home of St. Andrew's Hospital, Dollis Hill, to Margaret, wife of J. A. Pridham, M.C., L.R.C.P., M.R.C.S., of 28, Lake Street, Leighton Buzzard—a daughter.

TRUMAN.—On March 26th, at 447, Mansfield Road, Nottingham, to Dr. and Mrs. B. R. Beckitt Truman—a daughter.

WILSON.—On March 15th, to Mr. and Mrs. W. Etherington Wilson, of "The Banda," Lindfield, Sussex—a daughter.

## MARRIAGES.

ATTLEE—MACONOCHE.—At St. Paul's Church, York Place, Edinburgh, on Thursday, April 8th, by the Very Rev. the Dean of Edinburgh, Wilfrid Attlee, M.D., of Eton, youngest son of the late John Attlee, of Korking, to Emily Bridget, younger daughter of C. C. Macnochie, K.C., C.B.E., of Avonton, Linlithgow.

EDWARDS—HOSKIN.—On April 12th, at the Chapel Royal, Savoy, by the Bishop of Chester, assisted by the Rev. Canon Gardiner, M.A., and the Rev. H. Hoskin, uncle of the bride, Arthur Tudor Edwards, M.C.(Cantab.), F.R.C.S., elder son of Mr. William Edwards, J.P., and Mrs. Edwards, of Haresfield, Langland, Glamorgan, to Evelyn, only daughter of the late D. Theophilus Hoskin, J.P., and Mrs. Hoskin, of Cumberland Mansions, W., and Bray, St. Minver, Cornwall.

SANDERS—HEWETT.—On April 17th, at St. Margaret's, Barking, by Rev. J. W. Eisdell and Rev. H. S. Pelham, Guy, son of Dr. C. Sanders, Medical Officer of West Ham, to Clarice, daughter of R. M. Hewett, J.P., Roden Lodge, Barking, Essex.

SMITH—TERRAINE.—On April 3rd, 1920, Norman F. Smith, M.B., to Molly Terraine.

SUNDERLAND—BROWN.—At St. Leonard's Parish Church, Ayr, on April 14th, by the Rev. John Ellis, assisted by Rev. A. Crawshaw, R. A. S. Sunderland, M.R.C.S., etc., son of Rev. S. Sunderland, Muswell Hill, to Annie Brown, daughter of the late John Brown, of Kuglan, Kilkerran, Ayrshire, and Mrs. Brown, Ayr.

WITH—FRASER.—On March 22nd, 1920, at St. Thomas's Cathedral, Bombay, Percy Arthur, Capt. R.A.M.C., third son of Mr. and Mrs. A. J. With, of London, to Jean, daughter of the late James Fraser, of Aberdeen, and of Mrs. Fraser, Kemnay, Aberdeenshire.

## DEATH.

ORTON.—On April 6th, 1920, at 7, Campden Hill Road, Kensington, George Hunt Orton, M.B., F.R.C.S., eldest son of the late William Orton, of Narborough Hall, near Leicester, in his 79th year.

## 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 7s. 6d., 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 ADVERTISEMENT MANAGER, the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: City 510.

## St. Bartholomew's Hospital



## JOURNAL.

VOL. XXVII.—No. 9.]

JUNE 1ST, 1920.

[PRICE NINEPENCE.]

## CALENDAR.

Fri.	May 28.	Dr. Calvert and Mr. Waring on duty.
		Clinical Lecture (Medicine), Dr. Drysdale.
Mon.	" 31.	Clinical Lecture (Special Subject), Mr. Rose.
Tues.	June 1.	Dr. Fletcher and Mr. McAdam Eccles on duty.
Wed.	" 2.	Clinical Lecture (Surgery), Mr. McAdam Eccles.
Fri.	" 4.	Dr. Drysdale and Mr. Rawling on duty.
		Clinical Lecture (Medicine), Dr. Tooth.
Mon.	" 7.	Clinical Lecture (Special Subject), Mr. Elmslie.
Tues.	" 8.	Sir Archibald Garrod and Mr. Gask on duty.
Wed.	" 9.	Clinical Lecture (Surgery), Mr. McAdam Eccles.
Fri.	" 11.	Dr. Tooth and Sir D'Arcy Power on duty.
		Clinical Lecture (Medicine), Dr. Morley Fletcher.
Mon.	" 14.	Clinical Lecture (Special Subject), Mr. Scott.
Tues.	" 15.	Dr. Calvert and Mr. Waring on duty.
Wed.	" 16.	Clinical Lecture (Surgery), Mr. Rawling.
Fri.	" 18.	Dr. Fletcher and Mr. McAdam Eccles on duty.
		Clinical Lecture (Medicine), Dr. Calvert.
Mon.	" 21.	Clinical Lecture (Special Subject), Mr. Elmslie.
Tues.	" 22.	Dr. Drysdale and Mr. Rawling on duty.
Wed.	" 23.	Clinical Lecture (Surgery), Mr. Rawling.
Fri.	" 25.	Sir Archibald Garrod and Mr. Gask on duty.
		Clinical Lecture (Medicine), Dr. Calvert.
Mon.	" 28.	Clinical Lecture (Special Subject), Dr. Cumberbatch.
Tues.	" 29.	Dr. Tooth and Sir D'Arcy Power on duty.
Fri.	July 2.	Dr. Calvert and Mr. Waring on duty.

## EDITORIAL NOTES.

ONE day in every year the rain is definitely booked for Spain, and the sun never fails to make View Day what may be called a sweltering success. Fortunately tea is plentiful, for on such occasions its imbibition tends to become not so much a pleasure as a necessity. This year the usual beautiful flowers and pleasant company ensured a completely satisfactory afternoon.

May we again appeal to our readers for material suitable for publication. We are always pleased to have details of

honours, appointments, changes of address, etc., but we should be even more pleased to have articles which would prove of general interest. Also we would welcome any contributions in the lighter vein.

Only those who have undertaken the task of running a journal, even of the modest size of our own, can appreciate the difficulties associated with such a publication. BART'S JOURNAL has a circulation of nearly 2000, and we feel sure that in such a constituency there must be quite an abundance of literary talent. We invite the co-operation of our readers.

At a dinner of the West London Medico-Chirurgical Society, held on April 29th, Mr. G. E. Gask, C.M.G., D.S.O., F.R.C.S., was presented with the Society's Triennial Gold Medal. The selection committee, with the co-operation of Sir Humphrey Rolleston and Sir Anthony Bowlby, had decided to give the Medal this year for some achievement arising out of the war in the cause of medical science. The award was made to Mr. Gask for the work he had done in connection with the surgery of gunshot wounds of the thorax.

Mr. Gask is the first member of the Society to receive the Medal, and we offer him our heartiest congratulations.

Sir D'Arcy Power's subject on the occasion of the Annual Oration of the Medical Society of London, delivered on May 10th, was "The Rev. John Ward and Medicine."

That Sir D'Arcy is a recognised authority on medical history will be fully appreciated by those of our readers who had the opportunity of listening to, and subsequently reading in these columns, his delightful address which he delivered before the Abernethian Society a year or two ago on "Some Episodes in the History of the Hospital."

The Eighth Annual Meeting of the St. Bartholomew's Hospital Women's Guild was held in the Great Hall on View Day. Viscountess Sandhurst presided, and the meeting was addressed by Countess Ferrers and Dr. Tooth.

The former spoke of the value of the work that is being carried on amongst the patients in some of the out-patients departments, while Dr. Tooth reviewed and praised the work of the Guild since its foundation in 1911.

We wonder whether the ladies related to all St. Bartholomew's men, past and present, realise the existence of the Guild, which was formed primarily to provide clothes, but may, with the permission of the Treasurer and Almoners, take up any other work in connection with the Hospital. We should be very glad if readers of the JOURNAL would make it known. Further information will be gladly supplied by the Hon. Sec., Lady Moore, 67, Gloucester Place, W. 1.

In the Honours List published in the last issue of the JOURNAL one or two names were erroneously printed. We hope these gentlemen will accept our apologies when we inform them that in our desire to publish the JOURNAL on the first of the month the proof was allowed to go through uncorrected.

The names should have appeared as follows:

*O.B.E.:*

D. L. Beath, F. Belben, W. Furner.

*M.B.E.:*

J. Iredale, J. D. Lloyd, J. D. Priest.

Our congratulations to the following Bart's men on being admitted to the Fellowship of the Royal College of Physicians of London:

J. G. Forbes, M.D.(Cantab.).

G. Graham, M.D.(Cantab.).

G. Basil Price, C.M.G., M.D.(Lond.).

A. S. Woodwark, C.M.G., C.B.E., M.D.(Lond.).

Sir Wilmot Herringham has been elected a Representative of the R.C.P. on the Senate of the University of London.

At the Annual General Meeting of the Hunterian Society held at the School of Oriental Languages (London Institute) on April 28th, Sir Archibald Garrod and Sir George Newman were nominated by the Council as Honorary Fellows.

It may interest our readers who are "Devonians" to learn that recently Col. McAdam Eccles made the suggestion that "The County" should give at least one room (£350) in Queen Mary's Home for St. Bartholomew's Hospital Nurses. The response has been so good that a second "room" is now on its way. Mr. John Adams and Fleet-Surgeon Corrie—enthusiastic "Devonians"—have had much to do with this success, while Dr. Josiah O. Adams has contributed the very handsome sum of £100 towards the second room. The help of these old Bart's men is much appreciated. If any other "Devonians" care

to take a share, Col. Eccles will be very glad to acknowledge any cheque sent to him at the Hospital.

The Hon. Sec. of the Abernethian Society, Mr. H. L. Billingham, directs our attention to the fact that a clerical error was made in the announcement of the election of Mr. Lloyd and Mr. Verney to the office of Presidents of the Society. Mr. Lloyd and Mr. Wall were elected at the general meeting.

The announcement should read:

*Presidents:* Mr. Lloyd and Mr. Wall.

Apologies are therefore tendered to the two members concerned.

The two following meetings have been arranged:

*June 3rd*, at 8.30 p.m.—Professor T. Zammit, C.M.G., of Malta, Pathologist and Archaeologist. "The History of Undulant Fever in Malta."

*June 17th*, at 8.30 p.m.—Major H. D. Gillies, C.B.E. F.R.C.S., R.A.M.C. "Major Injuries to the Face, including Burns, and their Plastic Treatment."

These meetings, which will be held in the Medical and Surgical Lecture Theatre, have been arranged in place of the usual midsummer address in order to give Bart's men and their friends the opportunity of showing their appreciation of recent work which is of great interest and value to the Profession.

In the Chapel a simple tablet has been set up, inscribed with the words: "To the Memory of Arthur Watkins, Steward of this Hospital, who died on duty, 2nd May, 1919, aged 62 years, this Tablet is erected by the Governors of St. Bartholomew's Hospital, in Recognition of his unwearying zeal and devotion during 40 years' service."

The Decennial contemporary clubs have decided to revive their annual dinners this year. These social functions, which of necessity have had to be abandoned during the war, have always been extremely popular.

The Seventh has been arranged for the first Wednesday in July. Any alteration of this date will be duly noted in the next issue of the JOURNAL.

Meanwhile it has been definitely decided to hold the dinner of the Eighth Decennial Club on the second Wednesday in July instead of the usual last Wednesday in June, as this latter date clashes with the B.M.A. meetings at Cambridge.

Toward the end of June the Dramatic Club will give a performance of "Are You a Mason?" at the Cripplegate Institute. Particulars will be posted on the usual notice boards.

We are glad to learn that the Athletic Club has been revived after a lapse of six years and the sports meeting is

being held definitely on Thursday, June 3rd, at Winchmore Hill. The entry list is quite large and some good events are anticipated.

The United Hospital sports are being held at Stamford Bridge on Thursday, June 17th, and we hope to be able to send an excellent team to represent the Hospital.

Cricket is now in full swing and the Club is looking forward to a more successful season than last year. The season started in fine style with a victory over Gravesend. The Club hope to have the assistance of B. G. Melle, the old Oxford Blue, who scored over 1000 runs in first-class cricket for Hampshire last season. Among the freshmen there are many promising performers, and it is hoped with this material we shall be able to carry off the Hospital Cup this year. A full fixture list has been arranged for both 1st and 2nd XI's. The Cricket Week is early in June, commencing Monday, June 7th, and on Wednesday, June 9th, the annual Past *v.* Present match will be played, when it is hoped that there will be a large gathering of old Bart's men. Any old Bart's cricketer who wishes to play in this match should send his name to the Secretary of the Club, who will be very pleased to include him in the side.

## A LESSON IN ADAPTATION.

By ARCHIBALD E. GARROD.



ON June 17th, 1897, there was admitted to St. Bartholomew's, under the care of the late Sir Thomas Smith, a boy, Charles S—, *æt.* 13. He had been thrown by a pony in Church Street, Finsbury, in front of an omnibus "full of people," a wheel of which passed over his abdomen.

On admission the boy was collapsed, and complained of abdominal pain, especially severe in the left flank. In the left lumbar region was a bruise mark as of a wheel, and bruises developed later upon the epigastrium and left hip. The pelvis yielded when the crests of the ilia were pressed together; there was blood in his urine.

The heart was so far displaced to the right that there was no cardiac dullness to the left of the sternum, and a diagnosis of left pneumothorax was made. No free fluid could be detected in the abdomen. The hæmaturia persisted for ten days. Twelve days after his admission there was dullness of the left side of the chest up to the fourth rib, and vocal vibrations were absent over the dull area. The temperature was about 100° F. during the first week, and afterwards fell gradually to normal. The pulse had an average frequency of 120. Respirations, which ranged from 38 to 48 at first, fell to 24 to 32 during the second

week. On July 1st the signs of pneumothorax were still present on the left side, and the displacement of the heart persisted. The boy was discharged from the Hospital on July 18th.

Twenty years later, on December 29th, 1917, Private Charles S— was admitted to a military hospital in Malta suffering from malaria and bronchitis. He had seen two years and four months' service in an infantry regiment—sixteen months of that time in the Salonika force. In June, 1917, he had been sent into hospital with bronchitis and malignant tertian malaria. The notes taken at that time described bronchitic signs, with dullness and deficient breath-sounds over the lower part of the left side of the chest. He expectorated a frothy mucous sputum.

The signs noted on his arrival in Malta were as follows: On inspection the left side of the chest appeared fuller than the right. On the left side, in front, there was defective expansion and absence of breath-sounds and vocal vibrations below the fourth rib. Cardiac pulsation was palpable in the third and fourth intercostal spaces to the right of the sternum. The cardiac dullness extended to the fourth rib, above, and 2½ in. to the right of the sternum; its left border could not be determined. The upper border of the hepatic dullness was normal in position. The heart-sounds confirmed the displacement of the heart.

The breath-sounds were harsh on the left side in front down to the fourth rib, and below that level were only heard faintly.

The dullness over the left chest, below the nipple line in front and below the angle of the scapula behind, was high-pitched. In front, over the dull area, intestinal gurglings were sometimes heard, and behind a bell sound was occasionally obtained.

When the patient was recumbent a moveable mass was to be felt in the lower part of the abdomen on the left side, sometimes in the left iliac fossa and sometimes higher up. This could be identified as a greatly enlarged and wandering spleen, enlarged in consequence of his malaria. It was thought that the left kidney could be felt at times.

An examination by X rays after a bismuth meal showed that the stomach lay in the left side of the chest, and later a picture was obtained of a large part of the colon, filled with bismuth, also contained in the left side of the thoracic cavity. The abnormal position of the heart was confirmed by the X-ray pictures.

In reply to inquiries as to his past history the patient gave an excellent account, from his own standpoint, of his accident in 1897, and told us that since the accident he had led an ordinary life, but had been liable to bronchitis since boyhood. He had experienced no ill-effects of his anatomical peculiarities during his military service, and had kept in good health until he went sick with malaria and bronchitis.

The surprise at his recovery, of those who looked after

him at the time of his accident, had obviously made a deep impression upon his mind.

The case calls for little comment. That internal injuries so grave should leave so little incapacity, or even inconvenience, seemed almost incredible. Fortunately the man had escaped the prevalent intestinal infections, and so we had not an opportunity of observing the signs and symptoms of intra-thoracic dysentery.

### THE SPIRIT OF RESEARCH.

By MERVYN GORDON, C.M.G., C.B.E., M.D.

**T**HE practical application of current knowledge to the alleviation of suffering and the prolongation of life is the privilege of the physician or surgeon. Disease is organised. Part of its organisation is known; a greater part unknown. Research deals with the latter; it attempts to discover: in humbler branches to confirm and extend the discoveries of others; in the higher branches to obtain knowledge at first hand on matters about which little or nothing is known.

Research is its own reward. A genuine investigator should be equally immune to the praise or blame of his fellows. After all, he is the best judge. They can only see part of the picture. He knows the reverses, the weary months spent in working in the wrong direction, the failures, the mistakes, the scrap-heaps, the disappointments, and the snubs that Nature often administers to him with such vigour when he begins to feel unduly hopeful or elated. Nature, however, is never one-sided, and few pleasures are equal to that of a genuine discovery, however small and unimportant. Nor is this pleasure neutralised when such a discovery is found to have been made previously by somebody else. That gives confidence and actual encouragement to an investigator who is worth his salt. In course of time the investigator will come to realise that Nature is never wrong, that the fault—when fault there is—lies with himself, and thus he gradually comes to be immune to disappointment. Failures can interest him equally with successes; for, properly applied, a failure may sometimes be made to lead directly or indirectly to success.

It is characteristic of bacteriological research that a plan made beforehand, however carefully it is schemed, seldom works in practice. It is also characteristic of such research, that provided the investigator is constantly at work, some new point or other will crop up. Such points may not always be new to others, and they may not be of much importance, but they serve as a fillip to the investigator and compensate him for much sterile labour.

A time comes in many a research when the question has to be decided whether the method shall be master of the

investigator, or *vice versa*. The truth is that each method only takes us a certain way, and science is advanced, not by methods, but by those who invent, apply, and improve them, or introduce better ones.

An investigator should expend as much care on the staff work of his research as on the executive portion. Both parts of his organisation should continually be reacting on each other. One of the difficulties of research is to judge correctly as to the right direction in which to advance, when to experiment over a broad front, when to concentrate, when to mark time, when to press forward, when to turn, and when to withdraw. Each advance must carefully be prepared beforehand by getting together the necessary materials. A big research is really a series of experimental campaigns, all of which need careful correlation and forethought in accordance with the relative importance and urgency of their various objectives.

It has become fashionable lately to extol the advantages of team work, and undoubtedly co-operation is advantageous in order to cover a wide field. At the same time if one examines critically the completed work of research teams, one will often find that when progress has been made, the key discovery was due chiefly to the enterprise or power of perception of an individual of the team. Investigations can be directed, and investigators kept in touch, but the advancement of knowledge is almost always due primarily to individual imagination, initiative, courage, industry, skill, or grip. In reality international teams are already at work, of which one member may be in France, another in Berlin, another in Copenhagen, and another in England, the United States, Japan or elsewhere. They are keenly watching each other's progress in a world-wide tournament with the unknown that is in continual action for the benefit of mankind. King Arthur's round table is thus a better symbol of research to-day than the organisation of the soldier or bureaucrat, however excellent and necessary such disciplined organisation may be for the particular purpose for which it was designed. The mainspring of scientific progress is not uniformity, but independence of thought translated into experimental action, and individuality is one of the most precious, stimulating and necessary qualities of an efficient investigator. It would seem that Nature does not yield her secrets to groups, but to individuals who have the *voies* first to formulate the right question, and then to ask it in the correct experimental manner. Nature is very particular about the last; she only answers when compelled to do so.

An investigator cannot be too certain of his facts—they are sure to be challenged by someone or other—and further, he cannot take too much pains with his report. He will realise that to tell the exact truth is one of the most difficult things in the world. However much trouble he may take, someone will misunderstand him. But if he describes exactly what he did, and the results obtained, and keeps his inferences well within what his data justify, he can never be

wrong. For that reason it is wise to distinguish between inferences and conclusions, because the latter may have to be modified in the light of further evidence.

No research is ever quite complete. It is the glory of a good bit of work that it opens the way for still better, and thus rapidly leads to its own eclipse. The object of research is the advancement, not of the investigator, but of knowledge.

### DIAGNOSIS OF GASTRIC AND DUODENAL ULCER.

(A Paper read before the Fellowship of Medicine.)

By HERBERT CARSON, F.R.C.S.

(Continued from p. 113.)

**Affected by food.**—Now how is the pain affected by food? Well, one fact stands out very clearly: nearly all these cases have found it advisable to exclude certain foods from their dietary. Not that they are wanting in appetite; the appetite is not lost or diminished in gastric or duodenal ulcer unless pyloric stenosis and consequent dilatation of the stomach with retention has supervened. But they find that certain foods cause or increase their pain, and they are better without them. Patients vary so much in the foods they exclude and the foods they allow themselves that differential diagnosis is not helped.

**Relation to food.**—What relation has pain to the intake of food? The answer to this question is of great importance. My experience is that there is always a delay of between one and two hours before pain starts in cases of duodenal ulcer; in the great majority of cases of gastric ulcer there is as much delay, though we may get a proportion of cases where pain occurs at once. It has been suggested that in these cases the ulcer is situated on the lesser curvature near the cardiac end. I do not quite agree with this, as I have often come across cases of ulcer near the pylorus in patients who have complained of pain immediately after food. I would rather say that if pain is delayed the probability is that the ulcer is not near the cardiac end.

The majority of cases of appendicitis have pain immediately or very soon after food, and this is true of cholecystitis also. So we see that delayed pain is not likely to be associated with ulcer in the duodenum or the pyloric portion of the stomach.

**Relief by food.** The statement as to whether the taking of food relieves pain is also of value.

In appendicitis the answer is nearly always, "No, food makes it worse." In duodenal ulcer the majority of cases (75 per cent.) experience a definite relief lasting for an hour or so. Quite a fair number of gastric ulcer cases also obtain relief by taking food, but probably two-thirds of the cases are

made worse by eating. Cholecystitis patients often complain of fulness and flatulence after food, without actual pain.

**Night pain.**—The occurrence of pain at night, waking the patient up, is confined practically to duodenal and gastric ulcer. I have come across it rarely in appendicitis, still less frequently in hyperchlorhydria or cholecystitis. So common is it in duodenal ulcer that patients, knowing the pain will disappear if food is taken, keep a biscuit or some chocolate by their bedsides to take if required, and many patients take a dose of medicine (bismuth and soda generally) to obtain relief. I think we may look upon the occurrence of night pain as a differentiation symptom between gastric and duodenal ulcer and the other forms of dyspepsia.

**Relief of pain by vomiting.**—This is so common in all cases that it has no value for differential diagnosis. Practically all cases of dyspeptic pain experience relief after vomiting, even cancer cases, and it is perhaps the most characteristic symptom in pyloric stenosis when the gradual accumulation of the stomach contents causes increasing discomfort, which is at once relieved by emesis.

**Vomiting.**—The symptom of vomiting is also so common that it does not help much in differential diagnosis. I think we may say it is invariable in cancer of the stomach, quite common in gastric ulcer, appendicitis, and cholecystitis, and rare in duodenal ulcer.

**Hæmatemesis.**—Hæmatemesis is common in cancer and occurs in about 30 per cent. of the gastric cases. It is comparatively uncommon in duodenal ulcer, where bleeding, if it occurs, is distal to the pyloric sphincter. It does not often regurgitate into the stomach, but is passed *per anum*, when it is known as melena. Obvious as it may seem to consider hæmatemesis as pathognomonic of ulcer of the stomach, it is not so, as hæmatemesis is well known as a symptom of splenic anæmia, cirrhosis of the liver and even of chronic appendicitis. The pathology of this last condition is not known for certain. Whether there are minute ulcers, so small that in the folds of mucous membrane they cannot be seen and so free from induration that they cannot be felt, or whether it occurs as a weeping from an area of congestion, is not settled. Rarely is it so severe as to cause death, so that few cases have been examined post-mortem. In the total of eleven cases of appendicitis in the series under review hæmatemesis occurred in four, an unusually large proportion, and in one of these the loss of blood was so severe that the operation was done to meet the emergency.

**Melena.**—If occurring in large quantities and unaccompanied by hæmatemesis, it is pathognomonic of duodenal ulcer, and is a complete justification for operation. If accompanied by vomiting of blood it ranks as a diagnostic sign with hæmatemesis.

**Loss of weight.**—The last symptom I will discuss is loss of weight. This is not in itself a symptom of gastric or

duodenal ulcer, and it may not occur unless the patient suffers greatly from vomiting, as in pyloric obstruction, or has so reduced his diet to relieve pain that he is suffering from malnutrition. Definite loss of weight does not occur in chronic appendicitis or cholecystitis, but it may be a very striking feature of enteroptosis and toxæmia from intestinal stasis. It is a grave sign in patients past middle age with dyspeptic symptoms, especially if associated with loss of appetite and fixed epigastric pain, as it is suggestive of cancer, and would justify exploratory laparotomy.

#### EXAMINATION.

*General appearance.*—Patients with gastric or duodenal ulcer do not carry their diagnosis in their faces. Though you may come across patients who, as the result of long-continued ulcer, show signs of malnutrition, or wear the tired anxious look of one always in pain, this is quite the exception, and as a general rule they look much like other people. The tongue is no guide whatever unless there is gastric stasis. The teeth may be in perfect condition, but I think it is true that if there are not enough teeth for adequate mastication the stomach may become irritated and develop ulceration, and a septic mouth may predispose to ulcer. Experiments on animals by feeding them with bacterial emulsions have resulted in ulcer; but the conditions are barely comparable. The condition of the teeth is, however, of the utmost importance when the question of operation is considered, and I hold that the first step in the preparation for operation of patients with gastric or duodenal ulcer is to remove carious and septic teeth and to make the mouth as clean as possible.

*Examination of abdomen.*—Examination of the abdomen must be conducted with the greatest care and minuteness. The first step is inspection, which may disclose wasting, or dilatation of the stomach, or even in some rare advanced cases of cancer, a tumour. Then palpation; we are examining for tenderness, rigidity (general or sectional), and a tumour.

It is obvious that this is a proceeding where individual dexterity, lightness of touch, and experience in estimating muscle tone are essential. It is here that one man will be able to find abnormalities that another cannot. To estimate comparative rigidity the whole abdomen must be examined, beginning as far from the area where rigidity may be expected as possible. The flat hand must be used, not the fingertips. It is manual rather than digital palpation.

In gastric or duodenal ulcer, rigidity, if present at all, will be found in the epigastrium, the upper part of the right or left rectus abdominis muscle being affected. In appendix dyspepsia there may be slight rigidity in the right iliac fossa, and in cholecystitis rigidity in the right hypochondrium is fairly common. Very often indeed rigidity is absent.

*Tenderness.*—Tenderness is a sign of even greater value, but as it is purely subjective, it must be received with all the greater caution. A simple ulcer of the stomach or

duodenum will probably be quite free from tenderness, but if the ulcer has extended deeply enough to implicate the serous coat, or if adhesions are present, tenderness may be marked and may be definitely localised. I think you may accept as a fact that the pain in ulcer is not due to the ulcer itself, but to the peristaltic spasm in the presence of induration; a condition which the X rays shows to be present so frequently in ulcer.

In chronic appendicitis tenderness is more often found in the right iliac fossa, and it is interesting to note that pressure on the appendix will often elicit, in appendix dyspepsia, the characteristic epigastric pain.

In cancer tenderness is by no means the rule, and this may be due to the fact that in this condition one so often finds the mass free from adhesions and with its serous coat unaffected.

In cholecystitis upward pressure on the gall-bladder, with the patient sitting, very often causes pain (Murphy's sign), and exploration shows how often adhesions form in that disease.

*Tumour.*—The discovery of a tumour is of course diagnostic of grave trouble. It is much more common to find a tumour in late cancer cases than in late simple ulcer owing to the fact that in the latter the mass is so often fixed under the liver by adhesions. I am still inclined to believe that of two tumours, if one is free from tenderness and moves with respiration while the other is fixed, the former is more likely to be malignant than the latter.

*Percussion.*—Percussion to estimate the presence of dilatation of the stomach is practically useless. It shows only the area of the stomach which happens at the time to be occupied by air, and no deduction can be drawn from it. In the same way the splashing sound obtained by shaking the patient is useless—it can always be obtained in a normal stomach four hours or so after a meal, and it has no significance.

#### CHEMICAL EXAMINATION.

Now we must consider the modern developments in the investigation of gastric and duodenal ulcer. They are, first the chemical examination of the stomach contents, and secondly the examination of the gastric intestinal tract by the X rays after the taking of an opaque meal. It is not too much to say that these two methods of examination have revolutionised our knowledge of these conditions.

To take the chemical examination first.

It must suffice to-day if I indicate the evidence to be obtained by this form of examination and its value in diagnosis. At the same time I warn you that it is not an exact science. It does not follow that because you find a certain chemical change in the stomach contents to-day that it will be exactly the same to-morrow, or that a qualitative test carried out to three places of decimals represents a fixed quantity. And this of course is where this method fails to

be a diagnostic panacea and takes place more as a means of obtaining further evidence which must be taken with other signs and symptoms to form the symptom complex. Though there are many side issues, the main object of the examination is to estimate the amount of gastric secretion, to verify the presence or absence of free hydrochloric acid, to estimate it quantitatively, and to discover the total acidity. Two methods are used.

In the *first* the contents of the fasting stomach are examined. The contents of the stomach are washed out over-night, and in the morning, before food is taken, a tube is passed and the stomach contents aspirated. If more than 30 c.c. are removed there is hyper-secretion, and though of no value as a differential sign, it proves the presence of an abnormality, and if by the microscope the fluid is found to contain blood or pus, the presence of ulceration may be suspected.

In the *second* method a test-meal is administered and the contents of the stomach aspirated after digestion is well started. The simpler the meal the better, and you cannot improve on the traditional two slices of bread and a cup of tea or water, examining in one hour. Generally about 60 c.c. are recovered (say 2 ounces), and marked increase shows delayed emptying of the stomach. Some information may be obtained by microscopic examination, especially the presence of mucus, blood or bile; but the main test is for free hydrochloric acid. Normally this should be found in a percentage of about 0.1 and 0.2. Excess (hyperchlorhydria) is found in many disorders.

Diminution (hypochlorhydria) is found in cancer and gastric dilatation of long standing. At one time hyperchlorhydria was considered a definite indication of gastric or more especially of duodenal ulcer, but we know that it occurs in chronic appendicitis and also in cholecystitis. I am satisfied that a single test is valueless, and that at least three tests must be made and an average taken. The ordinary routine is to examine the filtered contents by Topfer's method, by which a quantitative estimate can be made of total acidity and free hydrochloric acid, and by subtraction, of combined hydrochloric acid and acid salts. Other tests can be done for lactic acid (which occurs in stasis and subacidity), propeptone, peptone, pepsin, etc. You will see that by these tests we can estimate pretty exactly the digestive power of the digestive juices. The variability in the findings makes several tests necessary, and you will find, as I have, absence of HCl or perhaps only a trace in gastric or duodenal ulcer. In two cases of duodenal ulcer occurring about the same time and having almost identical lesions, one had 0.438 per cent. for free HCl, the other had only a trace, but repeated examinations avoid these errors. On the whole I should say that the absence of free HCl (pointing to cancer or prolonged gastric stasis) is of greater diagnostic value than excess of free HCl, which may be present in gastric or duodenal ulcer, appendicitis or

cholecystitis. As I said before, excess of free HCl is by no means always present in the disorder known as hyperchlorhydria.

#### EXAMINATION OF FÆCES.

As far as the diagnosis of gastric and duodenal lesions is concerned, examination of the fæces is limited to the search for occult blood. It seems reasonable to believe that if you could exclude all sources of error, the continual presence in the fæces of small quantities of blood would be very suggestive of some breach of continuity of the mucous surface of the gastric intestinal tract, but the sources of error are indeed numerous.

First of all, one must be certain that no meat has been taken by the patient for several days, and that the gastro-intestinal tract is free from the last trace of a meat meal. Then the test must not be done while the test-meal examinations are going on lest the passage of the evacuating stomach-tube should by any chance excite bleeding from the throat, œsophagus, or stomach. Then one must be able to exclude bleeding from every other source in the gastro-intestinal tract, particularly the sigmoid and rectum, which are often irritated in dyspeptic patients who so often suffer from constipation. The test consists in finding hæmin crystals in the fæces. A small quantity of fæces is dried in a watch-glass over a spirit-lamp. The dried residue is mixed with a little common salt and a drop or two of glacial acetic acid added. The mixture is heated on the watch-glass again and then allowed to cool, when the hæmin crystals will form as cooling progresses, and can be recognised under the microscope. I own to but little faith in the test.

#### X-RAY EXAMINATION.

Lastly let me come to the X-ray examination of the stomach and intestinal tract after the ingestion of an opaque meal. I believe this is of greater value than the chemical tests, and it is developing rapidly into an exact science. Progress would be still more rapid if all patients were prepared in the same way for the examination, and particularly if a standard meal were used. The latter difficulty is being overcome by the widespread adoption of "umbrose," a prepared meal invented by my colleague Dr. Metcalfe, containing 75 per cent. of barium sulphate made into a fine powder with arrowroot and a little flavouring. I would make a strong appeal for examination of the whole gastro-intestinal tract. It is not enough merely to investigate the stomach. We want to know whether the tone of the stomach is normal, whether peristalsis is normal, whether the stomach is dilated, whether the gastric contents pass normally, too slowly, or too quickly into the duodenum, whether the stomach empties itself normally. Then the meal must be followed into the duodenum and so through the whole alimentary tract, particular attention

being paid to the investigation of delay in the last coils of the ileum or caecum, and a record made of the large intestine, particularly with reference to displacements.

It is obvious that to get a clear idea of the movements of the stomach many examinations must be made, and unfortunately it is not yet practicable to get moving pictures. If only a few films are made it is possible to mistake a peristaltic wave for a malformation, and I have seen negatives in which it is almost impossible to differentiate between a strong muscular action and an hour-glass stomach. The difficulty is got over by examining the movements of the stomach through the fluorescent screen, when a peristaltic action is seen to pass on or it can be dissipated by gentle massage. But this investigation is by no means free from danger to the operator, and many radiographers have suffered severely from the unavoidable exposure.

The X rays have taught us the shape and position of the normal stomach, the time at which the food begins to leave the stomach after a meal, the time taken to empty the stomach, the period at which the food reaches the caecum, the manner of the passage of the contents along the colon, and many other points of great interest in the normal person. In diseased conditions our knowledge has been added to even more and in many cases an accurate diagnosis can be made by this method alone.

### INFECTIONS OF THE TESTICLE.

By KENNETH WALKER, F.R.C.S.,

In Charge of Venereal Department, St. Bartholomew's Hospital.

**N**ineteen cases out of twenty the nature of an inflammatory lesion of the testicle is easily determined, and no particular skill is required in order to attach it to its appropriate diagnostic label. The twentieth case may, however, present greater difficulties, and demand a very careful and extensive investigation before its true nature can be determined. Indeed, it will often be found impossible to arrive at a correct conclusion without the aid of a bacteriological investigation and of a detailed examination of the rest of the genito-urinary system. To understand the pathology of such cases it is advisable to consider first the various routes by which a testicle may become infected. These are three in number:

- (1) By the blood-stream.
- (2) By the vas deferens.
- (3) By the lymphatics accompanying the vas.

That the testicle may be infected by organisms in the blood is of course an indisputable fact. Any vascular structure in the body is liable to such an accident. In the case of the testicle, however, a special liability to infection may possibly exist. There is reason to believe that in the fight of the body against infective organisms bacteria are elimi-

nated from the blood-stream by the agency of various glands, notably the kidneys; similar aid is possibly lent by the salivary glands (Quénu), the seminal vesicles (Huet), and, according to Belfield, by the testicles. The words of the last-named writer are worthy of quotation in this connection: "While the kidney is provided with a new and private sewer—the ureter—the testis continues to use the frog's old urinary duct, now called the epididymis and vas deferens. This excretory function of the testicle and its duct illumine both its intimate alliance with the kidney, and its frequent infection from the blood. The recognition of the testicle as an excretory organ illumines the frequent invasion of its tubules by mumps, typhoid, and colon bacillus, *Spirochaeta pallida* and other blood infections."

The analogy drawn between the testis and the kidney is ingenious, but Belfield's deductions must be received with caution. Although economy is so strictly observed in the working of the human body, it is difficult to believe that to the organ responsible for the all-important function of perpetuating the human race is delegated the additional duties of a scavenger! Would the benefit conferred by the testicle as an excretor of organisms justify the risk that it entailed to the next generation? This form of scientific argument belongs perhaps to a past age, but at any rate it justifies the adoption of a critical attitude towards Belfield's hypothesis. Further work must be done on this subject before the rôle of scavenging can be safely added to the all-important functions of the testicle. It is in any case a question of theoretical rather than of practical importance.

Whatever their true pathology may be, blood infections of the testicle are not uncommon. Such an infection may occur during the course of typhoid, smallpox, syphilis and mumps. According to literature it has also been seen as a complication of tonsillitis, glanders, dengue, malaria, acute rheumatism, scarlet fever and influenza. Diagnosis in such instances does not, as a rule, present any particular difficulty, although in certain cases of mumps the testicular lesion has so completely overshadowed that of the parotid gland that the true nature of the infection has been missed. The fact that the body of the testis, rather than the epididymis, is affected is of diagnostic importance. So also is the absence of any lesion of the prostate and vesicles.

Infection through the vas or its surrounding lymphatics accounts for the vast majority of cases of epididymitis and epididymo-orchitis with which the surgeon is called upon to deal, and it is in the task of differentiating between the various members of this group that difficulty arises. Although gonorrhoea and tubercle account for the majority of these cases they by no means account for all. Non-gonococcal epididymitis is probably less of a rarity than is commonly supposed, and it is on the importance of recognising the existence of such cases that emphasis is laid.

The key to these cases is the prostate. The importance of the P.R. examination in all cases of epididymitis cannot

be over-stated. Wherever any doubt exists a bacteriological examination of the prostatic fluid must follow. The prostate is the gate through which infection has passed, and the bacteriology of the prostatitis is the bacteriology of the epididymitis.

Although a certain number of these cases of non-gonococcal epididymitis are due to secondary organisms (staphylococci, *Bacillus coli communis*, etc.) following a true gonococcal infection, there remain others in which gonorrhoea can be definitely excluded. Amongst these infections with a coliform bacillus are the commonest. Such cases are often extremely puzzling, for the original generalised infection of the urinary tract may have cleared up, and nothing may remain but a focus in the prostate, from which the epididymis has become infected. The following case is an excellent example of such an infection:

A. B., æt. 40, mechanic, suffering from acute epididymitis (right). Previously had had three separate attacks of epididymitis on the left side, the first one some six months previously. Denies venereal infection. Has suffered from various attacks of "influenza." For a year he has noticed frequency of micturition, and at three different periods has suffered from transient and mild hæmaturia. Pain on micturition referred along urethra. A dull ache over the sacrum. *Per rectum* considerable inflammatory enlargement of prostate, with thickening of the ampulla of the vas on the right side. Cultures: A Gram-negative coliform bacillus. No gonococci.

#### NOTE.

The occurrence of repeated attacks of epididymitis in this case clearly accounted for by the existence of a focus in the prostate. The condition of this structure furnishes the key to treatment as well as to diagnosis. Until the condition in the prostate has been remedied the patient will be liable to further attacks of epididymitis. The attacks of "influenza" preceding the history of epididymitis probably represented the original *Bacillus coli* invasion of the urinary tract.

The method by which an epididymis becomes infected from a focus in the prostate is still a disputed point. Two explanations may be put forward. The first postulates a wave of reversed peristalsis, travelling along the vas, and driving infective material from the prostate to the epididymis. The second claims that infection is *viâ* the lymphatics in and surrounding the vas. There is much to be said for either theory, and it is probable that infection may take place by either means. The centripetal flow of lymph along the lymphatics of the vas is sufficiently sluggish to permit of infection passing in an opposite direction. The fact that infection *viâ* the lymphatics would be against the lymph-stream is no argument against its occurrence.

Of the differential diagnosis between tuberculous and chronic gonococcal epididymitis it is beyond the scope of this brief paper to speak. It will be sufficient to point out that the similarity is often extremely great—so great, indeed,

that it seems impossible to the writer to suppose that the route of infection is not the same in the two cases—along the vas in the direction of the epididymis. Likewise is it impossible to deal with the all-important question of treatment. All that can be said in conclusion on this subject is contained in the following dictum. The key to the diagnosis and treatment of epididymitis almost always lies in the prostate.

### THE TREATMENT OF ACUTE SUPPURATIVE OSTEOMYELITIS BY DIAPHYSECTOMY.

By K. J. ACTON DAVIS, M.C.(Cantab.), F.R.C.S.

**A**CUTE suppurative osteomyelitis is a disease common in children, associated with a high mortality, or, in cases of recovery, with permanent disability of function or loss of the affected limb.

The pathology of the condition is as follows:

As a sequel of an injury of varying severity, an infection by the *Staphylococcus pyogenes aureus* takes place in the diaphysis close to the growing epiphysis. The infection spreads rapidly up the medulla and through the Haversian canals out underneath the periosteum, extending rapidly under the latter and stripping it up from the bone from one epiphysal line to the other with resulting necrosis of the whole diaphysis. The sequelæ of the formation of the sequestrum and involucrum with ultimate separation of the former are too well known to need description.

The treatment generally advocated in text-books is as follows:

- (1) Incision of the periosteum from end to end of the stripped-up area and evacuation of the pus.
- (2) Opening the medulla of the diaphysis by a "gutter" incision along its whole length.
- (3) If pyæmia or amyloid disease supervene amputation well above the site of infection.

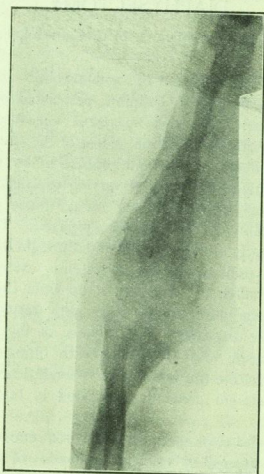
The difficulties of treatment are mainly due to unsatisfactory drainage, owing to the fact that the disease spreads widely in the medulla, and even after apparently thorough opening of the bone some foci of infection are left unopened, and these, being enclosed in rigid bony walls, do not drain satisfactorily, and consequently septic absorption and pyæmia are very likely to supervene.

Examination of amputated specimens confirms this. In a very large number of cases unopened infected cavities in the bone can be demonstrated, proving the unsatisfactory nature of the drainage.

As an alternative method of treatment diaphysectomy is occasionally employed, and it would seem that in certain selected cases it might be more generally employed on the following grounds:

- (1) It removes the infected focus much more completely than is done by any other method except amputation.
- (2) The necrosed bone is removed, and with it a constant source of irritation.
- (3) It is rapidly performed, and is an extremely simple operation.
- (4) It does not lay open any tissues hitherto unaffected.

If the bone is stripped of periosteum it is dead and will ultimately have to be removed, and there does not seem any object to be gained in leaving the dead diaphysis to



SKIAGRAM, MARCH 17TH.

separate. The division should be made through dead tissue and not at the junction of living and dead, as this would be likely to interfere with future growth of the limb.

A boy, *æt.* 8, came under my care at the East London Hospital for Children with the following history:

On December 21st he injured his elbow (severity of injury uncertain).

December 22nd: Elbow swollen. X-rayed for evidence of fracture. *Ni* abnormal discovered.

December 23rd: Admitted to hospital. Temperature, 104° F.; pulse, 140; respirations, 44. Boy very ill; delirious.

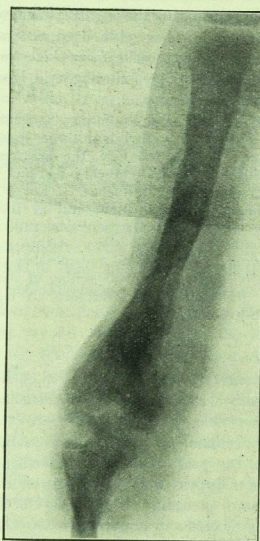
Right arm generally swollen, especially in forearm, on the outer and upper aspect in relation to the extensor group of muscles. Movements of joint free. Maximum tenderness in forearm.

*Operation.*—Incision of large intramuscular abscess in

extensor muscles of forearm. Culture: *Staphylococcus pyogenes aureus*. Abscess apparently localised to forearm. No connection with bone demonstrable.

Child improved, temperature ranging between 99° and 100° F. On January 4th patient became much worse, and temperature rose again to 104° F. Marked swelling of arm appeared. Skiagram showed a patch of necrosis at the lower end of the humerus.

*Operation.*—The shaft of the humerus was exposed, and found completely stripped of periosteum and necrosed.



SKIAGRAM, APRIL 12TH.

The shaft was opened by a gutter incision on its external aspect, and the medulla was found to be full of pus. The bone was widely opened, the musculo-spiral nerve being seen and avoided. No improvement resulted: the boy continued delirious, with a very high temperature and a pulse rate as high as 150.

On January 15th I opened a large abscess in his upper arm, and during this operation the boy nearly died on the table.

On January 15th, 10 p.m., a pyæmic abscess appeared in his buttock, and that night I opened it and removed the diaphysis of his humerus, cutting it through with bone forceps  $\frac{1}{2}$  in. above his lower epiphysis and  $\frac{1}{2}$  in. below his upper epiphysis. The arm was put up extended on a Thomas's splint.

On January 20th temperature 98.4° F., pulse 130, respirations 32. Convalescence was uninterrupted.

Skiagram, March 17th, 1920, showed commencing regeneration of shaft, and shows quite clearly dense patches of sequestra at upper and lower ends.

Small sequestra were spontaneously extruded after about five weeks, and the boy was discharged to Bognor Convalescent Home on March 11th, 1920.

Returned after one month.

Skiagram taken on April 12th, 1920, shows humerus completely regenerated, sequestra at upper and lower ends gone. Two small sequestra present, one in middle of shaft and one at lower end—since extruded.

The boy has now two small sinuses, and a considerable amount of limitation of movement at the elbow. Otherwise the arm is normal in length and strength, and the prognosis of complete restoration of function is good.

This case is a very good example of the unsatisfactory nature of drainage by guttering of the bone, and the almost magical effect of complete removal of the infected area.

#### Conclusions.

- (1) Diaphysectomy is a simple operation rapidly performed.
- (2) It completely removes the source of sepsis.
- (3) There is no reason why it should alter the future prospects of growth of the bone or regeneration of the shaft.
- (4) It produces little shock and does not open up fresh tissue to infection, and is therefore preferable to amputation.

### A CASE OF CANCRUM ORIS, SHOWING A RARE DISTRIBUTION OF SECONDARY INFECTION.

By H. J. McCURRICH, M.R.C.S., L.R.C.P.

**T**HE following case of cancrum oris exhibits a few peculiarities. The patient's age was 44, and the distribution of the secondary infection was an extremely rare one.

In an article by Drs. George H. Weaver and Ruth Tunnicliffe in the *Journal of Infectious Diseases*, January, 1907, a comprehensive survey of infections by Vincent's spirochete and fusiform bacillus is given, and a full bibliography is included. Infections of the mouth, vagina, rectum, nose, and external auditory meatus are described.

The only writer quoted as having seen ulceration of the intestines in man by these organisms was Angelici, and he had only seen one or two cases.

Only a few cases of cancrum oris or noma were described in adults.

#### Details of the case.

S. M.—*æt.* 44, a married woman, was admitted into Radcliffe Ward about 10.30 p.m. on February 11th, 1920, complaining of a gangrenous patch on the cheek and ulceration of the mouth.

*History.*—About a month before admission the patient had the first lower molar tooth on the right side extracted under an injection of local anaesthetic. Fourteen days later a septic place appeared on the outer side of the socket of the extracted tooth. The sepsis and ulceration spread rapidly. She was under treatment for ten days before admission.

*Condition on admission.*—The patient looked very ill indeed, her temperature was 98° F. and her pulse 148. She complained of much pain in the right side of her face. A thick grey slough covered the entire inner surface of the right cheek as far back as the fauces, spreading on to both alveoli. There were no upper teeth, and of the lower teeth on the affected side the first molar was absent and the second and third molar teeth were loose. The ulceration had extended through the right cheek, and about an inch and a half from the corner of the mouth there was a black gangrenous round patch the size of a shilling. Glands in the neck were enlarged. There was a petechial rash over the abdomen.

*Treatment.*—The patient appeared to be beyond treatment, but both she and her husband, though aware of the small chance, were anxious that something should be tried. Accordingly it was decided to attempt to excise the gangrenous patch and to scrape the slough away and disinfect the underlying tissue. Under nitrous oxide and oxygen anaesthesia an incision was made from the angle of the mouth and the gangrenous patch excised. The slough was partly removed, but it was found to involve the fauces deeply and spread between the cheek and the anterior pillar; the bone of both the upper and lower alveoli was bare. The loose molars were removed and the whole area swabbed with pure carbolic. 25 c.c. of Burroughs and Wellcome's antistreptococcal serum were given intravenously and another 25 c.c. of the same serum injected hypodermically into the breast; 1 c.c. of pituitary extract was also given hypodermically.

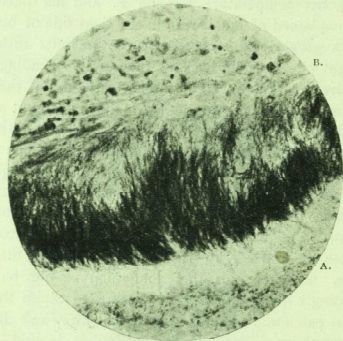
The patient recovered consciousness after the operation but died about three hours later.

*Post-mortem.*—In addition to the mouth condition there were found: (1) In the stomach two areas of hæmorrhage and early ulceration, one the size of a shilling, the other the size of a pea. (2) In the colon a few sub-peritoneal hæmorrhages were seen on the surface. On opening the colon numerous round crater-like ulcers the size of a pea were seen. These were very numerous in the ascending and descending colon, less so in the transverse, and none in the pelvic colon. Spirilla and fusiform bacilli were found in the mouth and in the ulcers in the colon.

A general examination showed the purpuric rash seen on admission. The left lung was congested at the base with a small area of consolidation. The heart was pale, with numerous small sub-pericardial, myocardial and sub-endothelial hæmorrhages. The heart and great vessels contained very pale clot. The liver was large and pale and showed fatty changes.

A section was cut through the edge of the excised gangrenous patch and the normal skin close to it. Photographs of this section are shown.

The section was stained by the Gram-Weigert method and shows a dense palisade of fusiform bacilli at the junction between the necrotic (A) and normal (B) tissues. These are shown in the photograph.



MAGNIFICATION × 500.



MAGNIFICATION × 1000.

A section stained by the method of Levaditi showed at places large numbers of spirochaetes, which in some cases were invading the normal tissue in advance of the fusiform bacilli.

In publishing this case I am indebted to Sir D'Arcy Power, K.B.E., F.R.C.S., under whose charge it was admitted, for permission to do so, to Dr. Spilsbury for the post-mortem report, and to Dr. Mervyn Gordon for the bacteriological report and permission to publish these photographs.

## A CASE OF UNDIAGNOSED VOLVULUS OF THE SMALL INTESTINE.

By H. J. McCURRICH, M.R.C.S., L.R.C.P.

**M**ISS B—, æt. 36, a single woman, was sent in by a doctor as she was bleeding from the vagina and had signs of bleeding into her abdomen.

She was admitted to Lucas Ward on February 29th, 1920. The history of the present condition was that she was quite well on February 26th. On the 27th she had a severe hæmorrhage from the vagina with severe abdominal pain; she had got gradually worse. Her bowels had been open since the attack. She had vomited several times. Her doctor had treated her with injections of morphia.

*Past history.*—She had been living with a man as his wife for about seventeen years. She had one child, æt. 16. Three years ago she had a miscarriage. In December, 1919, she had the right Fallopian tube removed in this Hospital on account of a ruptured ectopic gestation.

*Condition on admission.*—The patient was in a condition of severe shock, pale, and complaining of thirst. Her temperature was 97.2° F., pulse 112, respirations 20. Pupils were contracted from morphia. She was not vomiting. Bright blood was coming from the vagina. The abdomen was distended, a little tender in lower part, not rigid. There was free fluid in the abdomen.

It was thought that an attempt at abortion might have been made, though no history of this was obtained.

Her general condition was too bad for an operation to be performed. Her temperature remained subnormal and her pulse-rate increased.

She died the following day.

*Post-mortem.*—There were found (1) a volvulus of the small intestine; (2) abundant free blood-stained fluid in the peritoneal cavity; (3) hæmorrhagic cysts in the left ovary; (4) blood in the body of the uterus (not due to menstruation). There was a volvulus of the small intestine from a point 4½ ft. below the duodeno-jejunal junction to within 2 in. of the ileocecal valve. The twist in the mesentery was clockwise, and there appeared to be two complete turns. The intestinal wall in this area was a deep purple colour and thickened; the bowel was dilated in the area involved, especially above. The mesentery of the affected area had a purple colour, but the condition of the blood-vessels was not examined, the specimen being kept for the Museum.

The fact that she was not vomiting was probably due to the amount of morphia she had had before admission. She was admitted about 4 p.m.; she had had ½ gr. of morphia hypodermically in the morning and ¼ gr. in the afternoon. Why she had bleeding from the uterus was not really explained by the post-mortem.

I am indebted to Sir D'Arcy Power, K.B.E., F.R.C.S.,

under whose care the case was admitted, for permission to publish these notes, and to Dr. Bernard H. Spilsbury for the post-mortem notes.

## 1ST LONDON (CITY OF LONDON) GENERAL HOSPITAL REUNION DINNER.

**T**HE 1st London General Hospital was mobilised on August 4th, 1914, and was demobilised on April 30th, 1920, having been "on active service" for practically five years and eight months.

The first Reunion Dinner of the gentlemen and ladies who had served with the unit took place on the evening of "View Day," May 12th, 1920. A goodly number assembled at the Hotel Great Central, the ladies being three times more numerous than the gentlemen.

Lord Sandhurst presided, and among those who were present were: Miss Cox-Davies, Miss McIntosh, Lady Sandhurst, Col. Sir D'Arcy Power, Miss Rundle, Col. W. A. Atkinson, Miss Appleyard, Col. R. J. W. Oswald, Miss Cockshott, Col. W. McAdam Eccles, Miss Preston, Captain Harold Wilson, Miss Thompson, Miss Storrs, Captain Girling Ball, Miss Horder, Miss Bompas, Miss Brailsford, Mrs. Carter, Miss Bourner, Dr. A. Pavey Smith, Dr. K. Hay, Dr. Duncan Mackintosh, Mr. Holmes Spicer, Mr. Ernest Clarke, and many others who had rendered much aid to the Hospital.

After the toast of "The King" had been loyally honoured, Lord Sandhurst proposed the toast of the evening, that of "The health of all those who had served the 1st London General Hospital."

He drew attention to the fact that the Unit had been "manned" and "womanned" by "Bart.'s," and that this was not the first time that Bart.'s had undertaken the treatment of the "wounded soldier," for on the table was the statuette of the soldier treated in the old hospital in the year 1637. The site chosen for the General Hospital was a good one, though rather far away from Harley Street and the railway termini. The inception of the Hospital owed much to Sir Alfred Keogh and to Sir Anthony Bowlby. The original number of beds was 520, but expansion took place, so that with the Section at St. Bartholomew's and the other Sections and Auxiliaries more than 2000 beds were eventually under the control of the unit. Over 46,000 men were admitted, and the operations performed exceeded 10,000, while the number of persons who took part in the work of the hospital reached the large total of 2000. Nothing could have been more harmonious than the working of such a large body of people—in fact it was like a great family party.

Special thanks were due to those who initiated and carried through the Y.M.C.A. Hut, Workshop, and Officers' Annexe. And now the Hospital had come to an end of its activities, the end of its grand work, and those gathered met as friends brought together by the necessities of the war, but determined to hold together in the times of peace, and all joined in the hope that long might live that spirit of comradeship inspired by the 1st London General Hospital.

The toast of "The Health of the Chairman" was proposed by Sir D'Arcy Power, and responded to, and "The Health of Col. McAdam Eccles," who had acted as Hon. Secretary for the Dinner, was proposed by Miss Cox-Davies. Col. Eccles in his reply drew attention to the fact that the day was the centenary of the birth of Florence Nightingale—a very appropriate anniversary for a reunion of so many nurses and V.A.Ds. who had worked so splendidly for the sick and wounded in the 1st London General Hospital.

After the Dinner the guests enjoyed an informal dance to music supplied by a most excellent ladies' orchestra under the guidance of Miss L. Markham.

## INTER-HOSPITAL GOLF CUP COMPETITION.

**T**HE first round of the Inter-Hospital Golf Cup was played at Stanmore on Wednesday, May 12th. We were drawn against University College Hospital, who, having the right to pick the course, chose Stanmore, a long hilly course with a number of blind holes.

Our team played at a certain disadvantage in not knowing the course, while our opponents were mostly acquainted with the vagaries of the "blind holes."

Notwithstanding, after a very interesting and enjoyable day we defeated U.C.H. by 5-4 points, the match turning on the last game of the day.

In the next round we meet St. Mary's Hospital, who have had a walk-over with Westminster.

Owing to our scanty knowledge of the "golfers" in the Hospital, it was only with great difficulty a team was raised to uphold the name of "Bart.'s" at all.

Would those gentlemen who know the difference between a "spoon" and a "putter" please communicate with J. L. Potts or C. H. Bulcock as soon as possible.

Singles.	
C. H. Bulcock (3 and 2).	1 v. Forman . . . . . 0
W. C. Stuart-Lowe . . . ½ v.	Pearson . . . . . ½
J. Ness-Walker (2 up) . . . 1 v.	G. Walker . . . . . 0
F. C. Cozens . . . . . 0 v.	Claremont (3 and 1) . . . 1
S. Orchard . . . . . ½ v.	Blake . . . . . ½
E. H. Roberts . . . . . 0 v.	Overton (6 and 5) . . . . . 1
	—
	3

Bulcock	} (5 and 4)	1 v.	{ Forman	}	0	
Cozens						{ Walker
Orchard	} (3 and 1)	1 v.	{ Pearson	}	0	
Ness-Walker						{ Blake
Stuart-Lowe						{ Claremont (1 up)
Roberts	}	0 v.	{ Overton	}	0	
		2			1	

## OUR LITANY.

**I**IE porter upward plods his weary way  
 To wake the sleeping beauty—that means me!  
 The calls that have been banging fire all day  
 Accumulate by night for poor D3.

And with each spavin-jointed knock-kneed pace,  
 Slow but progressive as the march of doom,  
 The sweat bursts out upon my pallid face;  
 I wait him—in the silence of the tomb.

Perchance—maybe—he only comes to say  
 Some wench to strenuous labour long unknown  
 Has unaware let loose a B.B.A.:  
 God grant that she *has* done it on her own.

But what is this? His footsteps pass my door  
 And on—still on—keep up uneven way,  
 Till, echoing weirdly on the upper floor,  
 They leave me wondering till the peep of day.

When—relics in the corridor displayed  
 Of his eventful passage overnight  
 Read me the riddle, for I see arrayed  
 Plain signs of what he was—some drunken wight.

God curse the man to liquor strong unused  
 (Would he were girdled to maternal hem);  
 Who goes, on pleasure bent, and gets well-boozed,  
 Then wakes the district clerks at 1 a.m.

May, 1920. D3.

## REVIEWS.

PRINCIPLES OF HUMAN PHYSIOLOGY. By E. H. STARLING, M.D., F.R.S., Professor of Physiology, University College, London. (J. & A. Churchill.) Pp. 1315. Price 25s. net.

Physiology has made such rapid strides during the last few years that the appearance of a new edition of the *Principles of Human Physiology* is particularly welcome. The most important alteration in the present edition is that the section on the special senses has been entrusted to Dr. Hartridge, whose account of this difficult subject is admirably clear and simple. In the light of knowledge gained during the war the chapter on diet has been largely re-written, and a very interesting account of the "spinal" man has been added to the section on spinal shock. Extensive alterations have also been made in the chapters dealing with muscular exercise, the pulse-wave and the functions of the kidneys. As in the earlier editions the book is written with a freshness and vigour of mind and with a breadth of view which cannot fail to inspire and stimulate its readers, and it should be read not only by the advanced student, but by everyone who wishes to keep abreast of modern physiological teaching.

SIGHT-TESTING MADE EASY. By W. WRIGHT HARDWICKER. Fourth edition. (J. & A. Churchill.) Pp. 79. Price 5s. net.

The present edition has been thoroughly revised and a short chapter on retinoscopy is now included. The book is not intended to supersede large works but aims rather at being a concise and practical summary of the art of sight-testing. We can thoroughly recommend this little volume; it admirably serves the purpose for which it was written.

WHEELER'S HANDBOOK OF MEDICINE. By WILLIAM R. JACK, B.Sc., M.D. Sixth edition. (Edinburgh: E. & S. Livingstone.) Pp. 561. Price 12s. net.

"Wheeler and Jack," as it is affectionately known to a host of medical students, is undoubtedly one of the most, if not the most popular short book on medicine in the English language. Whatever may be said against the book, the author has a perfect genius for putting the essential and diagnostic features of disease before the student in the minimum amount of space. It would be absurd to suggest that it forms a complete guide to medicine, but a careful perusal of its pages, together with careful clinical work, will enable the student to get a clear idea of the subject and prepare his mind for further detailed work on a more elaborate and comprehensive scale.

By the use of smaller type in certain sections the size of the book has not been notably increased. Space has been found for articles on Landry's paralysis, caisson disease and compression paraplegia, as well as a brief description of myasthenia gravis. The chief medical diseases of the war have also been briefly mentioned.

HERMAN'S DIFFICULT LABOUR. Revised and enlarged by CARLTON OLDFIELD, M.D., F.R.C.S. Sixth edition. (Cassell & Co., Ltd.) Pp. 573. Price 16s. net.

While no radical alterations have been made in the letterpress, yet Mr. Oldfield has succeeded in bringing this medical classic up to date. The alterations which have been made relate almost entirely to treatment. In particular, it is advised that Caesarean section should be done more frequently in contracted pelvis, and also in ante-partum hæmorrhage. The description of this operation has been re-written, as well as the section on the treatment of rupture of the uterus.

The book, retaining as it does all its own characteristics, must still be regarded as one of the best guides to the student and practitioner in the treatment of cases of difficult labour.

MINOR SURGERY AND BANDAGING (HEATH, POLLARD, DAVIES). By GWYNNE WILLIAMS, M.S., F.R.C.S. Seventeenth edition. (J. & A. Churchill.) Pp. viii + 447. Price 10s. 6d. net.

"Heath's Minor Surgery," to give this volume its original name, has stood the test of time, and must still be looked upon as an essential to the student and junior practitioner. The present edition, while retaining all its old points of excellence, has been thoroughly revised by Mr. Gwynne Williams and parts of it entirely re-written, the chapter on general anaesthesia and local analgesia being especially good. We have nothing but praise for the book, which should be read by every student, especially during his period of dressership.

SYPHILIS IN CHILDHOOD. By LEONARD FINDLAY, M.D., D.Sc. (Henry Frowde & Hodder & Stoughton.) Pp. x + 154. Price 8s. 6d.

This is an extremely well printed and readable little volume—so readable in fact that we could have wished that its pages had been extended. For purposes of classification the symptoms are divided into early, intermediate and late. Other chapters are devoted to relapses, supposed syphilitic conditions, diagnosis and acquired syphilis in childhood. The concluding chapter on treatment is very sound and is obviously based on a wide experience.

The author would like to see syphilis made a notifiable disease. He also states that in his opinion patients may marry after a thorough course of salvarsan and mercury providing the Wassermann reaction has remained negative for one year.

NOTES ON GALVANISM AND FARADISM. By E. M. MAGILL. Second edition. (H. K. Lewis & Co., Ltd.) Pp. 224. 6s. 7d. Price 6s. net.

This is a good little book for those beginning the study of electro-therapeutics. It is concisely written and the diagrams are clear and simple. There is an appendix containing examination papers set by the Incorporated Society of Masseuses which should be useful to those about to brave the examiners.

AIDS TO ELECTRO-THERAPEUTICS. J. MAGNUS REDDING. (Baillière, Tindall & Cox.) Pp. 196. Price 6s. net.

The idle student who wishes to learn just enough will find plenty to occupy him in this little brown volume. The dull though eager person will find that he knows quite a lot when he has absorbed the contents of this comfortable, well-fied child, and we can recommend bigger diagrams, but being small the book can be carried in the pocket and serve as a solace to the studious soul who deems an idle day ill-spent.

A new set of manuals for medical students is about to appear under the general heading of "The Students' Synopsis Series." The publishers are Messrs. J. & A. Churchill, and they expect to issue immediately *Pharmacology*, by Dr. Douglas Cow, and *Dentistry*, by Mr. A. Bayford Underwood. A *Synopsis of Surgery* by Mr. Ivor Back and Mr. A. Tudor Edwards is in the press.

## RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ADAMSON, H. G., M.D., F.R.C.P. "On the Present Position of Curative Vaccination." *British Journal of Dermatology and Syphilis*, vol. xxxi.

"Three Cases of Lichen Planus in Children." *Ibid.*, vol. xxxii.

"On Schamberg's Peculiar Progressive Pigmentary Disease of the Skin." *Ibid.*, vol. xxxii.

BATTEN, RAYNER D., M.D. "The Need of Ophthalmic Physicians for the Advancement of Ophthalmology." *Proceedings of the Royal Society of Medicine*, April, 1920.

BOWLBY, SIR ANTHONY, K.C.B., K.C.M.G., K.C.V.O. "On the Application of War Methods to Civil Practice." *Ibid.*, April, 1920.

COLLINS, SIR WILLIAM JOB, K.C.V.O., M.S., M.D., B.Sc., F.R.C.S. "Specificity and Evolution in Disease." *Lancet*, May 15th, 1920.

CUNNINGTON, C. WILLET, M.D., B.C. "Pericardial Effusion Following the Injection of Anti-diphtheritic Serum." *Ibid.*, May 8th, 1920.

DALE, H. H., M.D. "Conditions which are Conductive to the Production of Shock by Histamine." *British Journal of Experimental Pathology*, April, 1920.

ELMSLIE, R. C., M.S., F.R.C.S. "Birth Palsy in a Boy." *Proceedings of the Royal Society of Medicine*, April, 1920.

"Case of Os Tibiale Sesamoidesum." *Ibid.*

"Case of Multiple Congenital Deformities." *Ibid.*

"Recovery after Suture of Median and Ulnar Nerves in the Forearm." *Ibid.*

EVANS, E. LAMING, F.R.C.S. "Skiagrams of an Injury to the Neck of the Femur Produced in Straightening a Flexed Hip in a Case of Infantile Paralysis." *Proceedings of the Royal Society of Medicine*, April, 1920.

"Case of Arthritis of the Knee with Persistent Flexion." *Ibid.*

FELLING, ANTHONY, M.D., F.R.C.P. "Two Cases of Intramedullary Tumour of the Spinal Cord with Operation." *Lancet*, May 1st, 1920.

GRANT, J. DUNDAS, M.D. "Case of Congenital Occlusion of One Chinna." *Proceedings of the Royal Society of Medicine*, April, 1920.

"Case of Hoarseness: Ventricular Band Phonation." *Ibid.*

GROVES, ERNEST W. HEY, M.S., F.R.C.S. "The Application of Bone grafting in the Treatment of Fractures." *Lancet*, May 15th, 1920.

HEPBURN, M. L., M.D. "Aneurysmal Varix of Cavernous Sinus." *Proceedings of the Royal Society of Medicine*, April, 1920.

HORNE, W. JOHNSON, M.D. "Papilloma at the Bifurcation of the Trachea." *Ibid.*, April, 1920.

LEGG, T. P., M.S. "Case of Comminuted Fracture of the Shaft of the Left Humerus, with Unusual Nerve Complications." *Ibid.*, April, 1920.

PARAMORE, R. H., M.D., F.R.C.S. "Notes on the Causation of Red Degeneration." *Lancet*, May 8th, 1920.

REV. JOHN WARD AND MEDICINE. "An Oration on the part of the Medical Society of London, delivered on May 10th, 1920." *Ibid.*, May 15th, 1920.

RYLAND, ARCHER, F.R.C.S. (CHICHELE NURSING, F.R.C.S. (Edin. and A.R.)) "Case of Extensive Papilloma of the Hard Palate." *Proceedings of the Royal Society of Medicine*, April, 1920.

STRANGWAYS, T. S. P., M.A., M.R.C.S., L.R.C.P. "Observations on the Nutrition of Articular Cartilage." *British Medical Journal*, May 15th, 1920.

VARRICK-JONES, P. C., M.A., M.R.C.S., L.R.C.P. (and Sir G. SIMS WOODHEAD, K.B.E., V.D., M.D., LL.D.) "The Industrial Settlement for the Consumptive." *Lancet*, May 8th, 1920.

WENDE, F. PARKES, M.D. "Unilateral Dwarfism of Limbs Connected with Congenital Chondromata." *Proceedings of the Royal Society of Medicine*, April, 1920.

"Myxœdema, with High Blood-pressure, preceded by Enlargement of the Thyroid Gland." *Ibid.*

"Pityriasis Rubra Pilaris (Generalised Form)." *Ibid.*

## EXAMINATIONS, ETC.

UNIVERSITY OF CAMBRIDGE.

At a Congregation held April 29th the following degrees were conferred:

M.B. and B.Ch.—G. L. Smith.  
 M.B.—C. R. Wright.

The following candidates have satisfied the Examiners in both parts of the examination in Sanitary Science:

A. C. L. O'S. Bilderbeck, E. A. Fiddian.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At an ordinary quarterly comitia of the College, held April 29th, the President, Sir Norman Moore, in the chair, the following members were elected Fellows:

I. G. Forbes, M.D. (Cantab.); G. Graham, M.D. (Cantab.); G. Basil Price, C.M.G., M.D. (Lond.); A. S. Woodward, C.M.G., C.B.E., M.D. (Lond.)

The following was admitted a Member:  
 F. R. Fraser, M.B. (Edin.).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

First Examination for the Diploma of F.R.C.S., May, 1920.

Special and Ordinary Examination—R. St. L. Brockman, E. A. Coldrey, H. Corsi, R. M. Dannatt, A. R. Gunn, S. G. Harrison, S. L. Higgs, J. P. Hosford, R. W. P. Hosford, G. L. Keynes, A. C. Macdonie, C. H. Terry, A. H. C. Visick.

ROYAL COLLEGE OF PHYSICIANS OF LONDON AND ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Diplomas in Public Health have been granted to the following:  
 G. D. Jameson, W. Simpson.

CONJOINT EXAMINING BOARD.

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

W. E. H. Banks, K. H. Doobis, H. J. H. Pollard, E. H. Strange, A. W. Taylor.



## LONDON SCHOOL OF TROPICAL MEDICINE.

The following candidate was successful at the examination held at the end of the 62nd Session (February-April, 1920):  
H. R. Dive.

## APPOINTMENTS.

CANE, Major A. S., D.S.O., O.B.E., M.D.(Cantab.), R.A.M.C., appointed Deputy Assistant Director of Hygiene, Shorncliffe Area, Eastern Command.  
CANE, L. B., M.D.(Cantab.), appointed Senior Hon. Physician to the Peterborough Infirmary and Dispensary.  
DAY, C. D., D.P.H. R.C.P.S., L.M.S.S.A., appointed Medical Officer by the Dorchester Board of Guardians.  
FAWKES, MARKADUKE, O.B.E., M.B., B.S.(Lond.), appointed Medical Officer to the Midhurst Post Office, including Lodsworth and Stedham.  
JOYCE, H. C. C., M.R.C.S., L.R.C.P., appointed Consulting Clinician in Tropical Diseases to the Ministry of Pensions (South Wales Area).  
LEITCH, J. N., M.B., B.S.(Lond.), appointed Medical Officer in Charge, Electrical Department, Queen Mary's Hospital for Children (M.A.B.), Carshalton, Surrey.  
RYLAND, ARCHER, F.R.C.S.(Edin.), appointed Oto-Laryngologist to the Whippo Cross Infirmary, Leytonstone, E. 11.  
SKELDING, H., T.D., M.B., B.C.(Cantab.), appointed Hon. Consulting Surgeon to the Bedford County Hospital on retirement as Hon. Surgeon.  
SPENCE, D. L., M.B., B.Ch.(Cantab.), appointed Certifying Surgeon, Melksham Area, and Medical Officer of Health, Melksham Urban District.  
SPURTON, S. D., M.R.C.S., L.R.C.P., appointed House-Physician to the Royal Sussex County Hospital, Brighton.  
VAILE, T. B., M.R.C.S., L.R.C.P., appointed Assistant Anaesthetist to the Italian Hospital; appointed House Anaesthetist to the Royal Dental Hospital; appointed Anaesthetist to the Cancer Hospital, S.W.  
WILLIAMS, F. S., M.B., B.S.(Lond.), appointed Medical Officer of Health to the Urban District of Wednesfield, Staffs.

## CHANGES OF ADDRESS.

BALL, W. GIRLING, 77, Wimpole Street, W. 1 (Tel. Mayfair 1311).  
CANE, A. S., Major, R.A.M.C., Oxford House, Sandgate, Kent.  
CHARLES, C. P., Minterne Grange, Lilliput, Parkstone, Dorset.  
DALY, I. DE B., Institute of Physics, University College, Gower Street, W.C. 1.  
FISHER, A. G. T., 2, Devonshire Place, W. 1 (Tel. Padd. 49); and Southgate, Horley, Surrey (Tel. Horley 35).  
HARRIS, H. G., 5, Archers Road, Southampton.  
HILTON-HUTCHINSON, R., North Stoke House, Amberley, Sussex.  
JOYCE, H. C. C., Garth House, Pontyclun, Glam.  
JUST, T. H., 77, Wimpole Street, W. 1 (Tel. Mayfair 1311).  
LOW, G. HARVEY, 2, Glencue Road, Blackheath, S.E. 3.  
MAYNARD, F. P., Lt.-Col., I.M.S. (retired), 79, Oxford and Cambridge Mansions, N.W. 1.  
NICOL, W. D., Hanwell Mental Hospital, Hanwell, W. 7.  
QUICK, H. E., "Varfell," 130, Eaton Crescent, Swansea (Tel. Central 280).  
SKELDING, H., Greenhouse Dingle, Alveley, nr. Bridgnorth, Salop.  
SMITH, A. B. PAVEY, 9, Victoria Avenue, Harrogate (Tel. 379).  
TRIST, J. R. R., 12, Alma Road, Clifton, Bristol.  
VAILE, T. B., 8, Northumberland Mansions, Northumberland Street, W. 1.

## BIRTHS.

ALEXANDER.—On April 25th, at Cade House, Riverhead, Sevenoaks, the wife of J. Finlay Alexander, M.A., M.D.(Camb.), of a son.  
BAILEY.—On April 27th, at Bourne End, Bucks, the wife of Selborne Bailey, M.D., of a son.  
BARNES.—On May 3rd, at Wiltshire House, Wiltshire Road, S.W. 9, to Sarah Frances (née Norman), wife of Howell Wood Barnes, B.A., M.B., B.C.(Cantab.), D.P.H.(Cantab.)—a daughter (Agnes Patricia).  
CANE.—On May 14th, to Dr. and Mrs. L. B. Cane, Minster Precincts, Peterborough—a daughter.

DICK.—On May 21st, at 52, Russell Road, Kensington, to Winifred, wife of J. Lawson Dick, M.D., F.R.C.S.—a son.  
DICKINSON.—On May 17th, at 89, Lower Baggot Street, Dublin, to the wife of W. R. Dickinson, M.R.C.S., L.R.C.P.—a son.  
DOUGLAS.—On May 3rd, at 7, the Drive, Gosforth, Newcastle-on-Tyne, to Mrs. R. I. Douglas (née Vincent)—a boy.  
FAVELL.—On May 9th, the wife of Richard Vernon Favelle, of Brunswick House, Glossop Road, Sheffield—a daughter.  
HOLTHUSEN.—On May 7th, to Dr. and Mrs. Alan W. Holthusen, at 583, London Road, Westcliffe-on-Sea—a daughter.  
JOYCE.—On May 2nd, at Le Sars, Bentley, Hampshire, the wife of E. Shirley Jones, M.R.C.S., L.R.C.P., of a daughter.  
MATHER.—On May 3rd, at 79, Linden Road, Bourneville, Birmingham, to Alice, the wife of Edward E. Mather, M.D.—a daughter.  
NORMAN.—On May 5th, at Eastwood, Strawberry Hill, Middlesex, to Ethel Anne, wife of N. F. Norman, B.A.(Cantab.), M.R.C.S., L.R.C.P.—a daughter.  
SOLTAU.—On May 13th, the wife of Dr. H. K. V. Soltau, Wentworth House, Ilfracombe, of a son.  
VERRY.—On May 1st, at 29, Porchester Square, W., the wife of Surgeon-Commander G. T. Verry, R.N., of Darvills Hill, Prince Risborough, of a daughter.

## MARRIAGES.

CHILLINGWORTH—PARTRIDGE.—On April 28th, at the Parish Church, Dawlish, South Devon, by the Rev. J. Cowper Pratt, M.A., Andrew John, elder son of Mr. and Mrs. Andrew Chillingworth, of Bedford, to Gwladys May, younger daughter of the late Capt. J. H. Partridge and Mrs. Partridge, of Dawlish.  
GIBBINS—MADGE.—On April 28th, at St. Mary Abbot's, Kensington, by the Rev. H. D. Madge, Vicar of Shoreham, Kent, brother of the bride, Herbert B. Gibbins, M.D., of 24, Allen House, Allen Street, Kensington, third son of the late Frederick J. Gibbins, of Neath, S. Wales, to Gwendolen M. G. Madge, M.B.E., youngest daughter of the late Dr. Henry M. Madge, of Upper Wimpole Street.  
IM THURN—NIMMO.—On April 28th, at All Saints' Church, Friern Barnet, by the Rev. Canon C. C. im Thurn, Rector of St. John's, Dufries, uncle of the bridegroom, assisted by the Rev. H. Miles, Vicar of the Parish, Robert McKenzie im Thurn, eldest son of F. C. im Thurn, of Ailka, Sydenham, to Eileen Muriel Alleyne, eldest daughter of the late William Edward Hope Nimmo, and of Mrs. Nimmo, of Leaside Mansions, Muswell Hill.  
JOYCE—WALE.—On April 21st, at the Chapel Royal, Savoy, by the Rev. Percy Young, Henry Cyril Conwy Joyce, M.R.C.S., L.R.C.P., elder son of the late Dr. R. Conwy Joyce and of Mrs. Joyce-Whitechurch, Glam., to Louise Jane, only daughter of Mr. and Mrs. Robert Wale, of Moscow, Russia.

## DEATHS.

ALLEN.—On April 23rd, 1920, after an illness of over two years' duration, Henry Marcus Allen, M.R.C.S., I.S.A.Eng., F.R.C.P. (Edin.), at Avonmore Road, Kensington.  
BLOUNT.—On May 14th, 1920, suddenly, at 5, Lawrence Road, Hove, Arthur Blount Blount, M.R.C.S., L.S.A.(Eng.), L.R.C.P.(Edin.), formerly of Hornsey, N., aged 61.

## 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 7s. 6d., 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 ADVERTISEMENT MANAGER, the Hospital Office, St. Bartholomew's Hospital, E.C. Telephone: City 510.

## St. Bartholomew's Hospital



## JOURNAL.

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

VOL. XXVII.—No. 10.]

JULY 1ST, 1920.

[PRICE NINEPENCE.]

## CALENDAR.

Tues., June 29.—Dr. Tooth and Sir D'Arcy Power on duty.  
Fri., July 2.—Dr. Calvert and Mr. Waring on duty.  
Tues., " 6.—Dr. Morley Fletcher and Mr. McAdam Eccles on duty.  
Fri., " 9.—Dr. Drysdale and Mr. Rawling on duty.  
Tues., " 13.—Sir Archibald Garrod and Mr. Gask on duty.  
Fri., " 16.—Dr. Tooth and Sir D'Arcy Power on duty.  
Tues., " 20.—Dr. Calvert and Mr. Waring on duty.  
Fri., " 23.—Dr. Morley Fletcher and Mr. McAdam Eccles on duty.  
Tues., " 27.—Dr. Drysdale and Mr. Rawling on duty.  
Fri., " 30.—Sir A. Garrod and Mr. Gask on duty.  
Tues., Aug. 3.—Dr. Tooth and Sir D'Arcy Power on duty.

## EDITORIAL NOTES.

**H**UR heartiest congratulations to the St. Bartholomew's men whose names were included in the Birthday Honours List.

We are more than pleased at the knighthood conferred on Prof. F. W. Andrewes. No man more thoroughly deserves the honour than Sir Frederick, and furthermore it is very gratifying to find the pathologist's work being recognised, especially as hitherto the clinician has had it practically all his own way. Needless to say everyone is delighted at the distinction which has been conferred upon its chief pathologist, for not only is it a recognition of Sir Frederick's great capabilities, but it also reflects great credit on the Hospital.

The other Bart.'s men to receive the honour of knighthood are: Mr. Sydney Beauchamp; Mr. C. O'Brien Harding, J.P.; Lt.-Col. Banatvala, I.M.S.

In addition, Dr. J. Dundas Grant has been awarded the K.B.E. (Civil Division).

The following decorations are announced, and to the recipients we offer our hearty congratulations.

Conferred by the President of the French Republic:  
*Order of the Legion of Honour*.—Officer: Alexander Granville, C.M.G., M.R.C.S., L.R.C.P.

Conferred by the King of the Belgians:  
*Palmes en Or de l'Ordre de la Couronne*.—Dr. P. Hamill.  
*Palmes en Argent de l'Ordre de la Couronne*.—Dr. A. W. Crawford Lindsay.

Conferred by the King of Italy  
*Order of the Crown of Italy*.—Commander: Alexander Granville, C.M.G., M.R.C.S., L.R.C.P.

Conferred by the King of the Hellenes:  
*Order of George I*.—Commander: Sir William R. Smith, M.D.

Conferred by the President of the Republic of China:  
*Order of the Excellent Crop*.—Sir William R. Smith, M.D.

The name of Capt. R. C. Clifford, D.S.O., M.C., I.M.S., has been brought to the notice of the Secretary of State for War, for gallant and distinguished services rendered in the field.

We are pleased to congratulate Temp. Lieut.-Col. R. J. Morris, R.A.M.C., on being awarded the C.B.E. (Military Division), in recognition of valuable services rendered in connection with the war.

It is hoped before the end of the year that a record of the service rendered and honours gained by past and present students of the Hospital for the whole period of the war will be available and ready for distribution. Meanwhile we feel sure that our readers will be proud to learn that the total number who served during the war is approximately 1947, and to this number must be added at least 350 members of the Nursing Staff.

At the election held recently, Sir A. E. Garrod, F.R.S., was one of the four successful candidates for representation on the Hebdomadal Council of Oxford University.

Dr. W. H. Bailey, Barrister-at-Law, Middle Temple, has been placed on the Commission of the Peace for the County of Middlesex.

\* \* \*

The Council of the Royal College of Surgeons have appointed the following members of the Hospital as Examiners for the ensuing year:

For the Fellowship:

*Physiology*—Prof. F. A. Bainbridge.

Conjoint Examination:

*Elementary Biology*—Dr. T. W. Shore.

*Public Health*—Prof. Sir F. W. Andrews.

\* \* \*

Our warmest congratulations to Mr. R. J. Perkins, M.B., B.S., on being awarded the Murchison Scholarship by the Royal College of Physicians of London.

\* \* \*

The post of Assistant Director of the Surgical Clinical Unit has been filled by the appointment of Mr. T. P. Dunhill, C.M.G., of Melbourne, Australia, to whom we extend a hearty welcome. Many of our readers will no doubt remember the exhaustive study on the surgery of exophthalmic goitre by Mr. Dunhill which appeared in the *Lancet* in December, 1917. Mr. Dunhill did most excellent work in France during the war, and his coming to Bart.'s cannot but add distinction to the Hospital.

\* \* \*

Miss Beatrice Cutler, the Assistant Matron, was the recipient of some charming gifts before leaving the Hospital.

*From the Nursing Staff:* A gold wristlet expanding bracelet watch with the Bart.'s shield, and her name and the date, May, 1920, inscribed on the back of the watch.

*From the Domestic Staff:* A pair of silver specimen vases.

*From the Linen Room Maids:* A black rose bowl with floating roses.

A very pleasant "Coffee Social" party was also given by the Sisters in the Superintendent's Room on May 11th, when Miss Cutler was the guest of honour.

\* \* \*

Major Gillies' lecture on "Plastic Surgery of the Face," which he delivered before the Abernethian Society on June 17th, was the most wonderful demonstration we had for many a day on the possibilities of surgery. To those of us who have been apt to think that surgery had reached its limits it was nothing short of a revelation.

The photographs with which the lecturer illustrated his remarks provided the most amazing evidence of the extraordinary success which Major Gillies has had in this branch of surgery.

\* \* \*

We are asked to call attention to the fact that a London University Liberal Society has recently been formed with the object of promoting intercourse between students of the University who are of Liberal sympathies.

On June 10th a dinner was held at University College, when the Society was addressed by Mr. Alfred Milnes, M.A., on the subject of "Adam Smith."

Membership is open to graduates and undergraduates, and gentlemen desirous of joining the Society are invited to communicate with Mr. A. Walk or Mr. R. G. R. West, at the "Cloak Room."

\* \* \*

The Dramatic Club gave a very successful entertainment at Tonbridge, on June 10th, in aid of the National Institute for the Feeble-minded. It took the form of a concert party of seven attired in operating gowns and labelled "The Bart.'s." Two performances were given, both of which received great applause from a large and enthusiastic audience. The "Bart.'s" Jazz Band also officiated and provided music for "dancing on the lawn," which proved a great attraction. The members of the concert party were Messrs. Urwick, J. S. White, Neville, Morison, Brigg, Bell and F. Green.

\* \* \*

The Clinical Research Department of the Hospital has issued a useful little handbook of some forty pages dealing with the collection of pathological material, together with details of the investigations undertaken. The book does not pretend to enter deeply into the subject of pathology, but has been compiled with the object of assisting medical men in the collection of samples for pathological investigation.

There is no doubt that a compilation of this kind will fill a long-felt want and very materially assist in obtaining the best possible results. The Clinical Department will be pleased to send copies free to any Bart.'s man on application.

\* \* \*

The Treasurer's Report for the year 1919 is just to hand, and makes most interesting reading. We are particularly pleased to learn that the plans of the projected Nurses' Home have been approved and adopted by the Court of Governors. They comprise four blocks, facing respectively south, south-east, east and north-west. Of these, one block, the south, is to be erected forthwith; it demands no interference with the present accommodation, and only one staircase of the old Christ Hospital building has to be removed. This block will accommodate 116 persons and can be arranged to provide temporary bedrooms for 194. Its cost is estimated at £80,000, and the amount received or promised to date is only £7,000 short of this sum. For a donation of £350 the donor has the privilege of naming a room in the Home. The architect's general plan of construction is of considerable

interest, and may be studied as an example of the highest point yet reached in the planning of such establishments.

\* \* \*

The increased cost of carrying on a big institution naturally calls for much comment in the Treasurer's Report. Several tables are included which demonstrate the extent of these increased charges. Provisions, for example, are costing on an average 200 per cent. on pre-war prices. Fuel works out about 100 per cent. increase. Most remarkable of all, perhaps, is the statement showing prices of drugs and dressings in 1919 compared with the prices in 1913. An increase of 300 per cent. is quite an average, and in some cases drugs have risen to more than 1000 per cent. on pre-war figures. No wonder the Hospital is having to strain every nerve to carry on.

\* \* \*

The references in the Report to the Special Departments of the Hospital are very gratifying. The extension and re-equipment of the X-Ray Department has just been completed at a cost of over £5000, and it is hoped will prove adequate to meet all demands upon it for some years to come. Evidence of the importance of this branch of the Hospital's work is well shown by the number of skiagrams taken: in 1913 the figures were 6673; in 1919 the number had increased to 11,136.

Upon the urgent recommendation of the Reconstruction Committee a Physicist has been added to the Staff of the X-Ray and Electrical Departments, Mr. F. Lloyd Hopwood, Demonstrator of Physics in the Medical School, having been appointed to the new office.

\* \* \*

We are asked to insert the following letter, and hope every St. Bartholomew's man will do everything possible to help.

I, PAVILION TERRACE,  
SCARBOROUGH;

June 29th, 1920.

DEAR SIR,—May I ask, by means of the JOURNAL, any Bart.'s man who has votes for Epsom College and who may remember my brother, John P. Griffin, to give some of their votes to his son, Frank James Griffin, at the next election. My brother died just after the war after a series of illnesses involving him in heavy financial loss, and leaves a widow and two children with very small means. If readers of the JOURNAL have not votes themselves, will they endeavour to secure them from their friends.

Yours,

WALTER B. GRIFFIN.

## THE FUTURE OF MEDICINE.

By Sir THOMAS HORDER, M.D.

IN the general survey of human activities that has followed the war, and in that spirit of revival which now and again hovers fitfully about the mind of man, causing him disquiet and urging him to fresh endeavour, the position of medical science and of medical teaching has received a good deal of attention. Like most other things, it has been found lacking, and in sore need of "reconstruction." The cynics, who are always with us, are enjoying our discomfort, and are reminding us that they always knew we should be found out some day. G. B. S. is more certain than ever that we are the quacks, and his friends the ostracised bone-setters and diet-mongers are the real thing—if only the silly public would believe it. Our citizens have been proved beyond doubt to be very largely a C3 population, and a good many politicians, searching for a scapegoat, have satisfied themselves that the medical profession is to blame: a newly established Ministry of Health, by drilling the doctor and organising his efforts, will change all that. One way or another the waters are properly astir, and so long as there is movement and not stagnation, there is hope.

Amongst those more serious critics who from time to time, and from within our own ranks, review the position of medical progress, is Sir James Mackenzie, who now gives us, in a very readable form, a statement of his own ideas upon this important subject.\* The author's valuable additions to medical knowledge, and the position he so worthily holds in consequence, entitle all he says to careful consideration. After a good deal of trenchant criticism of our present methods of medical education and medical research, and a detailed recital of his own work in connection with certain aspects of heart disease, Mackenzie proceeds to offer definite suggestions for the more scientific pursuit of clinical knowledge. These suggestions are based largely upon the methods which the author has himself adopted with such striking success in the work already referred to. The fundamental neglect in our present methods, of which the author complains, and the importance of which forms the basis of most of his constructive criticism, is concerned with the subjective aspect of diseases, especially in their early stages. An effort is made to establish certain principles of clinical research into these subjective data, termed provisionally the "law of progression" and the "law of associated phenomena." The author then attempts a tentative classification of symptoms, under the headings "structural," "functional," and "reflex." The assessment of the value of symptoms is next considered,

\* *The Future of Medicine.* By Sir James Mackenzie, F.R.S., M.D., etc. (Oxford University Press, 1919. Pp. 238. Price 8s. 6d.)

leading to a discussion of prognosis—a subject which, as the author rightly says, is a largely neglected one, receiving very little scientific attention. A very suggestive chapter deals with the establishment of the functional efficiency of organs. Here again the author illustrates what can be done in this direction if only the matter be approached in the scientific spirit, by reference to his own observations upon heart efficiency. There follows an urgent plea for the simplification of medical knowledge, and another chapter upon the use and abuse of laboratory methods. The book concludes with a survey of the place of the physician in the scheme of medical progress—the need for teachers with a wide outlook and a discussion of the essentials in the physician's training.

The subject is so vast, it must not be viewed as a disappointment that the book before us serves more to inspire activity in the general sense rather than to map out the path in any detail. And we may as well admit frankly that the author's personal example of what can be achieved by untiring and persistent effort, coupled with the true scientific spirit, goes much farther in the direction of enlarging our vision than anything his book can say. With much of the detail of his thesis we are not quite in agreement, but he does perceive, what many seem to forget, that *the business of doctors is to cure and relieve ill people, and that the business of teachers of medicine is to make good doctors.* Research that does not help the former end, and teaching that does not attain the latter, resolve themselves into beating the air so far as the progress of medicine is concerned. We select a few points in which to do critical justice to our review.

The author considers that a laboratory training unfits a man for his work as a physician, because by reason of it he fails to educate his senses and puts too much trust in mechanical methods. Is not this a criticism on the man rather than upon the system? Intimate acquaintance with the use of instruments of precision should teach a man what is *not*, just as much as what *is*, possible with them. To "compare" "laboratory and clinical methods," as the author does, is surely reactionary: the proper thing, as it seems to us, is to combine them. It has become almost a vogue to speak of pathology and clinical medicine as being in opposition, with two separate and almost inimical camps representing them. Could anything be more disastrous to medical progress? Clinical medicine halts without pathology, but, equally, pathology limps without clinical medicine, or drifts into a mere academic pastime. As Trousseau says: "*Il faut voir, toujours voir, des malades.*" What the airman is to the gunner, the clinician is to the pathologist: he "spots" for him, telling him if he hits or if he misses, and often tells him why. In proportion as this co-ordination of effort is kept in view by the workers, is made easy by the administration, and is insisted upon by the more intelligent of the public, so will medicine be scientific and useful. In proportion as this co-ordination is

not observed will medicine stagnate. It is in the more healthy reciprocity observable to-day at some institutions between these two great branches of our work that the hope of the future lies.

The attempt to eliminate either partner from this going concern is bound to end in disaster. It is not only a question of supplementing each other's knowledge; there is also the important question of checking each other's results. In the matter of diagnosis it is much better for the patient (who really matters) that the doctor should walk safely, if unimpressively, on the firm earth, than perilously on a tight-rope. And to do so he cannot, dare not, neglect the help he gets from both clinician and pathologist.

Mackenzie refers to the importance of studying closely "the symptoms provoked by the entrance of a pathogenic germ into the body." He reminds us that "if bacteriology is ever to give its full benefit to humanity, it is incumbent that other means must be taken to render its discoveries of use," and that "if bacteriological research is ever to bear fruit symptoms produced by each microbe should be recognised by the doctor who sees the patient." This is very true provided the clinician constantly forbears in the matter of going beyond his facts. The controlling observations of the laboratory are essential to preserve sound methods in practice. Nature is always ready with a healthy rebuff for the man who lacks humility. Similar clinical pictures are not seldom produced by very different infecting agents, and the same infecting agent may help to produce very different clinical pictures. To these two facts we must add, what the author perhaps forgets for the moment, that the same diseases themselves undergo variations from time to time, the symptom-complex differing materially, though the infecting agent remains apparently the same. From these considerations it follows that the clinician, if he be wise, will not stray far from his bacteriological colleague, and that future developments in medicine are no more likely to find either of them holding the field alone than is the case to-day. Disease is not only what we see at the patient's bedside, nor is it only the nature and habits of a microbe, nor even the end-result as shown in the post-mortem room: it is the sum-total of the interaction between a pathogenic agent and the organism. This is why a particular worker can see at most one side of the complex process, and is dependent upon his co-workers for demonstration of the rest.

With the progress of clinical and laboratory research the teaching of medicine is intimately bound up, and we heartily endorse Mackenzie's views upon the importance of long and frequent contact with patients as a *sine qua non* in the teacher of medicine. This personal daily contact of teacher and patient is all the more important, as the author says, when dealing with the symptoms of diseases in their early stages. We do not agree with him, however, when he says that this latter aspect of disease—the early subjective manifestations—should be made more prominent in the

teaching of students. (For graduate teaching we think it of the utmost importance.) The functions of a teacher of medicine at a hospital or university are to cultivate the power of accurate observation, and to insist upon clear thinking and the expression of thoughts in unambiguous terms. A good teacher is born, not made. He must have the gift of imparting knowledge (no one can impart wisdom), he must have had large experience of his subject, and he must have trained himself to do the same things which he requires of the student.

That there is a mass of ascertained medical knowledge not available for public utility is partly due to the dearth of statesmen with vision enough to see that the health of its citizens is a nation's chief asset, but partly also to the haphazard manner in which the teachers of medicine are chosen, or rather chance to be. For a solution to the former difficulty we can only hope and pray; to overcome the latter would be quite easy.

But we are by no means in despair about the future, whether in the matter of scientific progress or of teaching. There is one great stimulus looming large on the horizon, and that is the growing insistence of the public, tired of the *dilettante* doctor as of the persuasive politician, and quite willing to help—even with princely generosity, as we have recently seen—provided the scientific spirit and a set purpose are assured. For the spirit is the thing; the method follows, and matters less. Given some divine discontent with present achievements, a willingness to accept help from all quarters, and the power of mixing opportunities with the same ingredient the artist used for his colours, we need have no fear: results are bound to follow. Not quickly, of course, for science, like Nature, does not leap, but marches slowly—medicine, for many reasons, never in the van.

### THE ROCKEFELLER GIFT.

By GEO. E. GASK.

It is reputed, amongst people who know, that of the many complicated and absorbing problems of social economy there is none so interesting as that of medical education and the provision of health-producing measures for the nations.

The last decade has produced great changes of thought amongst medical men. Instead of thinking how to cure an individual sick person, they are beginning to think as well, and first and foremost of measures which will prevent disease, of measures which will not only reduce mortality, but will insure a lower rate of sickness among the living with a corresponding increase of mental and physical capacity.

These changes in medical thought, though existing before the war, were enormously accelerated by the efforts of the

Medical Services which were called out by the need to keep in a healthy state, fit to fight and fit to win, the biggest army Britain ever had, as well as those millions of workers in factories, offices and munitions works on whose capacities for effort depended the success of the armies in the field.

Without warning, preparation or organisation this task was shouldered by the medical profession of the country, and for this purpose the regular army medical officer and the civilian practitioner worked side by side in understanding and amity.

The success of the Medical Services is known; the thanks of the Houses of Parliament have been awarded to them, and a gratifying tribute was recently paid them at a dinner given in honour of the Medical Services by a number of distinguished public men, including past and present secretaries of State for War.

Though much was attained, we who know are only too well aware of how much more might have been done, and now the war is over our thoughts have turned towards the application of lessons learnt during the war to civilian practice.

The first essential towards a grasp of the fundamental principles which will keep individuals and nations healthy is a sound medical education. Money, wisely administered, spent on medical education will be repaid a hundredfold.

The Rockefeller Institute has made a gift of over £1,200,000 to University College and University College Hospital.

A truly magnificent gift! But what is more important is the spirit which prompted the gift. Without being in the confidence of the Rockefeller Foundation it would appear that the reasons for the gift were mainly two. Firstly, a desire to help forward by financial aid and moral support our attempt here in London to establish clinical units (medical, surgical and gynaecological), which are recognised all the world over as an earnest endeavour to advance medicine. Secondly—and this is very important—the gift is, as it appears to us, a sign and token that there is among the leaders of medical thought of North America an earnest wish to co-operate with British medicine; that the authorities of the Rockefeller Foundation are regarding the problems of medicine and medical education as not only national and continental, but world-wide.

For these reasons we welcome whole-heartedly the Rockefeller gift.

There are little rifts between the States and Britain which open and close like the cracks in an iceflow. We can help to cement these, for we are closer to the States in medicine than in any branch of commerce or science, and no band of men can do more to promote national good feeling and foster the ideals of the League of Nations than the doctors.

This, I believe, is at the bottom of the Rockefeller gift, and this is why it should be welcomed.

To University College and Hospital is given the privilege

and onus of spending the money. If the past records of these institutions and the present ideals of their directors are an augur for the future, the aims of the Rockefeller Foundation will be attained and the level of the whole of British medicine will be raised.

## THE LIFE AND TIMES OF JOHN MAYOW (1643-1679).\*

By R. G. R. WEST.

### INTRODUCTION.

**B**IOLOGISTS tell us that variation brings development, and development brings progress. Mankind with its civilisation is the product of a ceaseless adaptation of the individual members of a species to a changing environment, thus causing variations from the normal characteristics of the parent species, and eventually leading to the production of an offspring family possessing new and higher acquirements than the original parent stock. The popular press has recently recalled our attention to the fact that among the higher animals it is the male which responds first to the call of the new environment, becoming the pioneer, and indicating by example the path along which the race is next to travel.

In the realm of the mind, there are in every age men who are before their time. Looking back down the avenue of history, we see here and there men whose minds have responded to environment the environment of natural facts—more quickly than have those of their fellows; men who rose so high in their revolt against the doctrines of their day as to be obscured by mists from the eyes of the "parent type," who now lie buried in the dust in that avenue of history. It is well if we, looking back, can distinguish their figures towering above the dust and haze of the generation that was not ready for them.

The great original minds of history are those who, by their reason or imagination, have advanced the understanding of men's brains, or given light to their souls; whether they worked in poetry or science, philosophy or the building of empires. These giants of thought may be classed, from the point of view of the reception of their work, in three groups: Those whose work was fully appreciated during their own lifetime; those whom an admiring world promoted to the ranks of the immortals after their deaths; and those who, through some injustice, will never be acclaimed as they should be. The last group comprises men who have done real spade-work in the service of mankind, but who lost their birthrights, not through a partiality for red

\* Awarded the Wix Prize, 1920.

potage, but through uncontrollable mischance. Either they lived so long before their time that their work was not re-discovered until credit was already allotted to another, or a follower with more ingenuity than creative genius arranged that the wrong name should be attached to the manuscript. One is sometimes tempted to suggest the eternal "junior partner" as a possible solution!

William Shakespeare, appreciated by his contemporaries as a jolly fellow and a fair writer of popular buffoonery, died for a century and a half, and rose triumphantly to be crowned the greatest of the world's dramatists. "Most insipid and ridiculous," growls Pepsy; "Try to be Shakespeare, leave the rest to fate!" cries Browning.

In 1809 Lamarck propounded his theory of evolution. His contemporaries murmured "preposterous," and that seemed the end of it. When, fifty years later, Darwin and Wallace suggested their Natural Selection hypothesis, it was found that at least half of their work had been done before, and Lamarck's whole theory was revived by a society which had the unusual grace to call itself by his name.

John Mayow gave to the world theories and experiments of great value in 1668. Unlike Shakespeare, his own century ignored him completely. Unlike Lamarck he has never come into his own, and though he has secured a page and a half in the *Dictionary of National Biography*, the student of chemistry to-day has never heard his name, much less does he appreciate his work. We all know that Harvey discovered the circulation, but who knows that Mayow discovered that the heart was a muscle? We have all heard that Priestley (or Scheele) discovered oxygen. All credit to them, but why not tell us that Mayow first associated respiration with oxygen, and first held that that element was transferred to the blood-stream and thence to the tissues? Few of us know that the description we read to-day of the movements of the ribs and diaphragm was first given to the world by this unknown physiologist. Even an international tribunal cannot eliminate from our text-books the names of Willis and Sylvius. Yet this pupil of Willis, an immeasurably greater scientist than Sylvius, has not a structure, experiment or hypothesis called after his name.

John Mayow lived a century before his time, and consequently remains almost unheard of by the student of chemistry and physiology, the twin sciences in which he rendered monumental service, not to his own generation, but to the third and fourth generation following him. He rests apart, unhonoured and unsung; but some who take the trouble to follow out the laborious work, the ingenious experimentation, the cautious uprooting of hallowed, respectable and ridiculous views, and the substitution of carefully conceived and amazingly accurate theories, will take off their hats to Johannes Mayow, physiologist and chemist—one of the unknown great.

"Mayow: His Life and Times," is the subject of this paper.

His life must be interpreted to include his work, for his life alone is a mere string of dates. By his times I understand his relations to contemporaneous scientists, his influence on them and their influence on him.

### LIFE.

Johannes Mayow, Mayouwe or Mayo (1643-79), was a native of London, the city which can boast so few of England's greatest sons. "Descended from a genteel family of his name living at Brec in Cornwall," he was born in the parish of St. Dunstan's-in-the-West in May, 1643. We have only one accurate account of his life, that given in Wood's *Athenæ Oxonienses* (1623)—"being an exact history of all the writers and bishops who have had their education in the most ancient and famous University of Oxford from 1500 to 1690." The account occupies less than a full page, but has been slightly enlarged by Hartog in the *Dictionary of National Biography*. It appears that he early decided on a scientific career, and his people being wealthy he was sent to Oxford at the age of fifteen, becoming first a "commoner," and at sixteen a "scholar" of Wadham College. In 1663, at the age of seventeen, he was elected a Fellow of All Souls, where he graduated LL.B. (1665) and LL.D. (1670). He then obtained official permission to study physic and thus gained exemption from taking Holy orders. The greater part of his work was accomplished during the following nine years, for he died prematurely at the age of thirty-six. Contemporaries of his at Oxford include Willis, then Sedleian Professor of Natural Philosophy, under whom he probably studied, and to whose work he refers appreciatively. Mayow also came early into contact with Richard Lower, who developed some of his theories in a later work, *De Corde*. Hooke became his friend shortly after he left Oxford. Their researches on combustion have a great deal in common, but they appear to have worked separately. Certain it is that their friendship was not impaired by an unwarranted attack on Mayow by Thomson (*History of the Royal Society*), to which further reference will be made, and in which he accuses Mayow of plagiarism in connection with *Micrographia* (1664), published by Hooke four years before Mayow's *De Sal Nitro*.

On leaving Oxford in 1670 Mayow immediately took up research work. The winter was spent in his laboratory, where he performed endless experiments, all of which were conscientiously entered in his notes and published in his various "tractatus." During the summer months he practised medicine at Bath, while in his spare time he made several careful analyses of the already famous "waters." His results, published in *De Sal Nitro*, were attacked by a rival physician, Thomas Guidott, but apparently without effect either to his popularity at Bath or to the value of his work. His intimacy with Hooke was lasting, for Birch's *History of the Royal Society* (1757)—in which there are only two references to Mayow himself—contains this entry:

"February 7th, 1677—Dr. Mayow, proposed by Mr. Hooke."

Wood concludes an essentially uninteresting account with a pregnant passage: "He paid his last debt to Nature at an apothecarie's house bearing the sign of the Anker, in York Street, Covent Garden, having a little before been married, not altogether to his content." His remains lie in St. Paul's, Covent Garden, where he was buried on October 10th, 1679.

### WORK

In considering a great man, be he great in the realm of fancy or of fact, a dreamer of dreams or a doer of deeds, it is customary first to dissociate and then to reconnect the two aspects of his life—the man and his work. A model essayist attempts first to introduce his hero, then to dissect him, and before re-assembling the parts for the operatic *grande finale* he will strive to devote two chapters of approximately equal length, one to "the man," the other to "his work." The difficulty is that all the text-books on essay-writing will insist on this "approximately equal length." It cannot always be done; it cannot be done here. Sometimes the man is greater than his work. An adequate essay on Dr. Johnson will contain five pages of "the man" for every one of "his work." But in science the reverse is found—the man is his work. Thus I must crave indulgence for the disproportionately great space which I propose to devote to the work of Mayow, although I shall show later that the character of the man, his imagination, tenacity and natural breadth of outlook are largely responsible for, and can be inferred from, his positive achievements.

Mayow published his experiments and conclusions in five tracts, two of which, the second and fifth, contain all his chief work. *Tractatus duo, de Respiratione et de Rachitide* is a purely medical paper, published in 1668. The original was in Latin, as were all his works, but an English translation by Lully was published under the title of *Ραχτιδολογία*, 1685. His greatest work, *Tractatus quinque Medico-Physici*, dedicated with a laudatory preface to his patron, Coventry, had a far wider circulation. The current number of the *Philosophical Transactions of the Royal Society* (vol. ix, p. 101, July 20th, 1674, *vide infra*) gave several pages to a review of the work, which was translated into French, German and Dutch, being republished at the Hague as *Opera Omnia*, and also at Geneva. A third tract, *De Sal Nitro*, a discourse on saltpetre and the fixation of oxygen in salts and acids, was first published separately, but later incorporated with the *Tractatus quinque* which finally included: *De Sale Nitro et Spiritu Nitro-Aereo; de Respiratione de Respiratione Fœtus in Utero et Ovo; de Motu Musculari et Spiritibus Animalibus; de Rachitide*.

To appreciate the independence and originality of Mayow's mind it is necessary to recall the age in which he lived. His chief work was on combustion, respiration and

the circulation, and we must remember that he put forth accurate theories on each subject—theories which, in most cases, approached the truth for the first time. He described the double articulation of the ribs with the spine and the functions of the internal intercostal muscles at a time when the former had not been observed, and the latter were accepted—in utter ignorance of the element of mechanics—as being depressors of the ribs. He explained the function of breathing to scientists, who variously believed that it was mechanically to break up or else to cool the blood. He realised that the heart was a muscle which contracted to expel blood, when his contemporaries (Descartes' followers) thought that the heart was distended by fermentation as the blood was forced out of it. We find him stating that to produce combustion, oxygen and combustible matter must interact—and this before the phlogistic theory reached the height of its popularity! Before Stahl developed his much-courted theory that combustion consisted in the freeing of phlogiston, Mayow had oxidised antimony and demonstrated an increase in weight. The extra weight had come from the air, proved Mayow, but the devotees of the new theory stimulated their imaginations, and concluded it more reasonable to suppose that the phlogiston evolved during oxidation had negative weight! Finally he re-asserted, for the first time in the history of modern science, the theory of Hippocrates that a *fœtus in utero* does respire and that respiration occurs through the umbilical cord. Mayow investigated this notion, explained the passage of oxygen from mother to child, and was the first to assign to the placenta its correct function. All this work was supported by experimental evidence, and Mayow was one of the pioneers in connecting, by laboratory research, chemistry with physiology. I propose to examine his work in, roughly, the order in which his ideas appeared to have developed: the fixation of oxygen, combustion, respiration, circulation, foetal respiration, and—of necessity the least satisfactory—muscular contraction.

#### ON THE FIXATION OF OXYGEN.

Though he never isolated oxygen, Mayow certainly threw more light on its nature and properties than any previous chemist. He believed that an active gaseous constituent of the air was extracted and consumed whenever carbonaceous matter was burnt. He also believed that this "nitro-aerial spirit" or "fire air"\* could combine with and be "fixt" in various substances (forming oxidising agents in fact), and so enable them to react with combustible matter. In his chapter "On Saltpetre and the Nitro Aerial Spirit,"

\* Probably one reason why Mayow's work was not appreciated by his contemporaries is that he confuses his terms. His terms for oxygen include "Spiritus nitro-aëreus," "an aerial something," "fire-air," "animal spirits"; while "sulphur," "sulphureous," "salino-sulphureous," whenever they occur, simply mean carbonaceous or combustible matter capable of oxidation.

he records his attempts to account for the explosive character of potassium nitrate: "If nitre be thrown into an ignited crucible it will not inflame nor will this effect be produced . . . unless some combustible body be mixed with it, a clear proof that nitre contains no sulphurous (combustible) matter whatever, and hence it follows that flame produced by combustion with nitre arises from fire-air particles (oxygen) . . . thickly condensed in itself: hence it happens that the flame of nitre is so violent." It will be observed that this is perfectly in accordance with modern knowledge.

Having established that fire-air particles break away from nitre to combine with sulphureous matter, he proceeded to investigate the manner in which these particles became fixed in the formation of oxides and salts containing oxygen. "I must by no means omit to observe," he records, "that antimony calcined in the focus of a burning glass is not a little increased in weight . . . nor can we conceive whence that increase of weight is derived, except from the fixation of fire-air particles." D. G. Yeats (1798), an ardent admirer of Mayow, cannot understand how the phlogistics could develop their theories at all after Mayow had attributed the gain in weight correctly to the addition of oxygen. "How has not philosophy been tortured to explain the contradiction of increased weight with disengaged phlogiston?"

Mayow was probably the first to describe the simple experiment now used popularly to demonstrate the proportion of oxygen and nitrogen, by volume, contained in atmospheric air: "Let a lighted candle be so placed in water, that the wick shall rise about six fingers' breadth above the surface: a glass vessel is then inverted over it, as shown in Fig. 1. Care must be taken that the water be of the same level within and without. . . . In a short time you will perceive, while the candle is yet burning, the water rising in the inverted vessel." This "is produced by the combustion of the candle destroying the nitro-aerial and elastic particles of the air, so that it is no longer able to resist the pressure of the atmosphere." Mayow rendered a great service to science in connecting and co-ordinating the results of his various investigations, and in endeavouring to explain, in terms of his nitro-aerial spirit, such seemingly diverse phenomena as the formation and reactions of nitrates and sulphates, the calcination of antimony with its increased weight, the burning of a candle in a closed space with a decrease in air volume, and greatest of all, the recognition of life as a form of combustion, with respiration and the blood as vehicles. His next experiment shows this association power:

"Let a moistened bladder be tied over the mouth of a circular glass vessel, then let another containing a mouse be applied tight to the bladder. The edge of the vessel will adhere to the bladder which itself will rise into the cavity of the glass." By careful experimentation he concluded:

"I have discovered that the air is diminished one-fourteenth by respiration." The air "is deprived of its elastic power . . . as by combustion."

Mayow next performed experiments on nitrogen, hydrogen and nitric oxide in an attempt to discover their difference from oxygen. By enclosing given volumes of air, nitrogen (impure) and hydrogen, and varying the pressure to which they were subjected, he proved that they all obeyed Boyle's law for gases. After describing the essential features of the "downward displacement" method of collecting gases over water, he records: "A large vessel, in which is the tube containing the gas, is placed in Boyle's air-pump . . . and exhausted. The gas expands so as to fill the glass vessel expanding about two hundred times." Nitrogen, or air deprived of its nitro-aerial and vital particles, he obtained from the vessels in which a lighted candle and a mouse respectively had been kept. He recognised that the gas from both sources was the same, and identified it by the method chiefly used now—its failure to support combustion and its general inactivity. He did not succeed in isolating carbon dioxide as a product of combustion.

Hydrogen he obtained by the action of vitriolic acid upon "iron globules." He observed its physical properties, and immediately concentrated on the question, "Will it support combustion?" "Let a mouse confined in a trap, be placed upon a support under an inverted glass vessel . . . let all things remain in this situation until the animal dies: the time it lived is to be exactly noted. The mouse is now to be withdrawn and another placed in the same situation and under similar circumstances, taking great care that the same quantity of air be used in this as in the first case. The apparatus being thus adjusted, some gas is thrown up into the vessel, about twice or thrice the quantity it contains of air. The animal lives but very little longer than in the first case." Mayow attributes the slightly increased longevity of the second animal to "the air being diluted with gas and the fire-air particles consequently being more gradually consumed."

The experiments I have quoted above, performed, as some of them were, for the first time, show considerable ingenuity, and as we consider his inferences, and the manner in which he connected diverse reactions involving the participation of oxygen, and this a century before Lavoisier's very similar combustion hypothesis, it will become increasingly evident that history has treated Mayow badly.

#### ON RESPIRATION.

To appreciate the value of Mayow's work on respiration, the advances he made and the prejudices he had to overcome, it is necessary shortly to discuss the progress towards truth made before him, and some of the theories held in his time.

The essential importance of respiration—that without it

life ceased almost instantly, and that vital functions could be maintained for a considerable period by it alone—was early recognised. Hippocrates observes that—"So great a demand have our bodies for air, that we may refrain from any other kind of food for two, three or more days," but without air "we must unavoidably perish, so necessary is its presence to our being." This "Father of Physic" held that the spirit or soul of Nature was resident in the air. Later, the Platonic school associated this same "spirit" with fire. It is an interesting fact that the active element which Hippocrates deified in air, and the essential accompaniment of all manifestations of the god of fire, are one and the same—oxygen, the nitro-aerial spirit.

The preposterous theories of the Middle Ages were largely discredited by such workers as Bacon, who discountenanced all theories not based upon experimental evidence. But in Mayow's time it was still held by some that the function of respiration was to cool the blood, while others believed that it merely aided the transmission of blood from the right side of the heart to the left. Mayow unconditionally rejected the former notion, and ridiculed the latter, demonstrating its absurdity by the simple experiment of holding his breath and observing his pulse. He killed another theory—that the motion of the lungs was merely intended to "break up dense venous blood"—by passing deoxygenated air through an animal's lungs and observing its asphyxiation.

Having tested and rejected every current theory, Mayow commenced a series of experiments, starting with the promising premise: "Concerning the use of respiration, therefore, we may reasonably conclude that an aerial something, whatever it may be, absolutely necessary to support life, *passes into the mass of the blood*; thence air thrown out from the lungs, from which the vital particles are exhausted, is no longer fit to serve the purpose of respiration."

His first experiment is very ingenious. He perforated the lungs of a dog and then distended them with air, keeping them inflated with bellows. The dog lived, and the circulation was undisturbed. A second animal he caused to take a deep inspiration, and then closed its mouth and nostrils. The lungs were expanded, the circulation continued normally at first, but the dog died from asphyxia. From this result, coupled with his analysis of expired air, he reasonably concluded that the function of respiration was to supply a stream of fresh air to the lungs, that the "fire-air particles" might be continually separated and enter the blood-stream. He exposed venous blood to air, and finding that its colour approximated to that of arterial blood, concluded the brightness of the latter to be due to the presence of the nitro-aerial spirit.

In investigating the ultimate destination of oxygen in the system, he advanced the theory that "the nitro-aerial particles cause the fermentation of the blood," and are in some way responsible for its motion, as well as for the pro-

duction of heat, by combination with the salino-sulphureous material of the tissues. With regard to his notions of heat-formation, the following is interesting: "Nevertheless, the heat excited in animals by violent exercise is in part also due to the effervescence originating in the motor parts themselves, between the nitro-aërial particles and the salino-sulphureous particles, as will be pointed out elsewhere." This passage is quoted by Bayliss (*Principles of Physiology*), who comments: "Mayow rightly held that combustion occurs in the muscles themselves, though he was wrong in thinking that it also occurs in the blood. But this shows the advance made by Mayow, for even Lavoisier (1770) thought that combustion took place in the lungs themselves."

Turning his attention to the current beliefs regarding the heart, Mayow's scheme of action is the same as before—examination, rejection, substitution. He examined the prevalent theory that "fermentation" in the left ventricle was responsible for the heart-beat. He observes firstly that in the fœtus the blood is short-circuited through the ductus arteriosus, yet the heart still beats; secondly, that a beat caused by expansion of blood would result in a dilatation at every pulsation, while he observes a contraction. Also, on excision of the heart, he found that it still pulsated, "Whence it would appear that the heart is a muscle, which does not differ in its action from any other muscle."

I shall conclude this *résumé* of Mayow's work on respiration with a quotation which might almost have come from a modern professor of physiology: "In the more violent exercises we are obliged to breathe more quickly and laboriously, not that the blood may have a freer passage through the lungs, for this can occur independently, but because, from the various effervescences produced in the action of muscles, a very great waste of nitro-aërial salt is caused, so that the venous blood returns to the heart very much impoverished. . . . and, that the impoverished blood may restore its waste, there is a necessity for quicker respiration. Hence we may conclude that the chief use of respiration is to cause and keep up the motion of the heart and muscles." Surely the man who worked this out in the year after the Fire of London is entitled to immortality!

(To be concluded.)

### THE PREPARATION OF PATIENTS FOR GENERAL ANÆSTHESIA.

By C. LANGTON HEWER, M.B., B.S.

**T** has been observed, and with a certain percentage of truth, that there is no right or wrong way of performing a lumbar puncture. One either gets in, or one does not. This appears to express the average idea in preparing a patient for an anæsthetic. We do what

has always been done before, and think no more about it. The patient has either been "prepared" or not. We leave it at that.

The H.-S., on seeing a new patient for the first time, gaily writes the mystic symbols "Ol. Ric., H.S. Co., En Sap. *p.r.n.*" in the right-hand top corner of the "blue board," and little recked of what that patient will have to put up with before he finally reaches the operating-theatre. No one makes any attempt to find out what his previous habits were, whether he is usually constipated, or what aperient he generally takes. The common result is that we err on the "safe" (!) side, and a much more drastic purge is given than is necessary. This, combined with an enema, semi-starvation and the natural apprehension of an operation, frequently reduces the unhappy man to a condition which can only be described as gelatinous. Often and often, when asked his experiences, a patient will say: "The operation itself was nothing; it was what went before." Now surely we want to get the man into the finest possible condition immediately before operation, and this is not the way to do it.

The present idea of preparation appears to be summed up in the words—"Leave nothing inside which can be removed." Now it is admitted at once that for certain abdominal operations, especially those involving the alimentary canal, it is most important that the bowels should be as empty as possible, and therefore the surgeon himself must decide what preparation he wishes. But what about all the other operations which are not abdominal? Why should these be "cleared out thoroughly"? The usual answers are that if this is done, "they do not vomit afterwards," or that "they take the anæsthetic better."

So far from this being the case, those who have had experience in casualty and emergency cases will admit that they, on the average, take anæsthetics better than the routine ward cases which have been prepared, and that the after-effects are noticeably less. With regard to the first point, these patients may certainly vomit once, immediately on coming round, but rarely do so afterwards. One vomit is usually beneficial, as this disposes of the anæsthetic-laden saliva and mucus which have been swallowed.

In non-abdominal cases it is only necessary that—

- (1) There should be no food in the stomach at the time of operation.
- (2) The bowels should be sufficiently empty to—
  - (a) Avoid the possibility of an accident on the table.
  - (b) Avoid the necessity for an aperient till two days after operation without any symptoms of intestinal toxæmia appearing.

These requirements are fulfilled in the following technique, which has given very satisfactory results for some time.

We will assume that the patient—an adult—is to have an operation at 1.30 p.m. on Tuesday afternoon. He should

come in, at the latest, early on Monday morning. At 3 p.m. on Monday he is given 1 oz. of castor oil. This should have finished acting before he goes to sleep, so that he should have a fairly good night. If the result of the oil is not satisfactory and there is reason to suppose that the patient has been very constipated previous to admission, an enema may be given early on the day of operation. This is usually, however, quite unnecessary. He continues his ordinary meals up to and including breakfast on Tuesday morning, after which he has a cup of weak tea with plenty of sugar in it at 11 a.m. If the operation is timed for the morning, the only alteration is that breakfast is omitted.

It is well known that continued emotion to some extent inhibits digestion, and in very nervous patients food may remain unchanged in the stomach for a longer period than usual. It is therefore necessary that the breakfast should be light, and if this is taken early, as is normally the case in hospital, the possibility of any solid food being vomited is exceedingly remote.

Half an hour before operation the patient is given gr.  $\frac{1}{100}$  of atropine hypodermically. This is only given because it diminishes the secretion of saliva and mucus; its other alleged advantages—that it is a respiratory stimulant, and that it stops vagal cardiac inhibition—appear to be of theoretical rather than of practical importance.

We have not hitherto considered the question of children, but the preceding remarks apply to them with even greater force. They are very susceptible to starvation, which may bring on a condition of acidosis apart altogether from any anæsthetic. It is probable that if a fair quantity of sugar was given on the same morning as the operation this tendency would be overcome. But as the majority of operations performed on children do not involve the intestines, it is usually quite unnecessary to starve them.

From the foregoing considerations I venture to suggest that although the cult of the empty colon may be the doctor's dream, it is also the patient's nightmare and might be advantageously dispensed with in most cases.

### A CASE OF FRACTURE OF THE LOWER END OF THE LEFT RADIUS WITH DISPLACEMENT OF THE LOWER FRAGMENT FORWARDS.

By P. C. COLLYNS, M.R.C.S., L.R.C.P.

**M**R. G. E. H—, æt. 21, medical student, whilst competing in the Hospital Sports sustained the above injury. On attempting the high jump his shoes slipped just as he was about to take off, with the result that he scarcely left the ground, but shot under the

bar, falling heavily on the back of his left hand. The lower end of his left radius was broken and driven forwards, together with the carpus, the head of the ulna being displaced backwards. There was great deformity, caused by the lower fragment of the radius being directed forwards and impacted into the upper fragment, whose lower end, together with the backward displacement of the ulna, formed a marked swelling on the dorsal surface of the lower third of the forearm. The deformity was reduced within one minute of the occurrence of the accident and the forearm splinted without delay. The X-ray examination, on the following day, showed the fracture situated three-quarters of an inch above the wrist-joint. The fracture was comminuted, slightly impacted, and extended into the articulation.

I have described this case, as the injury is of exceedingly rare occurrence, and I have only been able to trace the records of some ten cases of a similar nature in the literature dealing with "fractures in the vicinity of the wrist-joint" since 1814, the great majority of these fractures being, of course, known as "Colles' fractures," and accompanied with the usual backward displacement of the lower fragment of the radius along with the carpus.

I have to thank Sir D'Arcy Power and Sir Charles Gordon Watson, under whose care the patient was, for permission to publish these notes.

### THE AGONY OF A MEDICAL STUDENT.

**A**S I wander'd in thought along Hunter's Canal by the mountains of Atlas and Tarsus,  
And gaz'd at their oscous ridges' array, which from mastery easy debars us,  
How charming the Islands of Langerhans look'd in an ocean of Canada Balsam,  
Though the Islands of Reil, I regret, were submerg'd (as 'tis said very often befalls 'em) !  
Antiquity's relics engag'd me in turn—the tall Columns of Signor Morgagni,  
The Sylvian Aqueduct, Pyramids old (from these beauties, O students, why run ye?)  
I then sat me down, and my ears bewitch'd felt the spell of the Band of Gennari;  
At those strains, which the Organ of Corti enrich'd, I forgot all my medical worry,  
And quietly munch'd at an Olive that someone had thrown from a neighbouring Attic,  
Till its hard Dentate Nucleus smash'd my best molar (my language was very emphatic) !  
But alas! from the fair slopes of Agar, renown'd for their vast Adenoid Vegetation,

Where bloom the Olfactory Bulb and Monaster, arose now  
a great agitation ;  
For a huge Hippocampus came ploughing along—quick I  
leap'd on my Cardiac Cycle,  
And with Platinum Needle I gave him a Stab in the part  
that I thought the most vital.  
This doubled him up, and I straightway awoke to the sound  
of a snorting convulsion ;  
A lecture was on, and my neighbour was sneezing ; I  
view'd him with grief and repulsion.

A. E. ROCHE.

100 yds. heat in his out-door shoes and for fun, and won  
amid cheers from the onlookers ! Other points of note were  
the immediate attendance of five Harley Street surgeons  
on a competitor who slid under instead of over the high-jump  
rod and broke his wrist, and the "throwing the hammer"  
entrant asking "Where was the hammer?" and "Did he  
come here for a cheese-cutting competition?"

Lady Power gave away the prizes, and Dr. Morley Fletcher  
expressed his opinion that the Club had re-started at a high  
level of efficiency and that there was every promise of a  
long succession of successful meetings in the future.



AN EXCITING MOMENT IN THE OBSTACLE RACE.

## ATHLETIC CLUB.

**T**HE much-belated Athletic Sports were held on  
June 3rd at Winchmore Hill. The weather was  
hot and fine, with a thunderstorm in the offing,  
and a fair number of visitors came to watch the trials of  
strength and endurance and to partake of tea by the Pavilion.  
The track was a pleasant sight to see with its close-  
shaven grass and white-topped hurdles, and certainly not  
least in importance in the landscape was Last, the man who  
pulls the strings. It is on such occasions as these (and  
perhaps on Derby Day) that one realises the indispensability  
of the Last family.

The standard of results was quite high, owing largely to  
the style and finish of Mr. Ainsworth-Davies, who has  
recently run for Cambridge. The results of events will  
appear in the next issue.

In addition to the official list of winners the name of Mr.  
Bracewell should be mentioned. Mr. Bracewell ran in a

ST. BARTHOLOMEW'S HOSPITAL  
AMATEUR DRAMATIC CLUB.

**T**HE Dramatic and Variety Entertainment given on  
June 25th at the Cripplegate Institution in aid of  
the Nurses' Home Fund was a very good entertain-  
ment indeed. The theatre was not quite full, but those  
who were present made up for those who should have been  
present by a double appreciation. The St. Bartholomew's  
Hospital Amateur Dramatic Club has only recently been  
revived, and one expected to start one's criticism by  
saying—"Not bad, considering the Club has been so long  
in the grave." But happily no such apology is necessary  
and the performance may be judged on its own actual  
merit.

The first of the three parts of the programme started with  
an overture by the Jazz Band, which was collected together  
by Mr. Ainsworth-Davies, he himself playing the banjo.  
Everyone was agreeably surprised at their perfect rhythm  
and humorous orchestration. It is rumoured that they come

from Cambridge and call themselves "The Varsertile Four—  
five of them." Anyway, and whatever their name, they  
formed an invaluable background, and a large amount of the  
success and finish of the show was due to their excellence.

Mr. Eric Austen's song and its encore roused the  
enthusiasm of the audience, and at the end of Mr. J.  
Stanley White's two patter songs the success of the evening  
was already ensured. Mr. White has now had a considerable  
experience of the patter song, and is a master of the art.

In the first part there were two small plays, one a  
dramatic duologue called "The Brass Door-knob" (under  
the direction of Miss Edith Gibbs), and the other a playlet  
called "At Harridge's" (kindly permitted by Sir Alfred Butt).

Part II was the stock performance of the "Bart.'s"  
Concert Party, which is always ready for charity performances  
at a moment's notice. The opening chorus is sung to the  
music of the "Robbers' Chorus":

"We hope you'll like our little show  
It rests with you to make it go.

We simply sing

Like anything,

All standing in a row.

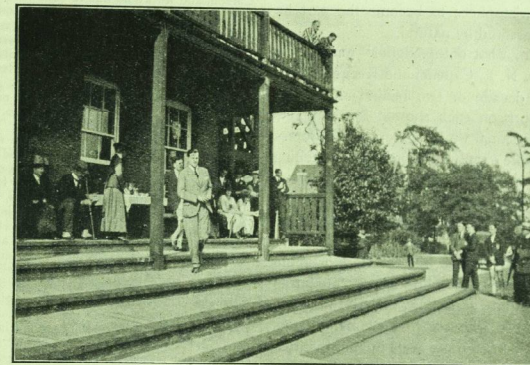
But, whether or no we execute well our parts,

We never can hope to penetrate into your hearts

Unless you applaud and shout 'hooray'

Whenever we sing 'tra la, tralaly.'

And so we wish you luck from Bart.'s."



LADY POWER PRESENTING THE PRIZES.

In the former a naval expert's wife who had all the  
timidity and cunning of a woman pretended that the brass  
door-knob of her room was electrified in order to prevent a  
German agent, who had all the bullying callousness of a  
man, from taking away the plans of a new armoured car  
(for use in destroyers?). Mr. Desmond Urwick and his  
sister Miss Isobel Alison are obviously used to acting, and  
both possess natural talent not always found in professionals.  
The subject-matter was interesting, the staging was good,  
the delivery was clear, and the reception by the audience  
was well deserved.

Harridge's turned out to be a furniture shop, in which the  
shopwalker (Mr. H. L. Sackett) demonstrated to the most  
inoffensive of parsons (Mr. C. H. Andrews) and his  
charming fiancée (Mr. F. C. W. Capps) the wonderful inven-  
tions which he claimed would catch black-betles and  
solve the servant problem. This was a very funny little  
farce and the fiancée easily won her bouquet of parsnips  
and carrots.

Mr. White amused us again with two patter songs, "The  
Palmist" and "Man." The part about the "silly-headed  
sisters" always goes down well with the nurses. The old  
limericks came as a concerted item. Mr. Urwick, a man of  
so many parts, finished his song, "I want to go to bye-bye,"  
by appearing as a flapper and dancing with Mr. Neville.  
And underneath his skirt he wore—well, at any rate they  
were mauve!

Mr. N. R. McLeod Morrison sang "Annie Laurie,"  
arranged by Liza Lehmann. Whilst recognising nothing of  
advantage in the Liza Lehmann arrangement of the old  
song we must mention Mr. Morrison's voice, which is  
destined to break many a fair young lady's heart. In the  
first part also Mr. Morrison sang, and especially in that song  
his voice was under good control, well produced and  
beautiful. A suspicion of shyness set the seal on his  
success.

The third part opened with a one-act farce, "The First  
of April." Mr. Desmond Urwick again proved his worth

by being so entirely Dr. Tobias Sobese (keeper of a lunatic asylum) and so little the German agent of "Brass Door-knob" fame or the flapper of the "Bart.'s." Miss N. Moore was an aged lady and Miss Isobel Urwick her niece Emerald. Emerald (who didn't mind saying "d—n!") was to meet the man to whom she had been long betrothed on the same day that Dr. Tobias was to fetch away to his asylum the servant Bridget. The servant Bridget (Miss Sheila Moore) is not really mad, only Irish. Sir Christopher Gould, the *fiancé*, is taken by Bridget for the asylum keeper, and Dr. Tobias is presumed by Emerald to be the *fiancé*. Sir Christopher hides under the sofa, and only emerges after making fools of everyone except dear Emerald, whom he longs to marry. Mr. L. Crofts Neville was splendid as Sir Christopher; to become the part he had but to don an eyeglass and be natural.

The duet, "Watchman, what of the Night?" was bravely accomplished by Messrs. N. L. Capener and Keene, though perhaps the song is a decade or two behind the times. Messrs. Neville and Morrison each showed the complete self-confidence of a professional when as Aurora and Boreas they entertained the theatre simply by appearing and telling a story about a ducking in the fountain, the orchestra strengthening a rather slender story by tit-bits from well-known songs. The grand finale ended a remarkably good entertainment.

The name of Mr. F. H. K. Green, the secretary, who did a great deal of the spade work, but who was prevented from taking part by the propinquity of exams., must be included amongst the names of those who are to be congratulated. The next time there will be no empty seats in the Institute theatre.

D. W. W.

## STUDENTS' UNION.

### CRICKET CLUB.

The following are the results of this season's cricket matches up to the time of going to press:

May 12th, v. Gravesend. Won. Gravesend, 175; Bart.'s, 220 for 7 wickets (Cooper, 46; Parkes, 45).

May 22nd, v. Alexandra Park. Lost. Bart.'s, 72 (Bracewell, 38); Alexandra Park, 197.

June 5th, v. Cheshunt. Drawn. Bart.'s, 240 for 5 (Parkes, not out, 106); declared; Cheshunt, 125 for 5.

June 7th, v. Dr. Calvert's XI. Lost. Dr. Calvert's XI, 324; Bart.'s, 78.

June 8th, v. R.A.M.C., Aldershot. Won. Bart.'s, 177 (Melle, 107); R.A.M.C., 150.

June 9th, v. Past. Drawn. Past, 248 for 7 (Braun, 56; Binnie, 70), declared; Present, 179 for 6 (Parkes, 42; Orchard, not out, 45).

June 10th, v. Gravesend. Drawn. Gravesend, 138; Bart.'s, 81 for 5.

June 11th, v. Alexandra Park. Drawn. Alexandra Park, 137; Bart.'s, 112 for 7.

June 14th, v. St. Mary's Hospital (2nd Round Hospital Cup). Won. Bart.'s, 218; St. Mary's, 61 (Melle, 7 for 29; Braun, 3 for 27).

June 19th, v. O.M.T. Drawn. O.M.T., 215 for 7; Bart.'s, 115 for 7 (Parkes, not out, 55).

June 21st, v. St. Thomas's Hospital (Semi-Final Hospital Cup). Lost. St. Thomas's, 244; Bart.'s, 132.

## CORRESPONDENCE.

### THE DIAGNOSIS OF GASTRIC AND DUODENAL ULCER.

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

SIR,—In the June number of the JOURNAL a paper appeared, entitled "The Diagnosis of Gastric and Duodenal Ulcer," by Mr. Carson, and we would like to comment on some of his statements.

We agree with him that the method of detecting blood in the stools by the use of hæmin crystals is very unreliable, and therefore useless. The chief and most reliable test is the benzidine test, which was introduced in its present form by Schliesinger and Hübner in 1907. In the St. Bartholomew's Hospital Reports for 1909, A. J. Clark wrote a short paper on the subject giving full details, and his conclusions have been corroborated by one of us (R. L. M. W.) in an article in this JOURNAL in March, 1920. Consequently we need not repeat the technique here.

The methods of examination of the test-meal differ in every way from those which we use. Our method is based on Prout's original method introduced in 1821, which forms the basis of all determinations of hydrochloric acid and chlorides. Hydrochloric acid is present in the gastric contents in three forms, viz. free hydrochloric acid, hydrochloric acid combined with proteins in the meal, and mineral salts of hydrochloric acid, e.g. sodium chloride. The first two forms are classed together as physiologically active hydrochloric acid, and this with the mineral salts of HCl constitutes the most reliable data for diagnostic purposes. Mr. Carson relies solely on the estimation of free hydrochloric acid and total acidity by means of Töpfer's method, which, besides being inexact, does not give sufficient data from which to draw any conclusions.

The amount of mineral salts present is generally about 0.1 gramme per cent. calculated as HCl and in carcinoma of the stomach may be considerably increased, and much higher than the physiologically active HCl. This increase of mineral chlorides provides the most reliable evidence of carcinoma of the stomach, although it is liable to error, as has been fully pointed out by one of us (G. G.) in the *Quarterly Journal of Medicine* in 1910, and by R. L. M. W. in his recent paper in this JOURNAL. Reference to these papers will explain the inadequacy of the tests applied by Mr. Carson, and also his failure to obtain satisfactory results.

We are, Sir,  
Yours, etc.,  
GEORGE GRAHAM,  
R. L. MACKENZIE WALLIS.

### WHAT HAS THIS TO DO WITH GOLF?

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

DEAR SIR,—Re your paragraph on the Inter-Hospital Golf Competition in JOURNAL of JUNE, 1920, several gentlemen would like to venture the information that a "spoon" is a harmless weapon used in stirring tea; whereas a "putter" is a dangerous individual who puts or puts the weight.

Yours,  
B. B.  
(An Enthusiastic Spooner).

## REVIEWS.

POST-MORTEM MANUAL: A HANDBOOK OF MORBID ANATOMY AND POST-MORTEM TECHNIQUE. By C. R. BOX, M.D., F.R.C.P., F.R.C.S. Third Edition. (J. & A. Churchill, 1919.) Pp. 351. Price 8s. 6d. net.

This manual gives an account of the methods which have been found to be most serviceable for revealing morbid processes in the organs and tissues, and it describes briefly the naked-eye appearances characteristic of many of these processes. The book is well written and is lucid, yet so concise that it can be carried in the pocket—a great advantage in a work of reference. The illustrations are good and the printing and paper excellent.

The additions to the text in this edition add to its value, notably the investigation of the cause of sudden and unexpected death and the expansion of the technique to be employed in bacteriological investigations.

As the microscopical examination of morbid tissues is of increasing importance in pathological and medico-legal investigations, a note on the precautions to be employed when reserving material for microscopical examination and the formulae of the fixing solutions in common use might be added with advantage.

In the clearness of its directions and the wealth of information given in a small compass this book has no superior, and it can be recommended to any medical man or student who wishes to acquire a good post-mortem technique.

SURFACE ANATOMY. By CHARLES R. WHITTAKER, F.R.C.S. (Edin.) Third Edition. (J. & A. Churchill.) Pp. 80. Price 7s. 6d. net.

Whittaker's Essentials of Surface Anatomy has been completely revised, many extra markings have been added and some new illustrations provided. This compact third edition will be found useful both to the student of anatomy and for the study of operative surgery. It is gratifying to see that the old terminology has been adhered to throughout the book and that numerous drawings, so essential in surface anatomy, illustrate the text. The arrangement of the latter, particularly the collection of the blood-vessels and nerves into separate chapters, is very convenient. The use of Addison's system of abdominal topography greatly simplifies the surface markings of this part of the body. It is a pity the same cannot be said of the superficial markings of the head, on any subject most text-books, if not actually at variance, at any rate complicate matters for the student by the use of totally different methods in each case.

FRACTURES, COMPOUND FRACTURES, DISLOCATIONS AND THEIR TREATMENT. By JOHN A. C. MACEWAN, M.B., C.M. (MacLachlan, Jackson & Co.) Pp. xii + 285. Price 12s. 6d. net.

It is impossible in the average text-book on surgery to devote more than a chapter or two to the very important subject of fractures and dislocations, and for this reason we welcome the appearance of this volume, which goes a long way to supply what is an undoubted need. Even then in the space of nearly 300 pages it is obvious that such a big subject cannot be discussed at great length. At the same time the book will prove a great adjunct to the student and materially aid him in grasping a difficult, and at the same time a very necessary part of surgery. The illustrations are a notable feature of the book; not only are they numerous, but they are exceptionally well reproduced. The chapter devoted to the general principles of treatment of fractures might with advantage be enlarged.

SURGICAL OPERATIONS: A TEXT-BOOK FOR NURSES. By E. W. HEY GROVES, M.D., M.S., F.R.C.S. (Henry Frowde & Hodder & Stoughton.) Pp. 255. Price 21s. net.

The nursing profession has long felt the need of a volume devoted to surgical operations which, while omitting technicalities, would at the same time supply all essential details. This volume admirably fulfils the purpose, and is certainly the best book of its kind which has yet made its appearance. The illustrations are profuse and well-executed, and the text is excellent. We could have wished that a further chapter had been devoted to the preparation of the operating room, also that some reference had been made regarding appliances and materials which should always be at hand in case of emergency. The appendix, which contains a series of illustrations of the most commonly used instruments, might also with advantage be extended. But these are points which can easily be remedied in a future edition.

Our first impression was that the price was somewhat excessive for a volume expressly written for nurses, but a perusal of its pages demonstrates that it is well worth the money.

We congratulate the author most heartily on his efforts; the publishers also deserve special mention for the admirable way the book has been produced. We confidently recommend the volume to the nursing profession; a nurse armed with such a book need have no fear of an examination on surgical operations.

HOME EXERCISES FOR SPINAL CURVATURE. By RICHARD TIMBERG, M.R.C.S., L.R.C.P. (William Heinemann, Ltd.) Second Edition. Pp. x + 67. Price 6s. net.

The aim of this volume is to provide the general practitioner with guiding principles and definite instructions regarding the home treatment of spinal curvatures. In no sense of the word is it to be regarded as a treatise on deformities—in fact the book is perhaps best described as a collection of 27 exercises designed to improve the condition. The book will undoubtedly serve a useful purpose. The patient should not be given the book as a guide.

The present edition chiefly differs from the first in containing a chapter on certain deformities of the feet that are often co-existing with spinal curvature. The illustrations are also greatly improved, the simple skeleton drawings and diagrams of the old edition having been replaced by photographs.

## RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

DALE, H. H., M.D. "Conditions which are Conducive to the Production of Shock by Histamine." *British Journal of Experimental Pathology*, April, 1920.

DANES, IVOR J., M.D., M.R.C.P. "Bronchiectasis." *British Medical Journal*, June 5th, 1920.

EDRIDGE-GREEN, F. W., M.D., F.R.C.S. "The Physiology of Vision, with Special Reference to Colour-blindness." London. G. Bell & Sons.

"The Edridge-Green Card Test for Colour-blindness." London: G. Bell & Sons.

FISON, JAMES, M.A., M.D. (Cantab.). "The Relative Positions of the Optic Disc and Macula Lutea to the Posterior Pole of the Eye." *Journal of Anatomy*, January and April, 1920.

GILSON, G. GORE, F.R.C.S.E. "A New Pylorus, being an Account of a Routine Operation for Cases of Pyloric Obstruction and Duodenal and Gastric Ulcer." *Practitioner*, June, 1920.

GROVES, ERNEST W. HEY, M.S., F.R.C.S. "The Crucial Ligaments: their Functions, Rupture and Operative Treatment." *British Journal of Surgery*, April, 1920.

HORNER, SIR THOMAS, M.D., F.R.C.P. "Medical Notes." *Practitioner*, June, 1920.

HURRY, JAMIESON B., M.A., M.D. "Diseases of the Liver and Vicious Circles." *Practitioner*, June, 1920.

KEYNES, GEOFFREY, B.Ch., M.D. (Cantab.). "Blood Transfusion: Its Theory and Practice." *Lancet*, June 5th, 1920.

MCCURRICH, H. J., M.R.C.S., L.R.C.P. "A Case of Malignant Pustule in which the Incubation Period was known." *British Medical Journal*, June 19th, 1920.

MORRISON, A. L., M.S., F.R.C.S. "Intussusception occurring in the course of Typhoid Fever." *British Journal of Surgery*, April, 1920.

OVEREND, WALKER, M.A., M.D., B.Sc. *The Radiography of the Chest*. Vol. I: "Pulmonary Tuberculosis." London: William Heinemann.

RAMSAY, JEFFREY, M.D. "Transfusion of Blood in Nephritis." *British Medical Journal*, June 5th, 1920.

ROLLESTON, SIR HUMPHRY, K.C.B., M.D., F.R.C.P., and WAKING, H. J., M.S., F.R.C.S. "Graduate Medical Education in the United States." *British Medical Journal*, June 19th, 1920.

SHAW, ERNEST HENRY, M.R.C.P. (ALEXANDER BLACKHALL-MORRISON, M.D., and E. H. S.) "Cardiac and Genito-urinary Anomalies in the Same Subject." *Journal of Anatomy*, January and April, 1920.

VERKALL, P. FENNER, M.B., B.C., F.R.C.S. "Some Notes on Arthroplasty." *Clinical Journal*, May, 1920.



## EXAMINATIONS, ETC.

## UNIVERSITY OF CAMBRIDGE

First Examination for Medical and Surgical Degrees,  
Easter Term, 1920.

Part III. Elementary Biology.—J. E. Alam.

Second Examination for Medical and Surgical Degrees,  
Easter Term, 1920.

Part I. Human Anatomy and Physiology.—J. A. W. Robertson,  
G. B. Tait.

Third Examination for Medical and Surgical Degrees,  
Easter Term, 1920.

Part I. Surgery and Midwifery.—L. W. Batten, W. I. Berry,  
H. J. Bower, L. Cunningham, E. E. Llewellyn, C. C. Okell, C. L.  
Pasricha, H. J. A. Pollard, J. L. Potts, S. D. Sturton, W. S. Sykes,  
G. S. Trower, W. G. Verniquet, G. C. Wells-Cole.

Part II. Medicine, Pathology and Pharmacology.—W. E. H.  
Banks, H. Barbash, L. W. Batten, W. L. Berry, M. T. Clegg,  
L. P. Garrod, E. F. S. Gordon, E. P. Hicks, R. Hilton, R. Lester  
Williams, C. C. Okell, M. K. Robertson, C. J. Scholtz, R. S. Scott,  
G. S. Trower, E. B. Verney, W. G. Verniquet.

The following degrees have been conferred:  
M.B., B.Ch.—W. S. Soden, J. Li. Davies.  
M.B.—H. W. Scott, B. Haigh.

## UNIVERSITY OF LONDON.

June, 1920.

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

Honours.—J. P. Ross, Distinction in Forensic Medicine and  
Surgery (University Medal); G. M. J. Slot, Distinction in Medicine.  
Pass.—E. M. Atkinson, C. F. Beyers, H. C. Cox, R. Coyte,  
C. E. E. Herington, C. L. Hewer, N. H. Hill, J. V. Landau,  
H. M. C. Macaulay, S. F. Mahmood, J. A. Van Heerden, F. E. S.  
Willis.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

As a result of the Final Fellowship Examination held during  
May, 1920, the diploma of Fellow was conferred on the following:  
J. W. Adams, M.B., B.C.(Cantab.); J. R. Griffith, M.R.C.S.,  
L.R.C.P.; J. B. Hume, M.R.C.S., L.R.C.P.; A. W. Moor, M.R.C.S.,  
L.R.C.P.; B. S. Simmonds, M.B., B.S.(Lond.); J. Whittingdale,  
M.R.C.S., L.R.C.P.

## ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The following has been admitted a Fellow: F. H. Robbins, M.C.,  
M.B., B.C.(Cantab.).

## APPOINTMENTS.

DONALDSON, E., M.R.C.S., L.R.C.P., appointed Assistant Medical  
Officer to the Metropolitan Asylums' Board (Infectious Hospitals  
service).

KEEF, C. G., M.D., B.S.(Durh.), appointed Honorary Assistant  
Medical Officer, St. Albans and Mid-Herts Hospital, St. Albans,  
and Deputy Coroner, County of Hertfordshire (St. Albans  
District).

MELLER, R. W., L.R.C.P., M.R.C.S., D.P.H., appointed Assistant  
Medical Officer of Health to the County of Hampshire.

## CHANGES OF ADDRESS.

FERGUSON, J., 3, Duke Street, Manchester Square, W. 1.  
GORDON, F. J., 53, Castleton Mansions, Barnes, S.W. 13.  
HEWER, C. LANGTON, 51, York Terrace, Marylebone, N.W. 1.  
(Tel. Mayfair 041.)

JAMISON, R., 28, Ham Crescent, S.W. 1.  
KITCHING, R. L., Wetherby, Yorkshire.  
NUNN, J. H. F., "Fieldways," Well House Lane, Barnet, Herts.  
ROBBINS, F. H., Church Street, Leatherhead.  
RUSSELL, E. N., 8, Rue Cherif Pacha, Alexandria, Egypt.  
SALT, A. F., "Sunnyside," Benhill Avenue, Sutton, Surrey.  
STATHAM, H., 31, Christchurch Road, Bournemouth.  
TEICHMAN, O., D.S.O., M.C., Hollington, Chislehurst, Kent.

VAILE, T. D., 9, Northumberland Mansions, Northumberland Street,  
W. 1. (Tel. Mayfair 6180.)  
WILLIAMS, E. COLSTON, Public Health Department, County Hall,  
Cardiff.

## BIRTHS.

COOKE.—On June 20th, at 59, London Road, Horsham, the wife of  
Clement Cooke, M.D.(Lond.), of a daughter.

FINN.—On June 3rd, at Battle, Speen, Newbury, the wife of Allen  
Finn, M.D., F.R.C.S.—a daughter.

HINE.—On May 26th, at Coleshill House, Beikhamsted, to Margaret,  
wife of T. G. Macaulay Hine, M.D.—a son.

KIDMAN BIRD.—On May 29th, at "Cooksditch," Faversham, Kent,  
to Marjorie (*née* Carter), wife of M. W. Kidman Bird, F.R.C.S.—  
a son.

LOVEDAY.—On June 12th, at Manchester, the wife of Dr. G. E.  
Loveday, of a daughter.

PRENTICE.—On June 17th, at Kingsgate, Kent, the wife of H. Ridley  
Prentice, M.B., M.R.C.P., of a son.

## MARRIAGES.

DOUGLAS—NIAS.—On June 8th, at St. Stephen's, Gloucester Road,  
by the Rev. Arthur Winsor, Capt. S. R. Douglas (late I.M.S.),  
youngest son of the late J. A. Douglas, Esq., to Frances Miriam  
Claire, widow of J. B. Nias, M.D., and second daughter of the late  
Edmund Marmaduke Dayrell (Capt., R.N.), of Lillingston-Dayrell.  
ELLISON—THOMPSON.—On June 12th, at the Muswell Hill Wesleyan  
Church, by the Rev. Seaton Davics, Philip Oswald Ellison, M.B.,  
B.S.(Lond.), son of the late Dr. Clem Ellison, of Brisbane,  
Australia, and of Mrs. Ellison, of Clarence House, Clarence Road,  
Wood Green, to May, elder daughter of the late Henry Graham  
Thompson, of 31, Clerkenwell Road, E.C., and of Mrs. Thompson,  
of "Hillcrest," The Avenue, Muswell Hill.

HERINGTON HEWES.—On June 16th, at the Parish Church, Coal  
ville, Leicestershire, by the Rev. G. Herington, M.A., Vicar of  
Heydour, Lines, uncle of the bridegroom, Cecil E. E. Herington,  
M.B., B.S.(Lond.), son of Percy Herington, of Merston, Chichester,  
to Celia Mary, daughter of Mrs. Hewes and niece of Major H. E.  
Powell, D.S.O., of Coalville.

PAGE—LINE.—On June 23rd, at St. James's Church, Muswell Hill,  
by Dr. Stuart Holden, of St. Paul's, Portman Square, Sydney  
Watson Page, M.R.C.S., L.R.C.P., youngest son of the late  
Mr. and Mrs. A. G. Page, of Highfield, Hertford, to Charlotte  
Bertha Line, elder daughter of Mr. and Mrs. George Line, of  
27, Queen's Wood Avenue, Muswell Hill.

## DEATHS.

BOWLING.—On June 2nd, 1920, Rowland Alessandro Bowling,  
M.R.C.S., L.R.C.P., the dearly loved eldest son of the late Arthur  
Masterson Law Bowling and Mrs. Bowling, aged 38.

DINGLE.—At Sandakan, British North Borneo, on March 20th, 1920,  
Norah, the wife of Percival Dingle, of the British North Borneo  
Civil Service.

LAMMIMAN.—On June 1st, 1920, at Elleray, Tunbridge Wells, Cleland  
Lammiman, F.R.C.S.(Eng.), aged 70.

## 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 7s. 6d., 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  
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City 510.

## St. Bartholomew's Hospital



## JOURNAL.

VOL. XXVII.—No. II.]

AUGUST 1ST, 1920.

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## CALENDAR.

Fri. July 30.—Sir A. Garrod and Mr. Gask on duty.  
Tues. Aug. 3.—Dr. Tooth and Sir D'Arcy Power on duty.  
Fri. " 6.—Dr. Calvert and Mr. Waring on duty.  
Tues. " 10.—Dr. Morley Fletcher and Mr. McAdam Ferles on  
duty.  
Fri. " 13.—Dr. Drysdale and Mr. Rawling on duty.  
Tues. " 17.—Sir A. Garrod and Mr. Gask on duty.  
Fri. " 20.—Dr. Tooth and Sir D'Arcy Power on duty.  
Tues. " 24.—Dr. Calvert and Mr. Waring on duty.  
Fri. " 27.—Dr. Morley Fletcher and Mr. McAdam Eccles on  
duty.  
Tues. " 31.—Dr. Drysdale and Mr. Rawling on duty.  
Fri. Sept. 3.—Sir A. Garrod and Mr. Gask on duty.

## EDITORIAL.

AS announced on p. 165, the Old Students' Dinner  
will be held in the Great Hall on Friday, October  
1st, at 7 o'clock. As this is the first Dinner since  
the war it is hoped that as many Bart.'s men as possible  
will put in an appearance and make the occasion a record  
one.

Our warmest congratulations to Sir Anthony Bowlby on  
his election to the Presidency of the Royal College of  
Surgeons. It should be a matter of very great satisfaction  
to the Hospital that the President of the Royal College of  
Physicians and the President of the Royal College of  
Surgeons are both Bart.'s men.

The honorary degree of Doctor of Laws was conferred  
upon Sir Norman Moore by the University of Cambridge  
at a congregation in the Senate House on June 29th. We  
heartily congratulate Sir Norman on the high honour which  
has been bestowed upon him.

We note with much interest that Sir Archibald Garrod,  
K.C.M.G., has been honoured with the degree of Doctor of  
Medicine by the University of Dublin.

Sir Anthony Bowlby and Sir D'Arcy Power have been  
re-elected members of the Council of the Royal College of  
Surgeons of England.

The report has just been issued of the Committee of  
Selection, of which, it will be remembered, the Dean, Dr.  
T. W. Shore, was chairman. Amongst the names of the  
thirty whole-time officers selected we note those of S. A.  
Bontor (Great Berkhamstead), A. Heatty (Harrogate) and  
M. R. Taylor (Acton), and that of R. E. Crosse  
(Nightingale Lane, S.W.) amongst the names of the four  
Divisional Medical Officers chosen to superintend the work  
of the medical officers in the divisions assigned to them  
respectively.

Our warmest congratulations to Mr. J. P. Ross, who at  
the recent M.B., B.S.Lond. examination secured the  
University Gold Medal, and was distinguished in Forensic  
Medicine and Surgery.

Miss Marian Scott Riddell, R.R.C., has been appointed  
Registrar of the General Nursing Council established under  
the Nurses' Registration Act, 1919. She was trained at  
St. Bartholomew's Hospital, and before the war was Matron  
of the Chelsea Hospital for Women. During the war she  
served as Matron of the 2nd London General Hospital,  
and subsequently of the 53rd General Hospital in France,  
until she was appointed Principal Matron and afterwards  
Acting Matron-in-Chief of the Territorial Force Nursing  
Service.

Our sincere congratulations to Mr. Reginald Vick on the  
occasion of his marriage to Miss Mary Neville. Needless  
to say, a crowd of Bart.'s people were present at the ceremony,  
and we extend a hearty welcome to the Warden and  
his wife.

The Médaille l'Honneur avec Glaives "en Vermeil" has been conferred upon Col. A. D. Dorcal, D.S.O., A.M.S. (T.F.), by the President of the French Republic.

Temp. Capt. P. Black, R.A.M.C., has been awarded the Order of the White Eagle "With Swords," Fourth Class, by the King of Servia for distinguished services rendered during the campaign.

The names of the following Bart.'s men have been brought to the notice of the Secretary of State for War for valuable services in connection with military operations:

*In India and Persia.*—Col. W. E. Hardy, A.M.S., Capt. (act.-Major) J. M. Weddell, R.A.M.C.

*In France.*—Temp. Lt.-Col. C. S. Myers, C.B., O.B.E., R.A.M.C.

*In India.*—Major (temp. Lt.-Col.), J. K. S. Fleming, O.B.E., I.M.S.

### COMPLETE ABSENCE OF BREAST IN A FEMALE.

By D. S. RAY, M.R.C.S., L.R.C.P.

**T**HINK the following case is worth recording on account of the rarity of the condition.

Mrs. K—, multipara, was delivered on March 25th, 1920, of a full-term healthy female child of 9 lb.



weight. On examining the infant I found there was complete absence of the left breast and nipple and absence of the major part of the anterior axillary wall, due to the absence of the costo-sternal portion of the great pectoral muscle. The accompanying photograph shows the child at the age of six weeks.

### THE TREATMENT OF STAMMERING.

By CORTLANDT MACMAHON, M.A. (Oxon.),  
Instructor for Speech Defects at St. Bartholomew's Hospital.

**I**F all the many affections of voice and speech, stammering is by far the most interesting to treat and undoubtedly the most difficult. Nature seems to be hopelessly at fault whenever the stammerer tries to work out salvation under her impulses, and the advice given by those who would help the stammerer, and who have had no practical experience in how the defect should be treated, is generally extremely sensible but almost always entirely wrong.

The cause of stammering has been carefully studied and various theories exist as to why the speech is disorganised. A fact, which possibly is greatly overlooked in some theories, is that nearly all stammering commences between the third and fourth years of the stammerer's life—the age of complete innocence—and that generally it comes on by steady degrees.

Many years' experience of stammering has convinced me that it is caused by an over-stimulation of that part of the brain that controls the motor nervous power of speech, and that the over-stimulation is caused by emotions of the mind, such as, in the child, pleasure and interest in things that it is observing and understanding. The over-stimulation is coincident with a hyperæmia of the brain varying in intensity, and the connection between speech-centre and speech-apparatus is disorganised in proportion to the degree of the emotion. The primary over-stimulation is grossly aggravated by the wrongful physical efforts to free the speech. As the child gets older, bad emotions of anxiety, fear, and sometimes anger occur, and further developments arise, such as various well-known habit-spasms.

Nothing aggravates a stammerer quite so much as the advice continually given to the stammerer to "take a long, deep breath." The long, deep breath is taken, the sternomastoid muscles contract as the upper chest is drawn up, the throat and jaw muscles are constricted, and the vocal cords approximate weakly under the general tension. The abdominal wall is strongly retracted, and probably, as the blood-supply to the abdominal viscera is thereby impeded, the hyperæmia of the brain is increased. The result is that speech is rendered almost an impossibility until exhaustion brings expulsion of most of the air and relaxation occurs, and then only a few words are accomplished owing to collapse of the lungs.

Another fault the stammerer acquires is to think carefully as he speaks: this again over-stimulates the brain. The stammerer's brain cannot afford to think hard as speech

occurs nor is it necessary. It is a singularly good brain, but too sensitive to over-effort.

The true stammer only occurs in individuals born with this sensitive condition of brain. No one can acquire a stammer without it and no doubt some possible stammerers go through life without stammering; others unfortunately acquire it from shock conditions and through thoughtless imitation of a stammerer or by contact with a bad stammerer. The war called up much stammering of what one might call the civilian type, which differs very much from the shell-shock stammer. A stammering boy in a school is no danger to other boys unless they are predisposed to stammering. Heredity in stammering does not seem to aggravate it.

The object of all forms of treatment of the stammering speech is primarily to establish complete self-confidence, but this is not always sufficient; a great deal more must generally be acquired before normal speech is permanently established. One must impress upon a stammerer that his impaired speech is a trouble which will yield to a technique that must be thoroughly learnt, and that by steady practice what is necessary will become automatic as it does in other things, such as the playing of the piano, golf and tennis. The act of inspiration is very definite and very simple but has always to be acquired by very great care. It produces a powerful but very small expansion of the lower ribs. The movement brings the diaphragm well down and extends it. The abdominal wall is left as immobile as possible during inspiration, and there is no active advance or retraction of it. The intake of air becomes practically subconscious and the great concentration is on the physical movement of the lower ribs. A very marked increase in the lung capacity is soon noticed in this region. As the voice is produced the abdominal muscles contract very powerfully, and drive the diaphragm actively up like a piston in a cylinder. These acts of inspiration and expiration must necessarily increase the blood-supply to the lungs and viscera and so tend in a large degree to overcome the hyperæmia of the brain. As a proof, anyone who is afflicted by undue nervousness and lack of self-confidence will soon appreciate a marked improvement in their condition by using this method of breathing. One must emphasise that any marked movement of the upper chest during inspiration is absolutely fatal in a stammerer. In some cases of stammering due to shell-shock, only perfected breathing with the confidence it brings and a knowledge of the consonant production, are necessary to restore the speech to normal, and it would be the only treatment given to quite young children. When confidence and belief are established in this breathing act having a control over the emotions a great change occurs in the stammerer's demeanour and he becomes calm and callous by the knowledge that perseverance in the full treatment will make the stammer negligible or cure it altogether. In some the improvement is so

rapid that it is almost incredible that progress could occur in the way that it does.

Further treatment consists in the stammerer learning the nature of the consonants as to which carry voice and which are only breathed. Simultaneously he learns that every word has its resonator position or positions, and that when these are correctly shaped for the word is easy to produce. No word can puzzle the stammerer after a few weeks' treatment and he can at once say if a word contains main vowels, compound vowels or subordinate vowels and the type of consonant that introduces them. The voice is trained to be rather deeply pitched and resonant, and the stammerer soon learns that the less he thinks the more fluent he is, and that resonance and fluency are closely allied.

Stuttering is, of course, a form of stammering, and consists of the rapid repetition of the breathed consonant or consonants introducing a word; when, by instruction, the vowel sound following has its resonator position recognised, the consonant difficulty begins to disappear. As has been already pointed out this accuracy becomes subconscious and automatic.

The best age to deal with stammering is between the years of eight and fourteen, especially if the stammerer comes into residence for treatment. Between fourteen and nineteen years of age it is considerably more difficult, as school work interferes very much with practice. Between twenty and fifty it takes longer to treat as a rule, owing to the defect having become firmly established, but one finds the older stammerers very keen to speak well and they work hard with very satisfactory results.

Stammerers differ in the nature of their impediment very much and in their temperaments, but in nearly all the progress is good if they are prepared to work really hard over a period of three to six months. As a preliminary to treatment the nose and throat should be medically examined to see if tonsils and adenoids or other conditions require attention. It is useless to attempt treatment if the general health is very poor. The final result is that the speech is clear or the stammer made negligible in the large percentage of cases, the physical condition is greatly improved, and a full knowledge of how to produce the voice to the best advantage is acquired, which is in itself an asset of great value. Above all, the whole aspect of life is changed from despondency and a wretched self-consciousness to optimism and feeling of happy confidence. Only stammerers themselves and those who treat them know the full meaning of this change.

## THE LIFE AND TIMES OF JOHN MAYOW (1643-1679).\*

By R. G. R. WEST.

(Concluded from p. 150.)

### FETAL RESPIRATION.

Before turning to Mayow's work on muscles, I must devote a paragraph to his explanation of fetal respiration. On announcing the above-mentioned conclusion as to the function of respiration, he was challenged to explain how a fetus *in utero* lived and developed. He promptly announced his belief—doubtless to a very incredulous Royal Society—that the fetus not only respired, but did so through the umbilical cord. He pointed out that he was not the first to hold this opinion: "Wherefore we may be allowed to conclude with the divine old Hippocrates (*cum divino sensu* Hippocrates) that the umbilical vessels supply the office of respiration to the fetus." The blood of the fetus becomes impregnated, in the placenta, with the nitro-aërial particles from the maternal blood "in the same manner as the lungs." The placenta is the "lung of the uterus." He then asks himself how it is that a child, after birth, can live some hours enclosed in its fetal membranes, but if once it inspires air it cannot live a moment without it. He concludes that the explanation is to be found in the fact that, while absolutely at rest the child's minimal oxygen consumption is very low, but that, on inspiration, work is performed: "it with labour contracts the muscles of the chest and midrib."

### ON MUSCULAR CONTRACTION.

Though his work on the physiology of muscle contraction was, of necessity, unsatisfactory, the fact that Mayow turned his attention to the subject suggests that he had an inkling of some of the problems to be elucidated. There is absolutely no other English physiologist of the seventeenth century who can claim to have covered, in the first ten years of his research, anything like Mayow's field of work. Though his conception of muscle contraction was wrong, his description of the action of various muscles was of considerable value. He inferred that arterial blood was essential to muscular work from the observation that ligation of the artery of supply prevented the normal contraction of the muscle. As arterial blood differed from venous in the possession of the nitro-aërial particles, he reasoned that these were utilised in the muscle tissues. He argues that "it is absolutely necessary, for the continuance of animal motion, that a supply of salino-sulphureous and nitro-aërial particles should never be wanting in the blood" to enable muscular contraction to occur. Later he concludes that only the salino-sulphureous particles

\* Awarded the Wix Prize, 1920.

reach the muscle by the blood, but that the nitro-aërial spirit is dissociated from the blood in the brain, and in some way travels to the muscles by the nerves.

Mayow was the first accurately to appreciate and describe the action of the internal intercostal muscles in respiration, and the effect of raising the ribs. "He describes the mechanism and movements of the ribs and diaphragm almost as perfectly as they can be done to-day," writes Heidenhain. I cannot do better than quote his description, which appears to me to vary very little from that given in the modern textbooks of anatomy. "It is a received opinion, that the external intercostal muscles serve to dilate, and the internal to contract the thorax; but it appears to me more rational that the thorax is dilated at the same time by both. And we may assert that the thorax is dilated, when the ribs are raised, and contracted when they are depressed. . . . The ribs are not articulated with the spine and sternum at right angles, but the angle below the ribs is somewhat less than a right one, so that if a rib be raised, its articulations with the spine and sternum approach to right angles. . . . the thorax is dilated by the ribs being brought to right angles. . . . As each lower rib is less fixed than the upper one, it follows, when the intercostal muscles contract, that each lower rib must be drawn upwards, . . . the internal muscles drawing up the lower and more moveable rib equally as well as the exterior (he appends a diagram to illustrate this). . . . The ribs articulate with the spine in such a manner that they easily ascend and are thrown out, so as to describe a circle." He rightly explains the advantages of two oblique muscles at right angles over one set of vertical fibres. Also, it is to be observed that he is the first to describe the double articulation of the ribs with the spine.

### CHARACTER.

Of Mayow's character we know very little indeed. Of the two means at our disposal for summing up any historic character—his works and contemporary records—only the former is of any avail here. It is surprising that of contemporary criticism there is practically none. *Athena Oxoniensis* (1690), from which we know the dates of his life, is merely a chronological table, with no attempt at a character study. Verheyen and Wolferstan are the only contemporary scientists who acknowledge indebtedness to him; they praise his work, but make no mention of his life. Thurston (on *Respiration*) and Hales (*Vegetable Statics*) borrow his work wholesale, especially Thurston, with no acknowledgment whatsoever. With the exception of Lower and Hooke (and even the latter does not mention him in print) the scientists of the day seem to have conspired to keep Mayow in the background. In those days of fulsome and exaggerated praise I see no other explanation than that, not being on good terms with Boyle—who was the scientific dictator of the time and surrounded with

satellites—or for some similar reason, he was scrupulously 'edited out.'

We certainly have not adequate material for building Mayow a character, and I strongly deprecate the method of some authors of constructing a detailed but totally imaginative character around a few bare facts in a man's life. There are just a few characteristics which Mayow must have possessed. No one could have produced *Tractatus quinque* who had not considerable keenness and skill in observation, phenomenal powers of deduction, scientific imagination, a capacity for judging relative importance, and, I think, tenacity. From his appearance one can tell nothing. Hartog's description—the face long, thin, the features, especially the mouth, being delicately moulded and expressive—is a good one, but I confess seventeenth century portraits baffle me; with the exception of Shakespeare and James the First they all look exactly alike!

Some authorities consider that there is considerable evidence that Mayow was influenced by Descartes' doctrines. Certainly we find him possessed with a desire to explain things mechanically, and he also warns his readers at one point not to confuse his "animal spirits" with the "universally sensitive soul." But this does not take us far. Mayow modified Descartes' view of muscle action and flatly contradicted his ideas of fermentation. Besides, we have no knowledge of our subject's "soul life." In science Mayow had no need to follow Descartes; he was by far the more able physiologist, while, as far as we know, he did not specialise in philosophy. What influences worked upon John Mayow we do not know, but there is every indication that he did not let much interfere with his own ideas and theories. He held no opinion in reverence because it was "well-born," and the calm manner in which he disposed of venerable or popular notions suggests that he was perfectly satisfied with his own competence to judge every whit as well as any who had gone before him. There is also much of the self-assurance of genius in the way he follows out a mere hypothesis to what we now know to be a correct deduction, even when he must have known that his experimental evidence by no means warranted the conclusion he confidently asserted. "He does not always prove his case," says Hartog. No, but it is notable that the unproved case is often found correct. I would thus add indifference to the opinions and criticisms of others, and pardonable self-assurance, to the characteristics of Mayow.

### CONTEMPORARY CRITICISM.

Mayow's work had a profound influence on many scientists, both in the seventeenth and eighteenth centuries. In his own time he got little or no acknowledgment, but his influence is early noticeable, especially in the work of Hales, who repeated some of his experiments; Lower, who followed up his work on the heart in *De Corde* (1669); Thurston, who accepted his views on respiration; Wolferstan, who

developed his work on combustion; and Verheyen, who continued the researches of Mayow and Boyle and refers his readers to them.

Chemists of the next century not only used his work extensively, but wrote appreciatively of him, some even devoting a book to Mayow's work alone. Chief among the eighteenth century followers of our neglected seventeenth century scientist are Veats, Beddoes, Bluiembach, Fourcroy, Scherer, Housz and Hoefler—a list which shows that his greatness was left to be discovered by foreigners.

As typical of the attitude of "damning with faint praise" adopted by his own generation, I may cite a review of *Tractatus quinque* which I find in the issue for July 20th, 1674, of the *Philosophical Transactions of the Royal Society*. The writer begins by suggesting that much is borrowed from Boyle: "And acknowledging from the many Boylean experiments, that the air is endowed with a considerable spring, he attempts to give an account . . . that air deprived of its nitro-aërial particles looseth its springy vertue." In point of fact Mayow eventually showed that deoxygenated air retained its elasticity. The statement, together with the fact that the whole review is so clumsy and involved, with so many footnotes advising the reader to consult "the noble R. Boyle," leads one to doubt either the writer's capacity or his will to judge rightly. The reviewer is most intrigued by the worthless portion of the tract, "of thunder, colour, lightning, and where the rainbow ends." Nevertheless he realises that Mayow has hit the heart-fermentation theory a blow; "which he doth somewhat sarcastically exaggerate, thereby provoking the maintainers to a vindication, if the matter will bear it." He quotes approvingly an interesting caution: "Do not rashly prescribe contrary salts in medicine lest the one destroy the efficacy of the other or turn it into a third." Extracts from *Fetus in Utero* are quoted without comment save that he closes the account with: "But enough of this exorcitation"! This cool attitude to one of the chief researches in the tract, considered side by side with the expansion and annotation of some of Mayow's useless speculations, is extremely suggestive of the muddled outlook of his contemporaries. It is true that Boyle and Hooke had a clear view, but they also were before their time. Typical scientists of the day were Willis and Sylvius, who rank infinitely lower to-day, with their "medley of half-digested Cartesianisms and iatrochemistry." There is ample evidence that Mayow himself realised the relative value of the various sections of his work far more accurately than any of his contemporaries, just as he saw clearly the problems whose immediate solution was of primary importance to the advancement of science.

More mixed comment comes from Thomson in his *History of the Royal Society*, to which I have already referred. His charge of plagiarism finds no echo in Hooke himself. "Dr. Hooke," says Thomson, "sketched in

*Micrographia* (1664) a very beautiful theoretical explanation of combustion, . . . which Mayow embraces . . . without acknowledgment, and clogs with so many absurd additions of his own as generally to obscure its lustre." But Thomson proceeds to pay a tribute to Mayow's own work, "in which he appears to have gone much farther than any other chemist of his day, and to have anticipated some of the best established doctrines of his successors."

#### APPRECIATION OF MAYOW.

Towards the close of the seventeenth century interest in Mayow became very great. During 1797 and 1798 letters passed between Yeats, Beddoes, Scherer and Housz on the subject. Yeats himself was an enthusiast. He devoted a book of over three hundred pages almost exclusively to an examination of Mayow's work. This book, which bears a portrait of Mayow as a frontispiece, is exhaustive, and glows with the author's "high idea of his genius" (*Observations of the Claims of the Moderns to Some Discoveries in Chemistry*, 1798).

Beddoes, in his *Chemical Experiments and Opinions* (1793), writes in a very laudatory manner of the "philosopher of whom this country has just reason to be proud." He is hailed by Yeats in a personal letter as "the man who first held up the works of Mayow to the philosophic world." In a reply, dated December, 1797, he confesses: "I have long been sensible that my abstract of Mayow was drawn up with more ardour than judgment"; and in a later letter he says, "It is too rhetorical a great deal." A Dutch physician, Ingen Housz, writes, also to Yeats, in 1798: "As Mayow anticipated so many things discovered one hundred years after him, you may find in the works of this great genius what I imagined to be my original discovery." He asks Yeats to inform him if this is the case, "as I should rejoice . . . to coincide with the opinions of so great a man." J. Scherer, though his *Beweis das J. Mayow* is almost as exhaustive as Yeats', writes later to the latter: "Mayow has not yet met the attention he merits. Weigal, Mertsger and Haller have but very imperfectly made use of his writings."

After receiving no appreciation from his own generation—though he cannot be said to have been altogether wasted upon it—after being obscured for a hundred years by the universally accepted phlogistic theory, after Priestley, Scheele and Lavoisier had come and gone, at the turn of the century following his own death we see Mayow come into his own. It is true that he has never taken his rightful place in the history of science. His name should rank with Boyle, Hooke, Lavoisier, Avogadro, Dalton, Priestley, Scheele; with the men who built the foundations of chemistry. The student of anatomy, physiology and chemistry, yes, even the schoolboy who mixes the dates of Priestley with the hypothesis of Avogadro, should hear of John Mayow, physiologist and chemist, 1643 to 1679.

## AN ELECTRICAL METHOD OF TREATING ENURESIS.

By J. NEIL LEITCH, M.B., B.S., M.R.C.S., L.R.C.P.

**C**ASES of incontinence of urine occurring in children often tax the patience of the doctor, and after being "drowned" in belladonna, if no improvement occurs they are left "to grow out of it."

I have recently treated a good many cases by an electrical method, and if care is taken in selecting suitable cases the method seems almost uniformly successful.

It is first necessary to eliminate any possible source of irritation, and it seems that in the residue the cause is lack of cerebral control or weakness of the sphincter.

The method adopted is to give strong "single shocks" from a faradic coil. The "Physio" coil was used for this purpose and adjusted to give 60 shocks per minute. The indifferent electrode, consisting of a pad, was placed either across the lumbar region or over the front of the abdomen, and the active electrode, small and button-shaped, was held on the central point of the perinæum. Treatment was carried out in this manner for 20 minutes two or three times weekly. The strength of current was in each case as strong as the patient could comfortably bear.

The following two cases are quoted as examples of the results obtained.

CASE 1.—A. P.—, boy, æt. 8, healthy. Has always "wet his bed," and is a nuisance now he goes to school as he constantly has to ask to "leave the room." Seems bright and intelligent. Not circumcised, but no phimosis. Urine: No hyperacidity or bacilluria. No other apparent cause. Has had prolonged course of medicinal treatment, which was ineffective. Was treated by above method, and showed marked improvement after three applications and quite cured after eight. Now, four months after, he has been able to hold his water for a normal period and has no trouble at night.

CASE 2.—W. L.—, boy, æt. 6, suffering from paralysis of left leg following poliomyelitis three years ago. This has been treated with sinusoidal Schnew baths and is improving considerably. He has had entire loss of bladder control at any rate for the last two years while he has been under observation, and his bed was "always wet." It will be remarked that the sinusoidal baths did not improve this condition. Recently the same treatment was ordered for him and gradual improvement took place. In all over twelve applications were necessary, and now he can hold his water throughout the night and is normal during the day.

Results such as these seem to warrant a wider use of this form of treatment.

## THE "FIRST YEAR."

**S**OMEONE has described the first year of a medical course as a "mere smattering of a few delightfully interesting branches of science, which constitute the falsely-named 'scientific basis' of medical study."

That the enlightened individual, who burst forth into such a misplaced and unappreciative definition, could ever have undergone such a course is open to much doubt.

Experience has taught many fools that it is, in fact, nothing more or less than a blind plunge into a set of three incomprehensible, immiscible and highly-abstract sciences.

You have got to cram principles into your head which cost men their whole lives to formulate. You have to learn in a day or two the principles of a discovery that it took them ten years to complete.

In three-quarters of a year you must have a thorough groundwork of three of the leading sciences of the day. You are rushed from the development of the nervous system in the chick to the laws of mass action in chemistry, and thence to the theory of light-waves in physics. You comfort yourself with the fact that the University only requires an introductory knowledge of these subjects, treated in an elementary manner. You carry out their instructions most implicitly, and feel that it's jolly to be alive and easy to be a medical student. You get into the "smattering of everything" mood. You dance lightly through pages of heavy theory, with one eye fixed on the "elementary knowledge" clause in the syllabus. You listen to your lecturer with tolerant pity. Poor fool! He has such a depth of knowledge, and has lectured for fifty years on the same subjects. But he has forgotten to read the *syllabus*!

Listen to him, if you will, but don't take him seriously. Whatever happens, you have the University on *your* side! And so your course continues. You interest yourself in a "dilettante" way in a deep science or two, and when there are no important "rigger" matches on, work vaguely for some "exam." that seems a devil of a way off.

*Tempus fugit*, however, and one day you find yourself tripping gaily to your first examination for medical degrees. For a week you are completely dazed. The University has let you down horribly. The examination is cold and hard. You are asked for *facts*, and the few principles you have taken so much trouble to learn in a general way are not asked for. Cold, hard, irrefutable facts here, minute details there, are what these traitors would have from you.

You abandon your original intention of remaining in town till the results come out, and next session finds you listening very intently to the same lecturer, giving the same information which you treated with scorn the term before.

Your professors have won your heart at last. Even their photographs adorn your homely mantelpiece, and volumes

and volumes of their notes are the shrine you will worship for evermore.

A religious awakening also comes to you at this time, and periodically you offer up your burnt sacrifice, consisting of leaves ripped from the University of London Syllabus in the Faculty of Medicine!

By M. HOLDSWORTH.

## RAHERE LODGE NO. 2546.

**T**HE Installation Meeting of the Rahere Lodge was held in the Great Hall, St. Bartholomew's Hospital, on Tuesday, June 15th, at 5.30. W. Bro. F. Swinford Edwards, the Worshipful Master, initiated Bernard H. Spilsbury and Ralph Coyte in the first degree. The charge was given by W. Bro. Ernest Clarke. The Worshipful Master then installed Bro. E. W. Brewerton as Worshipful Master for the ensuing year. The following officers were appointed:

W. Bro. ELMORE BREWERTON . . . . .	W.M.
W. Bro. F. SWINFORD EDWARDS . . . . .	I.P.M.
W. Bro. FRANCIS W. CLARK, P.G.D. . . . .	S.W.
Bro. GIBLING BALL . . . . .	J.W.
Bro. The Rev. R. B. DAND . . . . .	Chaplain.
W. Bro. ERNEST CLARKE, P.M., P.G.D. . . . .	Treasurer.
W. Bro. E. LAMING EVANS, P.M., L.R. . . . .	Secretary.
W. Bro. M. L. TRECHMAN, P.M., L.R. . . . .	D.C.
Bro. REGINALD M. VICK . . . . .	S.D.
Bro. ARNOLD W. STOTT . . . . .	J.D.
W. Bro. H. MORLEY FLETCHER, P.M., P.G.D. . . . .	1st Asst. D.C.
W. Bro. W. J. GOW, P.M., L.R. . . . .	2nd Asst. D.C.
W. Bro. P. S. ABRAHAM, P.M., P.G.D. . . . .	Almoner.
W. Bro. L. W. BATHURST . . . . .	Organist.
Bro. WALTON READ . . . . .	I.G.
W. Bro. E. P. FURBER, P.P.G., J.W., Surrey . . . . .	Sen. Steward.
Bro. JOS. CUNNING . . . . .	Steward.
Bro. GEOFFREY EVANS . . . . .	Steward.
W. Bro. A. H. COUGHTREY . . . . .	Tyler.
Bro. E. W. HALLETT . . . . .	Asst. Tyler.

The addresses were delivered by W. Bro. Swinford Edwards and W. Bro. Laming Evans. Ninety brethren and guests dined subsequently at the Imperial Restaurant.

During the past year the following have been initiated into the Rahere Lodge: T. H. Just, J. C. Dixey, T. M. Body, F. Coleman, M. W. B. Oliver.

## RESULTS OF ATHLETIC SPORTS.

Held at Winchmore Hill on June 3rd.  
 100 Yards.—J. C. Ainsworth-Davies (1), L. C. Neville (2). 10½ sec.  
 220 Yards.—J. C. Ainsworth-Davies (1), L. C. Neville (2). 24½ sec.  
 120 Yards Handicap.—W. S. Hinton (+ 5 yards) (1), L. C. Neville (2). 13 sec.  
 120 Yards Hurdles.—E. Lloyd (1), D. C. Martin (2). 18½ sec.  
 440 Yards.—J. C. Ainsworth-Davies (1), C. J. Sanderson (2). 54½ sec.  
 Half-mile Handicap.—C. J. Sanderson (+ 30 yards) (1), E. Lloyd (+ 10 yards) (2). 2 min. 8 sec.  
 One Mile Handicap.—H. C. J. Ball (+ 30 yards) (1), D. W. Winnicot (scratch) (2). 4 min. 36 sec.  
 Long Jump.—J. C. Ainsworth-Davies (1), J. Parrish (2). 19 ft. 9 in.  
 High Jump.—J. C. Ainsworth-Davies (1), L. C. Neville (2). 4 ft. 10 in.  
 Putting the Weight.—J. B. Mudge (1), R. D. Reed (2). 33 ft. 4 in.

Throwing the Hammer.—J. C. Ainsworth, Davies (1), R. Lloyd (2) 73 ft. 7 in.

Inter-year Relay Race.—First Year Team (I. C. Neville, W. Holdsworth, W. S. Hinton, H. A. M. Whitby).

Inter-year Tug-of-war.—Junior Staff Team.  
Obstacle Race.—T. M. Marceuse (1), N. G. Thomson (2).

## REVIEW OF LAWN TENNIS SEASON.

### THE HOSPITAL RETAINS THE CUP.

THE Hospital brought to an end a successful Lawn Tennis Season by beating Guy's in the Final Round of the Senior Cup at Roehampton on July 20th by 9 matches to 3, three "doubles" being left unplayed.

The strength of the team lies in the high standard of all its players rather than in the exceptional brilliancy of any one member. Thus it was found extremely difficult to decide in what order the "singles" should be played in the cup matches, the fifth and sixth men on their day being quite capable of putting up a close game against the first and second.

Probably C. F. Roupell is the best "singles" player, his ground shots being excellent, both forehand and back, and he has a nice scoring forehand volley. He must, however, learn to play at the net and not half way up the court before he becomes a great "doubles" player. He is a great asset to the side, and is likely to be with us for some time as he has only just joined the Hospital.

The team has also been strengthened considerably by the return of N. R. Powell, who played for the Hospital before the war. He is a very consistent player and his temperament a lesson to many. If the result of a match hangs in the balance, his steady backhand and well-judged lobs usually win through. He needs, however, to get more pace on the ball and "kill" when he gets a chance before he improves much on the game he now plays.

J. G. Johnstone and W. D. Urwick have again played well for the Hospital, but are better "doubles" than "singles" players. The former is often brilliant overhead but needs to improve his low volleys; the latter must get steadier on the return of service, while he wins many points with his service and cross-court volleying.

P. Smuts and W. E. Cody have both much improved during the season, the latter's forehand drive and former's overhead work being especially good. Cody needs to develop his volleying and backhand, but with some regular practice, which they have not had this season, they would both soon reach the same standard as the rest of the team.

E. E. Llewellyn and S. Orchard have also done good work in helping the Hospital to beat Charing Cross and University College Hospitals in successive rounds of the Cup without the loss of a match.

In the final of the Cup the team was greatly strengthened by the presence of R. F. Johnstone, the "Oxford Blue" who has done so well in the "Varsity" matches this season and has now joined the Hospital for good.

In the "doubles" he played beautiful tennis and with Urwick easily beat the Guy's second pair. Unfortunately Urwick was not at his best against the first pair and they just lost this match 2-6, 6-4, 5-7.

The prospects of next year are decidedly promising: J. G. Johnstone, W. D. Urwick, R. F. Johnstone, C. F. Roupell and W. E. Cody will all be here, and possibly R. R. Powell. The Hospital was beaten in the Semi-final of the Junior Cup by the Middlesex Hospital chiefly owing to the unrepresentative team that had to be played, certain members of the Second VI refusing to play on the allotted date for apparently quite insufficient reasons. This second team would be promising if they did not lack enthusiasm.

The committee has also run a handicap men's "doubles" tournament in the Hospital with a view to finding unknown talent, and, at the time of writing, C. F. Roupell and Stuart Low (owe 153) have come through to the final in the lower half of the draw, while J. G. Johnstone and P. C. Collins (owe 30) and D. J. Brims and F. M. Marceuse are the semi-finalists in the upper half.

This tournament would have been more useful had not many competitors preferred the coin to their racquets in deciding certain of the earlier rounds.

The Club has been fortunate in obtaining sufficient money this year to open two new grass courts. They badly need a hard court, and the committee would venture to suggest to those who are interested in the welfare of the Hospital and its sport that this would be a very nice present.

Results of the season's matches.—Hospital win 9 out of 11.

- May 15th, v. Chiswick Park "A," at Winchmore Hill. Lost by 1 match to 8.  
 " 18th, v. Trinity College, Cambridge, at Winchmore Hill. Won, 5-4.  
 " 26th, v. Northwood, at Northwood. Match unfinished, Northwood leading 3-2.  
 " 29th, v. Cheshunt, at Winchmore Hill. Won, 9-0.  
 June 7th, Second Round Cup-tie, v. Charing Cross Hospital. Won, 15-0.  
 " 12th, v. King's College, at Winchmore Hill. Won.  
 " 15th, v. Chiswick Park "A," at Chiswick. Won, 7-0.  
 " 22nd, Semi-final Round of Cup, v. O.C.H. Won, 9-0.  
 " 27th, v. Roehampton, at Roehampton. Lost, 2-7.  
 July 3rd, v. Old Millhills, at Winchmore Hill. Won, 7-2.  
 " 8th, v. Cumberland, at Finchley Road. Won, 5-0.  
 " 20th, Final Round of Inter-hospital Cup, v. Guy's. Won, 9-3. Three matches left unplayed.
- Results—Singles: R. F. Johnstone lost to M. Jackson, 1-6, 4-6; C. F. Roupell beat L. Nurick, 6-1, 3-6, 6-4; R. R. Powell beat W. H. Cellier 6-2, 6-4; W. D. Urwick beat B. L. Laver, 7-5, 6-2; J. G. Johnstone beat B. J. M. Keyter, 7-5, 6-4; W. E. Cody beat J. W. Schollum, 3-6, 6-4, 7-5.
- Doubles: J. G. Johnstone and R. R. Powell lost to Nurick and Jackson, 3-6, 5-7; did not play Cellier and Danel; beat Keyter

and Nesar, 10-8, 6-0. W. D. Urwick and R. F. Johnstone lost to Nurick and Jackson, 2-6, 6-4, 5-7; beat Cellier and Danel, 6-4, 6-2; did not play Keyter and Nesar. C. F. Roupell and P. Smuts did not play Nurick and Jackson; beat Cellier and Danel, 8-6, 6-4; beat Keyter and Nesar, 6-2, 6-8, 6-4.

## ST. BARTHOLOMEW'S HOSPITAL AMATEUR DRAMATIC CLUB.

### Balance Sheet for Entertainment, June 25th, 1920.

RECEIPTS.		EXPENDITURE.	
	£ s. d.		£ s. d.
From Sale of Tickets	54 14 0	Entertainment Tax	0 10 0
From Sale of Programmes	11 0 0	Printing Bills and Tickets	1 17 0
Donations	2 7 3	Printing Programmes and Slips	5 10 0
		Deposit to Cripple-gate to Hire of Hall	2 2 0
		Balance to Hire of Hall Acting License for Play, "The First of April"	5 16 9
		Costumes, etc.	1 1 0
		Two Copies of "Cairo" for Finale	1 12 0
		Cheque presented to Nurses' Home Fund, being the Profits of the Entertainment	40 0 0
	68 1 9		68 1 9

Audited and found correct, July 16th, 1920. J. H. M. GREEN (Hon. Secretary).

(Signed) L. S. MORGAN.

A letter of grateful thanks to all concerned in the production has been received from Col. McAdam Eccles, Hon. Secretary of the Nurses' Home Fund.

## THE ST. BARTHOLOMEW'S HOSPITAL ANNUAL OLD STUDENTS' DINNER.

THE Dinner will be held in the Great Hall on Friday, October 1st, at 7 o'clock. Sir Anthony Bowlby, President of the Royal College of Surgeons, will take the chair.

This is the first Dinner to be held since the outbreak of war, as the Dinner which was arranged for 1919 fell through owing to the railway strike. A record attendance is expected. Application for seats should be made early, as the accommodation of the Great Hall is limited. Seats will be allotted and reserved in order of application, but no tickets will be sent out. The price of the Dinner will be one and a half guineas, payable at the Dinner only. Decorations will be worn.

It is hoped that all old students will return the reply card whether they are able to attend or not in order that their correct addresses may be registered. All communications should be addressed to the Honorary Secretary to the Dinner, Sir C. Gordon Watson, K.B.E., C.M.G., 82, Harley Street, W. 1.

## CORRESPONDENCE.

### THE ORIGIN OF MALIGNANT GROWTHS.

To the Editor of the 'St. Bartholomew's Hospital Journal.'  
 SIR,—An interesting résumé of the various theories which have been put forward to explain the origin of malignant growths has recently appeared in the *Guy's Hospital Gazette*. I am moved thereby to put forward again a theory of my own. I embodied it in a thesis for the M.B. in 1913, but events since then have thrust theories into the background. Each new observation which has been made in the meanwhile on the behaviour of the cancer-cell seems to me to fall into its place in this hypothesis.

The theory arises out of the conception of the human organism as a metazoan, evolved from the primeval protozoan, and to be regarded as a commonwealth of protozoa banded together for their mutual advantage. Our own life-history from the fertilised ovum onwards serves to keep fresh in our minds this history of our race's evolution from the protozoan. The individual cells of the metazoan, instead of being each self-sufficient as a breathing, feeding and reproducing unit, become dependent on each other, and in the course of ages, specialised into tissues. Now the cells of these tissues, like the members of a civilised community, have a double function to perform.

First, as individuals, they have to assimilate, repair and excrete—in fact live; secondly, as members of an organisation they have to contribute to the support and activity of the whole according to their special ability. Inherent in each cell are old race-memories of the protozoan days, when each was for himself and the ability to grow and multiply under adverse conditions was what counted most in the struggle for existence.

In evolution the unit of time is the generation. When an organism multiplies sufficiently rapidly we can almost watch evolution taking place, as in the acquiring of fresh characteristics by bacteria under cultivation. What space of time is covered by the life-cycle of a record, but remembering how rapidly repair of aseptic wounds takes place and what quantities of dead epidermal cells are found beneath a splint which has been on a few weeks, it seems that the cell-generation must be a matter of hours only.

Does evolution by natural selection play any part in such tissue changes as muscle hypertrophy and atrophy, cornification of epidermis under intermittent friction, etc.? Suppose there to exist in some portion of some tissue of a living metazoan a condition of stress, due perhaps to a chemical or bacterial poison, a stress not so severe as to kill the cells outright, not in terms so as to allow of their rest and recuperation, but continuous and severe enough to threaten their existence. What reaction would be expected from the cells when their evolutionary history is remembered? Surely, that the equilibrium between the respective functions of the cell would be upset, that there would be a process of reversion to type, the finer instincts obliterated, the duties of reversion to type, the finer energies concentrated on growth and reproduction. And so till finally a rank, coarse cell is evolved, bearing traces, it is true, of the tissue in which it originated, but ruthless and primeval, shoudering aside its more orderly fellows, flinging its poisonous excreta broadcast through the body and following them itself into the bloodstream to disseminate the dangerous doctrine of individualism wherever it may.

ASHTON-UNDER-LYNE.

J. V. FIDDIAN, M.D.

### THE TREATMENT OF RHEUMATIC CONDITIONS BY COUNTER-IRRITATION.

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

SIR,—I have read with much interest the account of the early treatment of rheumatic heart disease in *ST. BARTHOLOMEW'S HOSPITAL JOURNAL*, May 20th, by Dr. G. Bourne.

It will no doubt act as a shock to many to hear that the salicylates are discredited.

I enclose a reprint giving an account of the treatment of acute rheumatism entirely by blisters and not a single case of heart disease developing where the heart was sound on admission.

Moreover, although I have not read the original article I am led to believe that the disease can be cut short by means of cupping and

blistering, especially if these are applied near the vertebrae. The late Dr. J. K. Mitchell, of America, claimed rapid cure of his cases in a few weeks. The late Dr. H. W. Fuller in his book on rheumatism says blisters are always useful, and particularly so in pericarditis with effusion.

It does not seem to be generally realised that blisters and the like promote the destruction of micro-organisms in the human system and also their extrusion.

A few years ago an experiment was made in France. Twelve rabbits of the same age and weight, all healthy, were poisoned by injecting a lethal dose of cacodylate of soda. Six, shortly after the injection, also were given an injection of turpentine strong enough to set up a small abscess. These lived, the other six died. Each of the abscesses was opened when well developed. Practically the whole of the arsenic was recovered from the pus.

Again, I was told by an experienced bacteriologist that if a blister be put on a man suffering from secondary syphilis swarms of spirochetes are found in the blub—very many more than in a proportionate amount of blood. For the past twenty years I have had most gratifying results in treating rheumatoid arthritis by means of blisters applied near the vertebrae.

Another highly successful method consists of making thousands of minute punctures in the skin and painting over them a weak mixture of croton oil, cantharides and almond oil. One aims at producing small pustules. The cautery, too, is very useful. Small dots or dashes are made once, twice or thrice weekly on the back and elsewhere, the treatment being kept up for long periods in difficult cases.

I have imbibed the idea that large doses of salicylates and alkalies contribute to the anemia that goes with acute rheumatism. If this is the case they play right into the hands of the germs.

I am, Sir,  
Yours faithfully,  
W. J. MIDELTON.

112, CHARMINSTER ROAD,  
BOURNMOUTH;  
June 15th, 1920.

\* "Continuous Counter-irritant in Rheumatoid Arthritis, etc.,"  
W. J. Midelton (*Practitioner*, Oct., p. 371).

## REVIEWS.

DIATHERMY. By CLAUDE SABERTON, M.D. (London: Cassell & Co., 1920.) Pp. 138. Price 7s. 6d.

This is the only book by an English author, so far as we know, devoted entirely to diathermy. It is divided into three parts. The first part is headed "Technique." Various forms of diathermy apparatus are described, and the nature and properties of the current explained. The methods of application are then dealt with.

The second part gives an account of the medical applications of diathermy and is a valuable guide, as the author records both his own experience and that of others.

The third part deals with surgical diathermy. Some interesting details are added by Mr. Herbert Franklin, of Harrogate, on diathermic operations for suprapubic cauterisation of vesical papillomata and of carcinoma of the tongue.

This is an excellent book we can recommend both to the specialist and also to the general practitioner. It is well written, well illustrated, and contains a valuable bibliography.

It may interest our readers that diathermy was first demonstrated in this country at St. Bartholomew's Hospital by Nagelschmidt in 1910.

The seventh edition of Hutchison and Rainy's *Clinical Methods* and the fifth edition of Mr. Conyns Berkeley's *Handbook of Midwifery* are announced for early publication by the House of Cassell.

MODERN ANÆSTHETICS. By J. P. W. SILK, M.D. Second Edition. (Edward Arnold.) Pp. 190. Price 7s. 6d. net.

However many books there may have been published in the last few years on the subject of anæsthetics, no one could deny Dr. Silk late Lt.-Col., R.A.M.C.) the right, which he assumed in bringing

out a second edition of *Modern Anæsthetics* (Arnold, 7s. 6d. net), to add yet one to their number. The first edition was dated 1914, and then already Dr. Silk had had a vast experience in anæsthetic work. Since then he has been Consultant Anæsthetist to the Marine and Home Commands (1915-1919), and now his experience must be still more vast and broad.

Lest the student and practitioner should be frightened, Dr. Silk makes it clear in his preface that the primary object of the book is "to provide a simple guide for the student and practitioner in ordinary civilian work rather than a record of what has been done under exceptional conditions and with exceptional patients during the war." The book has in this way been kept down to a manageable dimension, and must prove one of the clearest and simplest expositions of ordinary anæsthetic science.

In the chapter on ethyl chloride, the open ethyl chloride induction followed immediately by 3 per cent. chloroform in ether appeals especially to those who had had the good fortune to see the author himself induce in this way. The book is full of interest and suggestion, and useless dogmatism is everywhere avoided.

STUDENT'S POCKET PRESCRIBER. By D. M. MACDONALD, M.D., F.R.C.P. Sixth edition. (E. & S. Livingstone.) Pp. 199. Price 2s. net.

This handy little book, which also includes some useful notes on prescription-writing, is well worth the modest sum asked for it. Our experience has been that the average medical student sadly lacks information on this very important subject. The medical curriculum is so extensive these days that some of the work has to be hurried over, and we are very much afraid that prescription-writing is often one of the subjects which suffers. The *Student's Pocket Prescriber* will help the student to form some idea of what is required. The arrangement of the book is excellent, and the posological tables together with the vocabulary add to its usefulness.

MEDICAL ABSTRACTS AND REVIEWS. Vol. II. Nos. 1, 2 and 3 April, May, and June, 1920. (Published for the Medical Research Council at the Oxford University Press.) Price 2s. net per month.

In the April number is an excellent abstract on pneumonia, especially the abnormal types following measles and other respiratory diseases in certain camps in America, and which was very prevalent this country during the recent outbreaks of influenza. In an abstract dealing with syphilis is a good exposition of the features of "latent" (non-symptomatic) syphilis and "occult" syphilis (in which the symptoms are taken to be those of some other disease). The subject of arsenical treatment and occasional complications is also dealt with at length. In all twenty-eight papers have been abstracted. Another useful article is one, compiled from thirty-four papers, on decapsulation and nephrotomy for nephritis, in which will be found a very interesting survey of the history of the subject and a considerable number of quoted cases. "Non-obstructive anuria" and the rise of tension within the renal capsule are discussed, with the value of nephrotomy as a remedial measure.

An abstract in the May number on diseases of the blood reviews recent work in the blood in health, in pernicious anemia, aplastic anemia, leukemia, Hodgkin's disease and hæmophilia. There is an interesting article on diseases of the ductless glands, and others on influenza and spinal anæsthesia.

The June number contains an abstract dealing with the surgical treatment of ascites. An account is given of the chief operative measures that can be employed in this condition, commencing with laparotomy for diagnosis in obscure conditions, of which a catalogue is given. The operative treatment includes Eck's fistula, Talma's operation, Drummond and Morrison's operation, omentopexy with hypogastric drainage, drainage by the upturned internal saphena vein, drainage through the femoral ring, drainage into the sub-cutaneous tissues of the abdominal wall, excision and erosion of portions of parietal peritoneum, and lastly the operation of splenectomy in splenic anemia. An article on tuberculosis includes the subject of the possible recovery from tuberculous meningitis and discusses the vexed question of whether influenza predisposes to tuberculosis. Fifty-one papers have come under review in this abstract.

Cardio-vascular diseases, surgery of the breast and traumatic ascending neuritis are also given considerable attention in this number.

The reviews in each number are numerous, and deal with recent papers on surgery, neurology, pathology and bacteriology, bio-chemistry and radiology.

The wide range of subjects dealt with and the way in which the material is assembled make these monthly abstracts and reviews of great value to those who wish to keep abreast of the rapid progress now being made in all branches of medical science, but who cannot who cannot sift the grain from the chaff without an amount of labour which does not justify the time expended.

DICTIONARY OF TREATMENT. By SIR WILLIAM WHITLA, M.D., M.P. (Baillière, Tindall & Cox.) Sixth Edition. Pp. viii + 1083. Price 52s. net.

In spite of the fact that this well-known work was first offered as far back as 1891, it still stands as one of the best books of its kind ever written. It is surprising how many general practitioners rely on "Whitla," and there is no gainsaying the fact that they might do much worse. Every department of medicine receives due consideration, and yet one question is not crowded out to the exclusion of another. The excellent prescriptions, which in nearly every case are given in full, constitute quite a feature of the book. To the busy practitioner this must often be a veritable godsend.

If we were asked to choose any section of the book for special devotion to midwifery and obstetrics; the information is exceedingly sound and practical. Other sections worthy of special note are those on skin diseases, especially the chapter on eczema.

Several of the more recent remedies might have been included. For instance we find no reference to use of camphor oil in cardiac failure in pneumonia, or the paraffin treatment of burns. Some further details regarding the fasting treatment in diabetes might also be included with advantage.

But these, after all, are minor points, and there is no doubt that *Whitla* more than holds its own as a book of great practical value. An immense amount of information has been collected into a reasonable space, and we have every confidence in commending it to our readers.

PLASTIC SURGERY OF THE FACE. By H. D. GILLIES, C.B.E., F.R.C.S. (Henry Frowde & Hodder & Stoughton, Oxford Medical Publications.) Published 1920. Pp. 408. Price 3 gns.

This volume will be of great interest to all Bart.'s men, especially as it is the result of a pioneer's work in this country carried out by the author.

The prosthetic problems of plastic surgery are dealt with by Capt. Kelsey Fry, and in addition there are some remarks on anæsthesia by Capt. R. Wade.

The volume commences with a short historical sketch of plastic surgery, followed by the general principles laid down by Major Gillies as the result of his experience. There are subsequent chapters dealing with the repair of wounds to the cheek, injuries to the upper and lower lips, similar injuries to the nose, eyes and the pinna, appended to which are numbers of illustrative cases which have passed through his hands. Not only are these cases described in detail, but there are also elaborate diagrams, illustrating the methods of procedure adopted in each individual case, and excellent photographs demonstrating the results of these processes of repair during each stage, with end-results, many of them taken at a long period after the original operations.

There is no doubt that the author has carried out a great work and brought into being a branch of surgery which has hitherto been neglected. The book demonstrates that the author has given a great deal of thought to this subject, and has exerted a degree of patience which is an essential for the successful carrying out of this type of work.

The book finishes with some idea foreshadowing the application of the methods which have been learnt on war cases in civilian practice. Scars as the result of injuries and the destruction of tissues which have hitherto been left untouched now come into the grounds of possible repair.

The author is to be congratulated on the results of his efforts and the publishers for their realisation of its value in expending money in the manner that they have done. The production is almost unequalled by any other volume at present in existence; the book should prove invaluable to every general surgeon as well as to the plastic specialist, for it gives rise to ideas which are not at the present moment generally accepted.

## RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ADAMSON, H. G., M.D., F.R.C.P. "On the Treatment of Lupus Vulgaris by the Liquid Acid Nitrate of Mercury." *British Medical Journal*, July 24th, 1920.

BROWN, W. LANGDON, M.A., M.D., F.R.C.P. "Spasmodic Asthma." *Clinical Journal*, July 7th, 1920.

*The Sympathetic Nervous System in Disease.* London: Henry Frowde & Hodder & Stoughton.

COOPER, PERCY R., M.D., B.Sc.(Lond.), F.R.C.S. "A Simple Method of Blood-letting, and a Plea for its More Frequent Adoption in Medical Practice." *Clinical Journal*, July 28th, 1920.

FOULERTON, ALEXANDER G. R., F.R.C.S. "On Poisoning by Arsenobenzol Compounds used in the Treatment of Syphilis." *British Medical Journal*, June 26th, 1920.

GASKELL, J. F., M.D., F.R.C.P. "Blackwater Fever in Macedonia." *British Medical Journal*, July 24th, 1920.

GILLIES, H. D., C.B.E., F.R.C.S. *Plastic Surgery of the Face—Based on Selected Cases of War Injuries of the Face including Burns.* With Chapter on the Prosthetic Problems of Plastic Surgery by Capt. W. Kelsey Fry, M.C., R.A.M.C., and Remarks on Anæsthesia by Capt. R. Wade, R.A.M.C. London: Henry Frowde & Hodder & Stoughton.

GROVES, E. W. HEY, M.D., M.S., F.R.C.S. *Surgical Operations—A Text-Book for Nurses.* London: Henry Frowde & Hodder & Stoughton.

HERRINGHAM, SIR WILMOT, M.D., K.C.M.G., C.B. "The Consultant." *British Medical Journal*, July 10th, 1920.

HORDER, SIR THOMAS, M.D., F.R.C.P. "Medical Notes." *Practitioner*, July, 1920.

"Diagnostic Significance of Nerve Symptoms in Acute Infections." *Lancet*, July 24th, 1920.

KYNASTON, JOHN, Lt.-Col., R.A.M.C. (R.P.) *Adenoids and Enlarged Tonsils Curable without Operation.* London: The St. Catherine Press.

NEWMAN, SIR GEORGE, K.C.B., M.D. (Edin.), F.R.C.P. (Lond.) "The State and the Future of Medical Practice." *British Medical Journal*, July 10th, 1920.

PICTON, I. RONALD JAS., O.B.E., M.D. (Oxon.) "Open Ether without Chill." *British Medical Journal*, July 17th, 1920.

POWER, SIR D'ARCY, K.B.E., F.R.C.S. "The After-treatment of some Surgical Cases." *Practitioner*, July, 1920.

"The Oxford Physic Garden." *Annales of Medical History*, vol. ii, no. 2.

SHORE, T. H. G., M.D. (Cantab.), M.R.C.P. (Lond.) "Sudden Deaths on Active Service." *Lancet*, July 24th, 1920.

VINES, H. W. C., M.A., M.R.C.S., L.R.C.P. "Anaphylaxis in the Treatment of Hemophilia." *Quarterly Journal of Medicine*, April, 1920.

WEBER, F. PARKES, M.A., M.D., F.R.C.P. "Parotitis, Jaundice, and some other Complications in Influenza." *Clinical Journal*, July 14th, 1920.

## EXAMINATIONS. ETC.

UNIVERSITY OF OXFORD.

The following degrees have been conferred:

D.M.—J. G. Priestley.

B.M.—G. H. Rosedale.

Second M.R. Examination, July, 1920.  
*Materia Medica and Pharmacology.*—D. G. T. K. Cross.  
*Pathology.*—D. G. T. K. Cross, W. F. Skaitie.  
*Forensic Medicine and Public Health.*—W. S. Hayes, J. G. Johnstone, G. H. Rosedale, W. F. Skaitie, W. S. Tunbridge.

Diploma in Public Health.  
Part I.—I. W. Barlow.

## UNIVERSITY OF CAMBRIDGE.

July, 1920.

The following degrees have been conferred:  
*M.D.*—A. J. W. Cunningham, N. Gray.  
*M.B. and B.Ch.*—H. A. Bell, G. E. Dyas, C. E. Kindersley, C. J. Scholtz.  
*B.Ch.*—A. Gregson Williams, P. T. Liang, W. G. Verniquet.

## UNIVERSITY OF LONDON.

*M.D. Examination.*

*Branch I. Medicine.*—Geoffrey Bourne.  
*Branch IV. Midwifery and Diseases of Women.*—R. S. Townsend.  
*Branch VI.*—M. D. Mackenzie.

*M.S. Examination.*

*Branch I. Surgery.*—R. N. Cooper.  
*Third Examination (M.B., B.S.) for Medical Degrees, May, 1920.*

*Supplementary Pass List.*

*Group I.*—F. H. L. Cunningham, M. Erfan.  
*Group II.*—C. T. Maitland.

*Second Examination for Medical Degrees, Part II (for Internal and External Students), July, 1920.*

*Pass List.*—C. O. S. B. Brooke, M. F. C. Fisher, J. R. Hamerton, A. K. Kerr, J. H. R. Laptain, A. E. Lorenzen, C. M. Pearce.

## CONJOINT EXAMINING BOARD.

*Second Examination, June, 1920.*

*Part I. Anatomy and Physiology.*—D. Diamond, J. W. Joule, E. Liston, F. R. L. Miller, C. A. Moody.  
*Part II. Materia Medica and Pharmacology.*—T. J. D. Atteridge, N. E. D. Cartledge, A. Downes, R. R. Foote, G. H. Hogben, E. F. Peck.

## APPOINTMENTS.

DOWNER, R. I. F., M.D. (Lond.), appointed Medical Officer to the Post Office, Shrewsbury, and Medical Examiner under the Board of Education.  
 FAWKES, MARMADUKE, O.B.E., M.B., B.S. (Lond.), appointed District Medical Officer and Public Vaccinator to the Midhurst Rural District Council.  
 FISHER, A. G. T., M.C., M.B., Ch.B. (Bristol), F.R.C.S., appointed Hunterian Professor to the Royal College of Surgeons of England.  
 LANG, B. T., F.R.C.S., appointed Assistant Surgeon to the Royal London Ophthalmic Hospital (Moorfields), City Road.  
 NIXON, J. A., C.M.G., M.B., B.Ch. (Cantab.), F.R.C.P., appointed Consulting Physician to the Southmead Infirmary, Bristol.  
 PORTKOUS, L. D., appointed Junior House-Surgeon to the Metropolitan Hospital, Kingsland Road, E. 8.  
 SIMPSON, G. C. E., O.B.E., M.B., B.Ch. (Cantab.), F.R.C.S., appointed Lecturer and Associate Professor of Human Anatomy in the University of Liverpool.

## CHANGES OF ADDRESS.

BELL, H. A., The Gables, Syston, Leicester.  
 DOWNER, R. I. F., 9, College Hill, Shrewsbury. (Tel. Shrewsbury 388.)  
 DUNHILL, T. P., 19, Craven Hill Gardens, W. 2. (Tel. Padd. 7231.)  
 FERGUSON, A., Grey Turrets, Haslemere, Surrey. (Tel. Haslemere 126.)  
 GORDON, F. J., 53, Castleton Mansions, Barnes, S.W. 13. (Tel. Hammersmith 1126.)  
 GULFOYLE, D. P., Hay Street, Perth, Australia.  
 LEE, W. E., 12, Bow Church Yard, E.C. (Tel. City 5415.) (Temporary city address.)  
 MAYNARD, F. P., Lt.-Col. I.M.S. (ret'd.), Prudential Chambers, Market Street, Crewe, and The Lyves, Audlem, Cheshire.  
 PAGE, S. W., Reddadoford, Slades Hill, Enfield.  
 PHILLIPS, L. L., 73, London Street, Reading. (Tel. Reading 462.)  
 PORTKOUS, L. D., Metropolitan Hospital, Kingsland Road, E. 8.

SODEN, W. S., Tudor House, Winchcombe, Glos.  
 WARE, A. M., 10, Queen's Gate Terrace, S.W. 7. (Tel. Kens. 455.)  
 WHITE, C. PERCIVAL, 96, Sloane Street, S.W. 1.

## BIRTHS.

BINNS.—On July 3rd, at 34, Humberstone Road, Leicester, the wife of Cuthbert C. Binns, M.A., M.B., of a son.  
 BROUGHTON-ALCOCK.—On July 2nd, at 2, Crescent Road, Wimbledon, the wife of Dr. W. Broughton-Alcock, of a daughter (premature).  
 CANDLER.—On June 3rd, at Shenley, Barnfield Road, Exeter, the wife of A. L. Candler, F.R.C.S. (Eng.), of twin sons.  
 CHANDLER.—On July 12th, to Marjorie (née Raines), wife of F. G. Chandler, M.A., M.D. (Cantab.), M.R.C.P., of 86, Harley Street, W., and 4, Downshire Hill, Hampstead—a daughter.  
 FISON.—At 9, North Park Road, Harrogate, the wife of Dr. James Fison, of a boy.  
 GILMOUR.—On June 30th, at West Meon, Hants, the wife of R. Withers Gilmour, M.B., of a daughter.  
 JOHN.—At Karachi, on June 20th, the wife of Capt. J. C. John, O.B.E., I.M.S., of a son.  
 MORFORD.—On July 15th, at 51, Kidderminster Road, Croydon, the wife of Arthur Morford, M.B., F.R.C.S., of a son.  
 PAVEY-SMITH.—On July 25th, at 9, Victoria Avenue, Harrogate, the wife of A. B. Pavey-Smith, M.C., F.R.C.S., of a son.  
 TUCKER.—On July 11th, at Park View, Pembury, the wife of S. A. Tucker, M.B., B.S. (late Captain, R.A.M.C.), of a daughter.  
 WEAKLEY.—On July 10th, at Alexandria, Egypt, to Dr. and Mrs. A. Leonard Weakley—a daughter.  
 WORTON.—On July 18th, at Darley Dale, Hadley Wood, N., the wife of A. S. Worton, M.D., F.R.C.S., 7, Manchester Square, W. 1, of a daughter.

## MARRIAGES.

ATTERIDGE—COLE.—On June 26th, at the Church of the Sacred Heart, Hampton Wick, Kevin Doyle Atteridge, M.R.C.S., I.R.C.P., second son of the late J. J. Atteridge, M.D., of Ladbroke Grove, W., to Arbery, second daughter of Mr. and Mrs. Herbert Cole, of Hampton Wick.  
 VICK—NEVILLE.—On June 30th, at St. Martin-in-the-Fields, by the Rev. H. R. L. Sheppard, Reginald Martin Vick, O.B.E., F.R.C.S., to Mary Kate Neville, eldest daughter of Reginald J. N. Neville.

## DEATHS.

DOVE.—On June 26th, 1920, suddenly, at Brightside, Crouch End Hill, N.E., Dr. Aug. C. Dove, M.D., the dearly-loved husband of M. Evelyn Dove, aged 64.  
 RYECART.—On July 4th, after an operation, E. N. Rycart, M.D. (Lond.), The Corner House, Ewell, Surrey, aged 54.  
 SANDILAND.—On July 7th, 1920, suddenly, Arthur H. Sandiland, of 72, Southgate Road, N., aged 72.  
 WYNNE.—On July 1st, 1920, at St. Olave's Priory, Suffolk, William Arnold Smith Wynne, M.D., Deputy Surgeon-General, H.M. Indian Army (retired), aged 85.

## 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 7s. 6d., 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 ADVERTISEMENT MANAGER, the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: City 510.

## St. Bartholomew's Hospital



## JOURNAL.

VOL. XXVII.—No. 12.]

SEPTEMBER 1ST, 1920.

[PRICE NINEPENCE.]

## CALENDAR.

Tues., Aug. 31.—Dr. Drysdale and Mr. Rawling on duty.  
 Fri., Sept. 3.—Sir A. Garrod and Mr. Gask on duty.  
 Tues., „ 7.—Dr. Tooth and Sir D'Arcy Power on duty.  
 Fri., „ 10.—Dr. Calvert and Mr. Waring on duty.  
 Tues., „ 14.—Dr. Morley Fletcher and Mr. McAdam Eccles on duty.  
 Fri., „ 17.—Dr. Drysdale and Mr. Rawling on duty.  
 Tues., „ 21.—Sir A. Garrod and Mr. Gask on duty.  
 Fri., „ 24.—Dr. Tooth and Sir D'Arcy Power on duty.  
 Tues., „ 28.—Dr. Calvert and Mr. Waring on duty.  
 Fri., Oct. 1.—Dr. Morley Fletcher and Mr. McAdam Eccles on duty.

## Old Students' Dinner in the Guildhall.

## EDITORIAL.

THIS issue of the JOURNAL sees the completion of another Hospital Year. In accordance with our usual custom we have briefly summarised in Our Retrospect the more salient events of the past twelve months. For the first time since the war we think we can safely say that the Hospital has got into its stride. The event of the year has undoubtedly been the introduction of a Medical and a Surgical Professorial Unit, the success of which has fully borne out the high hopes of its promoters.

It is not often we venture to talk about ourselves, but taking advantage of our annual editorial privilege, may we express the hope that the JOURNAL also has regained something of its pre-war standard? It is obvious that we cannot please everyone. Is the JOURNAL quite as good as it might be? How can we improve it? Does it really form a link between past and present to the fullest extent possible? These are questions we are continually asking ourselves. After all it is a matter for our readers to decide. It is hardly necessary to say that suggestions will be warmly welcomed.

Incidentally we would like to take this opportunity of thanking the numerous contributors for their kindness during the year. Is it too much to ask that they will continue the good work, and by their inspiration possibly induce others to favour us with a contribution?

We would again remind our readers that the first Annual Old Students' Dinner since the outbreak of war will be held on Friday, October 1st, at 7 o'clock.

Owing to the large number of applications for seats it has been found impossible to hold the Dinner in the Great Hall. Arrangements have been made, by kind permission of the Lord Mayor, to hold the Dinner in the Guildhall. The Dinner will therefore take place on the above date in the Guildhall with Sir Anthony Bowly in the Chair. The plan of the Table can be seen at the Warden's House during September, and those who wish to do so can arrange their seats personally. During the month of September, all communications relating to the Dinner should be addressed to the *Warden's House*.

We feel sure that the attendance will be a record one, and suggest that application for seats should be made as early as possible.

\* \* \*

It is with very considerable regret that we learn of the resignation of Viscount Sandhurst from the important position of Treasurer to the Hospital. As we have ventured to point out in Our Retrospect, his Lordship has been so long connected with Bart.'s that we had almost come to regard him as part of this great institution. We are sure we are voicing the sentiments of our readers in wishing to thank him for the great service he has rendered the Hospital during the past twelve years.

\* \* \*

The following have been mentioned in despatches by Gen. Sir C. C. Munro for distinguished medical services during operations against Afghanistan:

Lieut.-Col. (Acting Col.) H. Boulton, I.M.S.  
 Major A. A. Meaden, D.S.O., R.A.M.C.

\* \* \*

The Navy Cross has been conferred upon Surg.-Capt. Sir A. S. Nance, K.B.E., C.B., R.N., by the President of the United States of America.

\* \* \*

For valuable services rendered in the field in the

Afghan War, 1919, the following decorations have been awarded:

C.S.I.: Major-Gen. H. Hendley, I.M.S.  
C.B.E. (Military Division): Lieut.-Col. (Acting Col.) H. Boulton, I.M.S.

The Harveian Oration will be delivered by Sir Frederick Andrewes on St. Luke's Day, October 18th; and the FitzPatrick Lecture, on "The History of Medicine," by Dr. E. G. Browne, of Pembroke College, Cambridge.

The new Mitchell Lecture is to be delivered by Dr. F. P. Weber, and Dr. G. Graham is to be Goulstonian Lecturer in 1921.

The following Fellows of the Royal College of Physicians of London are included in the list of officers elected for the ensuing collegiate year:

Treasurer: Sir Dyce Duckworth.

Registrar: Dr. J. A. Armerod.

Curator of the Museum: Sir Frederick Andrewes.

Drs. J. Calvert and W. A. Turner have been elected Examiners in Medicine, and Dr. J. B. Christopherson Examiner in Tropical Medicine.

Our warmest congratulations to Mr. A. G. T. Fisher, F.R.C.S., Clinical Assistant in the Orthopaedic Department, on his appointment as Hunterian Professor of the Royal College of Surgeons of England for the ensuing year. The subject of Mr. Fisher's discourse is "Loose Bodies in Joints."

We are pleased to note that the Bisset Hawkins Medal has been awarded to Dr. W. H. Hamer, to whom we offer our congratulations.

The new Home for the Nurses is to benefit to the extent of £24,000, this sum being the share of the distribution of surplus Red Cross funds allotted by the Joint Finance Committee of the British Red Cross Society.

Sir Archibald Garrod was entertained at dinner on July 28th by his late house-physicians and present members of the Medical Professorial Unit, on the occasion of his leaving St. Bartholomew's Hospital to take up the duties of Regius Professor of Medicine at Oxford University.

It was a re-union of men who had been his pupils, who had shared his work, and who felt in a keen sense the affection and regard that Sir Archibald Garrod inspires in all who are privileged to play even a small part in his life. It was an opportunity for the Chief and his assistants to recall the good memories of days that are passed, and to unite in good wishes for the life and work of the future. The dinner was given at the Café Royal. The health of the guest was proposed by Sir Thomas Horder, and seconded by Dr. Fraser, and was then drunk with enthusiasm. Drs. Horner and Geoffrey Evans added their testimony, and the

latter read messages from those who were unable to be present.

Dr. Trower then presented the silver vase which had been subscribed for by all who had worked with Sir Archibald. The vase was designed by Capt. Alwyn Carr. It was in itself an epitome of the feelings that prompted the re-union. It was decorated with the two signs of Æsculapius, being surmounted with the Cock of Vigilance, and carrying on its sides the Serpents of Wisdom. There were also three coats of arms, those of the City, its Hospital, and its distinguished physician. The base bore a wreath of laurels for merit and roses for affection; round the rim was an inscription, "I was wrought for Sir Archibald Garrod by desire of his late House-Physicians and Assistants at St. Bartholomew's Hospital." The gift was accepted by Sir Archibald, who replied in terms that recalled again the feeling of being yet a part of a unit of which he is always the inspiring and affectionate head.

Mr. B. F. W. Armitage, M.R.C.S., L.R.C.P., Fellow and Tutor of St. John's College, Cambridge, has been acting as Medical Adviser to the British teams at the Olympic Games at Antwerp.

Mr. J. C. Ainsworth-Davies, Cambridge second string at the Olympic Games, came in third in Heat 1 of the 400 Metres Semi-final. The *Times* correspondent says that Mr. Ainsworth-Davies ran well on a very heavy track, and that in the final, which he finished strong, he might have been third if the race had been five yards longer.

Mr. Ainsworth-Davies was also a member of the English team which won the 1600 metres relay race.

The Inter-Hospital Boat Race was an exciting event and fully bore out the traditions of inter-hospital rowing. The race, which was rowed over the Putney-Hammersmith course on July 31st, was the first since 1913, when Bart's won with an excellent four which included C. E. Kindersley at stroke and C. W. B. Littlejohn, the old Oxford Blue. As in 1913, light coxswainless boats were used, Bart's (the holders) and Guy's being the only crews competing.

Bart's led from the start, but were behind by about half a length at the London Rowing Club. Unfortunately Bart's steering was not all it might have been, and opposite the Thames Rowing Club the boats got entangled and it was necessary to stop rowing. Guy's could, of course, have claimed the race, but greatly to their credit they asked to be allowed to make a fresh start. After rowing a very round-about course Bart's got well away, but Guy's, by a splendid effort, just managed to get home by a quarter of a length.

We congratulate Guy's on their win and thorough sportsmanship. We only hope that such excellent feeling will always dominate inter-hospital sports.

The Bart's crew consisted of: Bow, H. K. Denham; 2, B. M. Tracey; 3, R. Klaber; str., D. C. Fairbairn.

It is with much regret that we learn of the death of Dr. P. J. Hensley, for some time Senior Physician at this Hospital. We hope to publish our obituary notice in the next issue of the *JOURNAL*, but meanwhile desire to express our sympathy with his relatives and friends.

## OUR RETROSPECT.

THE year 1919-20 has been in many respects a record one for the Hospital. During those trying years of war routine had to go to the wind; duties unprecedented and unthought of had to be performed. It was only to be expected that the return to normal conditions would necessarily be a slow process. Last September we had to record a definite effort to revert to pre-war conditions; the past year has seen this satisfactorily accomplished.

The inauguration of a Medical and a Surgical Unit of the professorial type was the first great effort of the Hospital year. Thanks to an endowment by the Board of Education the scheme was definitely launched last October. It is a matter of very considerable satisfaction that our own Medical School was amongst the first to seize an opportunity, which has not only been productive of a distinct advance in the more scientific paths of medicine and surgery, but has stimulated other schools to follow along similar lines. The Hospital was fortunate in the appointments of Sir Archibald Garrod and Mr. G. E. Gask as Directors of the Medical and Surgical Units respectively. Six months later Sir Archibald Garrod was selected for the Regius Professorship at Oxford in succession to the late Sir William Osler, an appointment of which Bart's is particularly proud, and while regretting the loss to the Hospital, at least we can congratulate ourselves that this distinguished physician was able to put the scheme on such a sound footing.

The number of students entering Bart's during the past twelve months has constituted a record. Large numbers have had to be refused, and this in spite of the fact that lady students are still not admitted to the practice of the Hospital.

Post-graduates have still been numerous, especially during the Winter Session. The new Professorial Units no doubt proved an additional incentive to many men anxious to become *au fait* with up-to-date methods after years of, in many cases, routine war work.

Quite a feature of the year has been the effort on the part of the Hospital to meet the enormous increase in expenditure necessary to carry on under post-bellum conditions. The People's Peace Year Commemoration Fund was opened by the Lord Mayor of London on October 21st. Since that date innumerable concerts, auctions and sales have been

held to help this most deserving cause, and so successful has been the response that the serious deficiency, which loomed like a nightmare before the Hospital, appears for the moment to have been met.

We regret to record the resignation of Dr. W. S. A. Griffith, who for so many years had been such a familiar figure in the Gynaecological Department.

Another resignation has been that of Mr. Girling Ball from the post of Medical Officer-in-Charge of the Venereal Department in Golden Lane. Mr. Kenneth Walker has been appointed to succeed Mr. Ball. Incidentally the development of this youngest of Bart's special departments is a matter of great satisfaction, several new schemes having been evolved for increasing its work and efficiency.

Amongst the new appointments we would specially mention that of Dr. Bernard H. Spilsbury as Lecturer on Morbid Anatomy and Histology, and Dr. F. R. Fraser and Mr. T. P. Dunhill, C.M.G., as Assistant Directors of the Medical and the Surgical Units.

The decorations in connection with the great war and other subsidiary wars have again been numerous. As far as possible we have endeavoured to enumerate these each month in our editorial columns. The list includes the following: G.B.E., 1; K.B.E., 1; Knighthood, 6; C.B., 1; C.B.E., 21; O.B.E., 59; M.B.E., 17; D.S.O., 2; C.S.I., 1; Mentioned in Despatches, 61; Promotion, 3; Bar to the M.C., 1; M.C., 3; American Navy Cross, 1; Medal for Military Merit, 1; Distinguished Service Medal of U.S.A., 1; Officer, Légion D'Honneur, 3; Chevalier, Légion D'Honneur, 2; Croix de Guerre (Belgian), 3; Croix de Guerre (French), 4; Médaille du Roi Albert, 1; Médaille des Epidémies, 2; Order of the Nile, 1; Order of the White Eagle, 1; Palmes de l'Ordre de la Couronne, 2; Order of the Crown of Italy, 1; Order of the Lion and the Sun, 1; Civil Honours, 31.

We are glad to note that the social side of the Hospital has been much more in evidence. Unfortunately the Annual Old Students' Dinner had to be postponed owing to the railway strike, so that the Dinner to be held on October 1st, 1920, will be the first great re-union of old Bart's men since the war. The Rugby team has again had another satisfactory season. After reaching the Final they were only just defeated by an exceptionally strong Guy's XV. The tennis season was most successful. Here the tables were turned, Bart's beating Guy's in the Final Round of the Senior Cup by 9 matches to 3. Other clubs, notably Cricket, Rowing and Boxing, have all flourished and been well supported. We have been particularly pleased to see the revival of the Dramatic Club. Their first entertainment at Cripplegate Institute last June was deserving of the highest praise. Another innovation has been the formation of a Debating Society in the Hospital. Undoubtedly something of the kind was wanted. With the election to the Presidency of Sir Thomas Horder its success was assured.

With the passing of time numerous changes have taken



place in the Hospital. Amongst the most important of these is the retirement of Viscount Sandhurst from the Treasurership of the Hospital. His Lordship has been connected for so long with Bart.'s that we had almost come to regard him as part of the Hospital.

Mr. R. M. Vick has been appointed to the post of Warden of the College in succession to Mr. Girling Ball. Mr. Vick is fourteenth in the List of Wardens commencing with Sir James Paget. Incidentally Mr. Ball has held the post since 1913, and during what has been perhaps one of the most exacting and strenuous periods in the history of the Hospital.

It is with much regret that we have to record the death of several past students. We would especially mention Dr. Hensley and Dr. Samuel West, for so many years on the Senior Staff of the Hospital, Dr. A. H. Hogarth, perhaps the real originator of the Students' Union, and Dr. Laurence Humphry, so well known at Cambridge.

Numerous honours, recognitions and appointments have been conferred upon Bart.'s men during the past twelve months which reflect credit upon the Hospital. Amongst these we may mention the following:

Sir Norman Moore has been re-elected President of the Royal College of Physicians of London. He has also had the honorary degree of Doctor of Laws conferred upon him by the University of Cambridge.

Sir Anthony Bowlby has been elected President of the Royal College of Surgeons of England. He has also had the Distinguished Medal of the United States of America conferred upon him.

Prof. F. W. Andrewes has received the honour of Knighthood.

Sir Archibald Garrod has been appointed Regius Professor of Medicine at Oxford. He has also been honoured with the Degree of Doctor of Medicine by the University of Dublin.

Mr. G. E. Gask has been presented with the Triennial Gold Medal by the West London Medico-Chirurgical Society.

Dr. H. J. Gauvain has received the honour of Knighthood. The Hospital has had a successful year from the point of view of examinations.

*University of Oxford.*—Degrees conferred: M.B., 2; M.D., 1; D.P.H., 1.

*University of Cambridge.*—Degrees conferred: M.D., 5; M.B. and B.Ch., 14; M.B., 5; B.Ch., 3; passed examination but not yet taken degrees, 6; Sanitary Science, 3.

*University of London.*—M.D.: Branch I, Medicine, 2; Branch IV, Midwifery and Diseases of Women, 1; Branch VI, Tropical Medicine, 1. M.B., B.S.: Honours, 2; Pass, 19. M.S.: Branch I, Surgery, 2.

*University of Liverpool.*—Diploma in Tropical Medicine, 2; Diploma in Public Health, 1.

*Conjoint Board.*—M.R.C.S., L.R.C.P., 37; Final F.R.C.S., 12; Primary F.R.C.S., 20; F.R.C.P., 4; M.R.C.P., 10; D.P.H. R.C.P.S., 7.

*Royal College of Surgeons of Edinburgh.*—F.R.C.S., 1.

*London School of Tropical Medicine.*—D.T.M., 3.

The Scholarships and Prizes during the year 1919-20 have been awarded as follows:

*Lawrence Scholarship.*—G. Bourne.  
*Luther Holden Scholarship.*—F. W. Watkyn-Thomas.  
*Brackenbury Medical Scholarship.*—L. P. Garrod.  
*Brackenbury Surgical Scholarship.*—J. L. Potts.  
*Kirkes Scholarship and Gold Medal.*—R. Hilton.  
*Matthews Duncan Medal and Prize.*—W. E. H. Danks, *prox. acc.*, C. H. Andrewes, T. H. Hodgson, E. H. Strange, *eq.*  
*Willetts Medal.*—J. L. Potts.  
*Walsham Prize.*—J. V. Landau.  
*Bentley Prize.*—H. L. Sackett.  
*Hichens Prize.*—C. O. S. B. Brooke.  
*Wix Prize.*—R. G. R. West.  
*Sir George Burrows Prize.*—C. H. Andrewes.  
*Skyner Prize.*—C. H. Andrewes.  
*Shuter Scholarship.*—W. F. T. Adams, C. Sturton, *eq.*  
*Junior Scholarships: Biology, Chemistry, and Physics.*—F. A. Bevan, W. Wilkinson, *eq.*  
*Junior Scholarships: Anatomy and Physiology.*—(1) N. A. Jory, (2) N. R. Lawrence.  
*Harvey Prize.*—(1) G. L. Brookhurst (prize); (2) R. Hunt Cooke, A. C. Maconie, *eq. prox. acc.*  
*Senior Scholarship in Anatomy, Physiology, and Chemistry.*—A. Walk.  
*Foster Prize.*—(1) A. H. C. Visick; (2) J. P. Hosford; (3) V. L. Capener, A. C. Maconie, *eq.*  
*Treasurer's Prize.*—N. A. Jory; H. Sutherland, H. Burt White, *corrs.*  
*Entrance Scholarship in Arts.*—F. A. Bevan.  
*Jeaffreson Exhibition.*—R. N. Cunow, H. P. Hiscocks, *eq.*  
*Senior Entrance Scholarship in Science.*—J. N. Kerr; N. A. Jory, *prox. acc.*  
*Junior Entrance Scholarship in Science.*—E. J. Blackaby, A. B. Cooper, *eq.*

## THE MECHANISM OF WALKING.

By R. C. ELSLIE, M.S., F.R.C.S.

*Report of a clinical lecture delivered at St. Bartholomew's Hospital.*

**T**HE mechanism of walking is a very complicated thing, and our actions in walking are subconscious, so that it is very difficult to analyse the movements and to determine what they are. Directly we start to think about our walking we find we are beginning to walk unnaturally, and not in the same way as we should if we were walking unconsciously.

Last year I was able to make some observations on walking by means of a cinematograph. The method was this. A man was undressed, except for wearing boots. He had to have boots on because one does not walk quite the same without boots as with, and we wanted a walk with boots for comparison with the walk of a man wearing an artificial leg. Certain spots on this man were marked by me, so that we might follow their course as he walked.

Taking a lateral view, the spots that were marked were the tip of the acromion, the highest part of the iliac crest, the great trochanter, the external condyle of the femur, the head of the fibula, the external malleolus of the fibula, and the heel—not of the boot, but of the man. Then the

cinematograph was set working, and photographs of this man walking taken at the rate of 160 a second; these were shown on the cinematograph at the rate of 10 a second, so that all movements could be followed quite clearly. I am sorry that at the present time I have no facilities for showing these cinematograph pictures, but hope to be able to do so on a future occasion.

In order to follow out the mechanism of walking particular pictures were printed, and have been analysed in diagrams. The pictures taken for a complete phase of walking were 21 in number, and each of them represents an interval of  $\frac{1}{20}$ th second.

In the diagram the top point represents the crest of the ilium, second the great trochanter, third the external condyle of the femur, fourth head of the fibula, fifth the external malleolus. I do not want to take an instance of a man stepping from a standing position, but actually in the act of walking past you, and I start at the point when the weight is over the right foot, just as the left leg goes past the right foot. At this point the pelvis is over the foot, and the height of the pelvis at its greatest. The hip is a little bit flexed and the knee also, the ankle is dorsiflexed, the angle in front being  $87^\circ$ . Note that the height of the man is not complete, but diminished: the man is never at his maximum height in the act of walking, as he always has some flexion of the lower limb.

As the body progresses forwards the hip extends, the knee extends slightly, and the foot dorsiflexes further, reaching its maximum dorsiflexion of about  $80^\circ$ ; this is its smallest angle—only  $10^\circ$  beyond a right angle.

The active muscles during this stage of step are the extensor muscles of the hip and the extensor muscles of the knee, but when I say that these are the active muscles, they are not the only muscles working. Whilst walking every single muscle of the lower limb is working—certain muscles are contracting, and certain muscles are elongating slowly, while certain other muscles are in use to maintain balance. But the most active muscles are the extensors of the hip and extensors of the knee.

When we come to photo No. 7 the heel rises from the ground, dorsiflexion of the foot diminishes; instead of becoming  $80^\circ$  it approximates to a right angle; the knee remains the same, and the hip continues to extend further. The extensors of the hip and the calf muscles are the most active muscles at this stage. A muscle which undoubtedly is of great importance at this stage is the tibialis posticus, which keeps the foot a little bit inverted as you step off the heel, and so pulls up the arch of the foot. Then as the toe leaves the ground, the hip has passed its maximum degree of extension, the knee remains a little flexed, and the foot remains at about a right angle.

As the toe leaves the ground you get a regular push off the ground with the toes. Many think that the toes are not much used in walking, but this push off with the toes

is a very important action. You see its importance directly a patient becomes unable to use his toes, for he is immediately placed at a great disadvantage. The calf muscles and the tibialis posticus are active muscles at this stage.

Now the foot clears the ground and it reaches its greatest lift from the ground just as it is clear. This is also the point at which the knee flexes to its maximum ( $112^\circ$ ). The hip begins to flex, the limb being swung forward by a pendulum action; the flexors of the hip, the flexors of the knee and the foot muscles are working actively.

Let me call attention to another point. At this stage you have stepped on to the left leg, and are swinging the right leg past it. It is all very well to talk about the flexors of the hip and knee, but what about the trunk muscles? At this stage their function is that of balance, and in order to get balance the right hip must be kept up in the air, not allowed to drop. You must not allow the right hip to fall into an adducted position.

The leg now swings past its fellow and a curious point occurs, the hip does not flex any further; the knee extends largely as a result of a pendulum action, assisted by the quadriceps muscle, but the limb is carried forward finally by a tilt of the whole of the right side of the pelvis forwards, so that the right antero-superior iliac spine comes forward in front of the left.

The foot remains about at a right angle, and the toe is still in a straight line with the rest of the foot.

At No. 16 the heel is just about to come down on to the ground. At this stage the pelvis is distinctly tilted, the hip is flexed, but not so much as it has been, the knee is fully extended, the foot is at a right angle. A curious little point here is that the toe is definitely dorsiflexed; this dorsiflexion does not take place as the foot passes the other leg, but in the forward movement afterwards.

Many of us are apt to think that at this stage we come down on to the ground with the knee straight, but actually we drop on to the ground by dropping the pelvis and thereby flex the knee slightly. At 17 the heel is off the ground; at 18 it is dropped on to the ground, and the knee flexes. There is no doubt at all that the chief reason for this is that a flexed knee prevents shock. When the foot reaches the ground the knee actually is flexed to  $164^\circ$ , practically as much as at the commencement of the stride. The pelvis now continues to move forward, the hip remains a little flexed, but not so much as it was, the knee flexes a little more, and the whole foot comes flat on to the ground.

Certain muscular actions require mention. The hip from Nos. 1 to 7, is extended, the gluteal muscles acting—that is, you are taking a push off and extending the hip as you push. From Nos. 8 to 13 the hip is flexing—that is, the leg is being lifted forwards; then, as you drop on the foot again, you are extending the hip to press it back, as the weight comes on to the limb. Whilst the foot is leaving

the ground the knee is being extended—that is, as you push off with the hip by extending it, you push off by the knee by pressing it backwards. At the beginning of the swing the knee is flexed more than at the moment when the foot leaves the ground, to give clearance to the stride; then at the end of the swing the knee extends up to the point where the foot is about to touch the ground again, and then, as it touches the ground, the knee flexes.

The ankle movement is largely a matter of balance, the striking thing being that, on level ground, the total range of movement is only from 80° at maximum dorsiflexion to 97°—a total angular movement of 17°. The calf muscles and flexors of the toes are active at the moment when we step off the ground, helping to push forwards. The extensor muscles are acting at a later stage, just before the foot reaches the ground, with the object of keeping the toe up and not letting the foot come down on to the ground flat.

I have so far neglected the muscles around the hip other than the flexors and extensors. The other muscles of the hip must of course be useful. Suppose we watch someone walking from behind; the striking point comes out that the centre of gravity is never right over the foot which is on the ground. If I stand on one foot I have to tip my body, so that the centre of gravity is over the foot that is on the ground. But in walking I do not do this to anything like the same extent. You can divide the mass of a man walking into two components, one of which is transmitted through the foot to the ground, and the other part of the mass forms a moving body, which has a certain momentum, which keeps it in the air during the stride. The proportion which constitutes the moving body is higher the quicker one is walking. The quicker you walk the less you have to sway from side to side. This preservation of balance necessitates a considerable muscular action throughout the whole trunk, the chief muscles used being the abductors of the hip and the spinal muscles. As I lift my right leg I must not allow the right side of the pelvis to drop; therefore the outer gluteal muscles on the left side are used, and these are very important muscles in walking. There are certain conditions under which the patient walks—either with a shuffle, or with an actual drop of the pelvis on the side of the raised leg. The most important of these conditions are first those in which the hip is dislocated, and second, spastic contraction of certain muscles around the hip. In congenital dislocation of the hip, as the patient takes a step with the right leg the right side of the pelvis drops, and he walks with a waddle. In spastic contraction you have to remember that muscles do not act individually, but that they are constantly balancing each other. When the patient tries to take a step with the right foot he may attempt to use the abductors of the left hip to keep the pelvis steady, but he has a continuous spasm of the adductors, and these overcome the abductors and allow the pelvis to tilt; this accounts for his walking with a

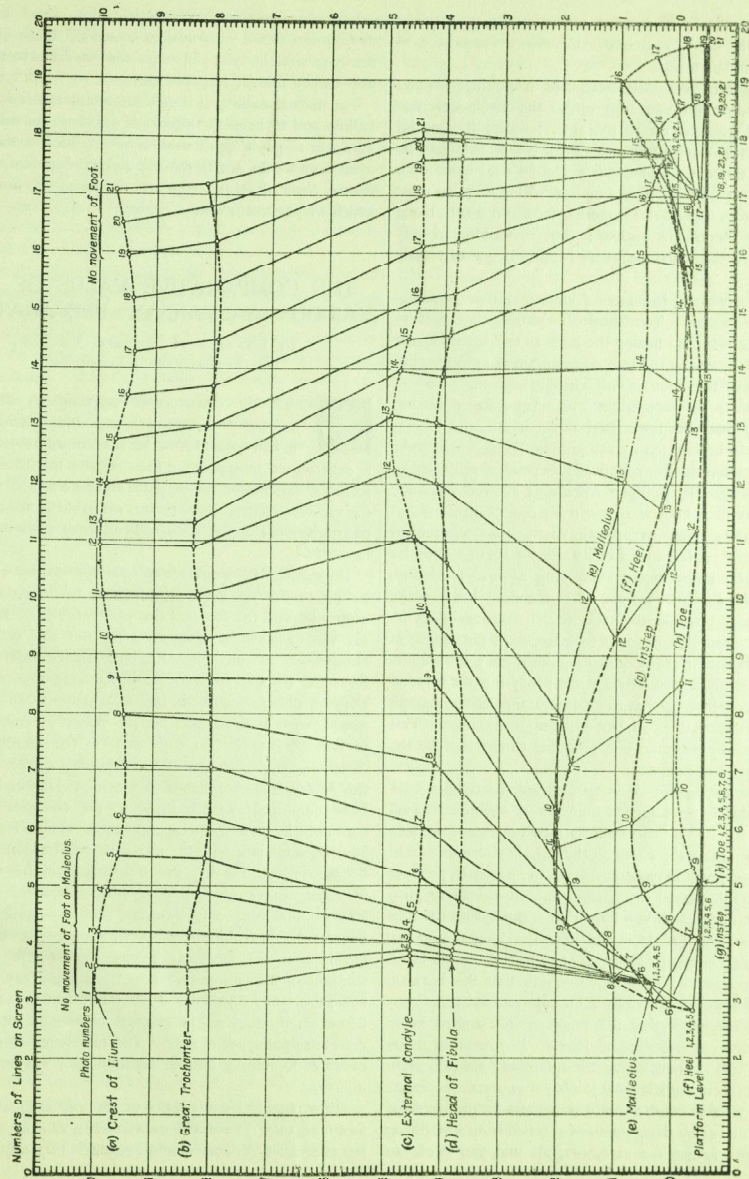
shuffling gait, dropping the pelvis on the side on which he is taking the step.

A very striking point about balance in walking and running came out at Roehampton Hospital in fitting a large number of men with artificial arms. There were races between the various patients, and those who had lost an arm could never run at any considerable pace. If they started to run fast they ran round in a circle, and then tumbled over. The reason was that they had been trained all their lives to balance themselves with their two arms while running. This balance having been removed, they had to re-learn their whole system of balance. They had re-learned it for walking, but not for running.

The knee-joint is always a little flexed when the weight is on the limb; the only time when it is fully extended is when the foot is just meeting the ground.

You will find that a patient with a complete absence of quadriceps extensor muscle can walk apparently perfectly, but he does not walk normally. He walks in such a way that when the foot is on the ground his knee is fully extended, or even hyperextended. This is because, having no quadriceps muscle, if he allowed the knee to flex it would give way altogether. This applies to walking with an artificial leg, so that when the weight comes on to the knee it must be fully extended. If a little flexion is allowed the knee may give way. The knee extensor is rather a complicated muscle. The quadriceps consists of four parts, and presumably there is some reason for this. The special use of at least one section (the vastus internus) is understood. The knee in a flexed position allows a little rotation; in order that we may be stable when standing with a flexed knee the joint must be braced up laterally on the inner side. The vastus internus is the muscle which does this. This muscle may be strengthened by balance exercises, such as flexing and extending the knees in a tiptoe position.

Suppose that you are walking uphill or downhill instead of on the level, you will find that on going uphill you come onto the ground with the knee very definitely bent, using the quadriceps muscle in lifting yourself up again. When coming downhill or downstairs this is done in the reverse direction, stepping off the step with the knee bent and allowing it to bend still more in coming down on to the next step. In this movement the quadriceps extensor muscle is actively used. The quadriceps is first fully contracted, and as you allow the knee to flex, it relaxes slowly, holding the weight as it does so. That type of action of muscle, in which it relaxes slowly against a resisting force is technically called "the eccentric movement of the muscle." When coming down a great many stairs you realise the considerable strain on the quadriceps muscle—as, for instance, if you come down one of the long flights of stairs in the tube, at the bottom your quadriceps—particularly the vastus internus part—is quite tired. You are using the



CINEMATOGRAPH CHART OF NATURAL WALKING (WITH BOOTS)—ONE CENTIMETER STRIDE. SCALE: EACH SQUARE = 10 CENTIMETRES.

muscle eccentrically, and using a part of the quadriceps not normally much exercised. Eccentric movement of muscles is rather tiring.

There is another eccentric movement in walking. If you are going downhill you step on to the heel, but you cannot roll straight on to the sole, because if you did you would tip forward; in order to preserve balance you must allow the foot to plantar-flex a good deal more than in walking on level ground, and in allowing this you must not let the foot flop down; it must come down slowly, being held up by the tibialis anticus; thus in walking in very hilly country the tibialis anticus is apt to get extremely tired.

Another muscle in the knee region is rather puzzling. The hamstrings, as I have shown, in walking have a very considerable action in flexing the knee as one leg is carried past the other, and as the foot comes upon the ground, but this flexion of the knee is only carried to a maximum of  $115^{\circ}$ . One of the hamstrings, the biceps, has a second head rising from the lower part of the femur, and joining the tendon to be inserted into the fibula. This only comes into action when the knee is flexed beyond a right angle. Some years ago Dr. Adolphe Abrahams showed me some photographs of a man who was a champion sprinter, and who showed enormous over-development of the short head of the biceps. A few weeks afterwards a patient was under my care who was a professional wing forward footballer, and he had a similar development of the short head of the biceps. It is possible that this muscle is developed by sprinting. A sprinter depends for pace upon the length of his stride and the rapidity of making the stride; all sprinters who are really fast have a long stride; they flex the hip and knee tremendously, so that in an instantaneous photograph the knee is seen to be drawn right up to the chin. This very full flexion of the knee is probably carried out by the short head of the biceps.


One other little point about walking and I have done. I have said that in walking you take a very definite step off with your toes. This, however, is only possible if the toes can be plantar-flexed; although they are at the moment in the extended position, you must have the power of pressing them on to the ground in order to get the necessary push off. What muscles do you use to press down with the toes against the ground? It is true that the long flexors are used, but another group of muscles of even greater importance are the interossei. We are apt to think that the intrinsic muscles of the foot are of little importance, but this is not so. The interossei flex the metatarso-phalangeal joints and extend the interphalangeal joints. If you press down with your toes without using the interossei, you will press down with the interphalangeal joints; if you use the interossei you get a direct downward pressure with the whole of the toe. The same thing applies to dorsiflexion: in lifting the toes, if you use the extensors, all that you do is to

extend the metatarso-phalangeal joints; you leave the distal joints flexed; if you want to extend these and keep the toes straight, you must use the interossei at the same time as you use the long extensors.

For normal walking it is very important to keep the toes mobile and to keep the interossei working; for this reason we ought to pay a great deal more attention to toe-movement than we do, and to develop a certain amount of actual control over the interossei and of those toe-movements which we practically always neglect.

### THE COMPARATIVE VALUE OF THE VARIOUS SALVARSAN PREPARATIONS.

By KENNETH M. WALKER, F.R.C.S.,  
In charge of Venereal Department.

 SINCE the discovery of salvarsan by Ehrlich in 1909, so many similar compounds have appeared in Europe and America that considerable difficulty is experienced in appraising their relative merits. For this reason it may not be out of place to make a brief survey of the various arsenical preparations available for the treatment of syphilis, and to give some indication of their merits and demerits.

Interesting as it would be to trace the various steps that led up to the synthesis of salvarsan, to do so would be utterly beyond the scope of this brief article. Suffice it to say that modern developments in the use of arsenical compounds in medicine received their initial impetus from the discovery of the beneficial action of *atoxyl* on sleeping-sickness. As in the vast majority of scientific quests, success came only as the result of much patient preliminary work. An early step in the search for the "*therapia magna sterilans*" was Ehrlich's discovery that if the pentavalent compounds of arsenic (which had hitherto been employed) were reduced to the trivalent form an enormous increase in therapeutic action resulted. Another advance was made with the introduction of arsenic into the benzene ring. Finally, the immediate mother-substance of *salvarsan* (3-nitro-4-hydroxy-phenyl arsenic acid) was attained, and from this salvarsan or dioxidiamido-arsenobenzol dihydrochloride. To overcome the difficulties arising from the fact that it was necessary to convert a solution of this compound into the sodium salt before it could be safely injected Ehrlich introduced "914," a condensation product of the original compound with formaldehyde sulphoxylate of soda. This merely required solution in water to form a neutral solution that was suitable for injection.

Many chemical equivalents of the two original German products, *salvarsan* and *neo-salvarsan*, now exist. The war has stimulated pharmacological research in many countries

previously content to import these products ready-made from Germany. The result has been that we now have *arsenobenzol* and *novarsenobenzol*, *arsenobillon* and *novarsenobillon*, *diarsenol* and *neo-diarsenol*, *kharsivan* and *novarkharsivan*. In addition to these are *galyl* and *luyl*.

From salvarsan or its equivalents can be derived another co-ordination series of compounds by linking on salts of mercury, silver, gold, copper or platinum. Of these possible compounds only two need serious consideration, namely *luargol* and *silver salvarsan*. Recently an analogous compound has been put on the market in which sulphur is linked up with salvarsan—*sulpho-salvarsan*.

Before attempting to estimate the relative value of these numerous preparations, it may not be out of place to indicate what are the qualities required of an agent employed in the treatment of syphilis, and by what means these qualities can best be estimated. In broad terms, what is required is a substance which combines maximum toxicity to the disease-producing parasite with minimum toxicity to the organism harbouring that parasite. The toxicity of the various salvarsan derivatives to the *Spirocheta pallida* may be measured clinically—

(1) By the promptness with which lesions clear up after the injection.

(2) By the time taken for spirochaetes to disappear from such lesions.

(3) By the amount of treatment required to convert a positive blood reaction into a negative one, and to maintain it in this condition.

The toxicity of the various preparations to the human host of the *Spirocheta pallida* may be measured by the extent to which an injection is or is not followed by toxic reactions, remembering always that these reactions may not occur for some considerable time after the exhibition of the drug.

Although a certain amount of difference of opinion must naturally exist concerning the efficacy of the various salvarsan preparations on the market, a large measure of agreement will be found amongst those whose experience best qualifies them to judge. In the first place it is generally agreed that no results have been so dramatic, so complete and so immediate as those obtained with the original batches of salvarsan arriving in this country. At the same time it must be remembered that the dose of salvarsan administered was very considerable and that accidents were not uncommon.

Secondly, it is generally conceded that whatever may be the merits of neosalvarsan and its analogues on the score of convenience, these soluble preparations are less efficacious as anti-spirochaetal agents than the insoluble. The explanation of this diminished therapeutic action of the soluble preparations is, of course, furnished by the fact that they are very rapidly excreted, and remain in action against the spirochaete for a much shorter time than the insoluble.

Thirdly, it is immaterial whether the preparation used be

*kharsivan*, *arsenobillon*, *arsenobenzol*, or *diarsenol*. These compounds are identical, and not, as is so often supposed, similar substances with some subtle difference in structure.

*Galyl*, on the other hand, is a distinctive substance introduced by Mouneyrat in 1913, and derived from "592" by substituting phosphoryl radicles for two amino groups. It has been claimed that *galyl* is less toxic than other preparations, and for this reason it has become popular amongst many who are nervous of the more potent preparations. It has, however, been the experience of many clinics that in the doses commonly employed (3 grm. initial dose), *galyl* is not altogether a satisfactory anti-spirochaetal agent. Relapses were so common at the Special Treatment Centre in Golden Lane when *galyl* was in use, and the persistence of spirochaetes in the lesions so frequent, that its employment, except in special cases, has been abandoned. Whatever its value in higher doses may be, in the amounts usually prescribed *galyl* would appear to be less efficacious than novarsenobenzol.

*Luargol* is a combination of salvarsan with antimony and silver bromide. The addition of these heavy metals enhances its anti-spirochaetal action. The initial disadvantage that was experienced, namely, the tendency of *luargol* to produce thrombosis at the site of injection, was overcome by the introduction of *disodoluargol*—a soluble and less irritating derivative.

The efficacy of *luargol* is undoubted, and other combinations of silver without the antimony have been introduced. At least two preparations of *silver salvarsan* are at present on the market, a German brand made by the original manufacturers of salvarsan, and a preparation of Messrs. May & Baker. Of the value of the latter preparation it is too early to speak. English silver salvarsan is at the present moment under trial in the Venereal Department of this Hospital. Before the merits of any particular salvarsan preparation can be estimated with any pretence of accuracy it must have been employed in a very big series of cases. Any statement made of silver salvarsan at the present moment can therefore only be provisional. It would appear, however, that the drug is a safe one, no more reaction having been noted than with N.A.B. Its therapeutic action, however, would not appear as strong as was originally estimated. After two injections of 15 grm. and 2 grm. of the drug spirochaetes have still been found in the lesions. It would therefore seem advisable to use larger doses than those that have been advocated, starting with 25 or 3 grm. of the drug and increasing up to 45 or 5 grm. As a footnote, it may be added that silver salvarsan is more irritating than novarsenobillon. As its dark colour prevents the appearance of blood in the injecting syringe being visible, special care has to be taken that the needle is actually in the vein before it is injected.

Little can be said of the value of *sulpho-salvarsan* for the reason that it has not been much employed in England. It has been recommended for use in the treatment of con-

genital syphilis and in cases exhibiting an intolerance to mercury. Combinations of salvarsan with gold, copper and platinum are for the present merely pharmacological curiosities. They merely serve to indicate how large is the number of arsenical compounds that synthetic chemistry may in the course of the next few years put into the hands of the clinician.

## TWO CASES OF CEREBRAL ABSCESS.

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**H**AVE thought the notes of the two following cases worth publishing, less perhaps from any pathological interest they may possess than from the disciplinary value attaching to a confession of jumping to conclusions through a somewhat remarkable coincidence of circumstances.

Lieut.-Cpl. H. S.— and Pte. W. B.— were admitted as Expeditionary wounded to the Connaught Hospital, Aldershot, on May 28th, 1915, both suffering from a gunshot wound in the left temporal region, which had been received in the case of the first mentioned on May 5th and in that of the second on May 21st. Both had been trephined in France, but no notes were forthcoming of the condition found or of any particular operation performed.

The condition on admission was as follows:

H. S.—: Septic wounds on the left side of the head; small cerebral hernia in the right frontal region. Slight left-sided facial paresis, ptosis of the left eye. Occasionally rather drowsy, and with a tendency to sensory aphasia.

W. B.—: There is right-sided hemiparesis, more marked in the face and upper extremity than in the leg. Speech is certainly not normal, but the actual condition of his disability varies so much from day to day that a more exact description is not possible.

Both patients improved rapidly, and both were dispatched to the same auxiliary hospital on June 17th. H. S.— was at that time described as “normal in every respect except occasional slight sensory aphasia.” W. B.— as “now walking well and with very slight mental symptoms.”

On July 5th both patients were brought back to the Connaught Hospital in identical condition: semi-conscious, delirious, incontinent, with general tremors and with the following history, for which I am indebted to Dr. H. W. Crotwell, of Bagshot:

“H. S.—: The wound on the right side was incised on June 20th and pus evacuated and bare bone exposed. This wound healed satisfactorily, but on June 27th headache was complained of and continued severe with vertigo and some speech affection. Per ophthalmoscope the retinal

vessels were engorged and tortuous. On July 2nd the trephine flap exhibited fluctuation; it was opened and a hæmatoma evacuated with great relief. Trephining was contemplated, but on July 4th his condition markedly improved. On July 5th he became suddenly much worse and was returned to the Connaught Hospital.

“W. B.—: Improvement rapid until June 20th, when paroxysmal headache began, starting always at the trephine area and running to the occiput. On July 1st headache entirely frontal. X ray showed shrapnel in skull and one fragment in the frontal lobe. There was evidence of paresis of right hand. Trephining was contemplated as in the other case, but similarly on July 4th improvement was marked. On July 5th he had become very drowsy and was returned with H. S.— to the Connaught Hospital.”

Taking into consideration the circumstance that in their transference from the Connaught Hospital both were regarded as convalescent, and that both now exhibited identical symptoms which had arisen comparatively suddenly, it is perhaps condonable that the mistake should have been made of seeking some external cause common to the two, and one was readily found in the belief that both had got “a touch of the sun,” which, acting upon a brain recently injured and presumably readily susceptible, had developed some functional disturbance of the nature of a meningismus.

It must also be added that in the case of H. S.— the scar on the right side (site of the original hernia) was bulging, but that lumbar puncture yielded fluid, not under pressure, and that in the case of W. B.— there was now right hemiparesis with exaggerated knee-jerk and an extensor response on the right side. Lumbar puncture performed in his case resulted in a “dry tap,” presumably from failure to enter the spinal canal.

The convenient explanation alluded to was supported by the marked improvement which occurred in both patients during the succeeding forty-eight hours. Both expressed themselves as free from headache, incontinence had disappeared, and the mental condition was apparently normal. In fact, this false security explains if it does not pardon the omission to make a more searching examination in the two cases, until, in fact, on the following day both patients became suddenly very ill.

On July 8th, at 12 midday, H. S.— had a temperature of 98° F., with a pulse of 52. At 4 p.m. his temperature was 102° F., pulse 104. By this time general tremors were present and marked, there was pronounced irritability, the knee-jerks were exaggerated on both sides, more so on the right; the abdominal reflex was absent on the right, the plantar responses were doubtful, Kernig's sign was positive. The optic discs showed slight but definite neuritis on both sides, more on the left side. Lumbar puncture yielded a clear fluid under pressure.

W. B.— at 12 midday had a temperature of 98° F., pulse 56. At 4 p.m. temperature was 100.2° F., pulse 72. His

mental condition was better than that of the other patient, but his signs were more pronounced. There was now ptosis of right eye, right facial paralysis, the tongue was protruded to the right, and there was complete flaccid paralysis of the right arm and leg. On lumbar puncture clear fluid under great pressure resulted.

Without further delay both patients were operated upon by Temporary Captain Drew, F.R.C.S., Surgical Specialist. In the case of H. S.— the scar on the left side was incised. The dura was seen to be œdematous; on opening this, pus was readily found. In the case of W. B.— pus was found on the left side of the skull so superficially as almost to be a subcutaneous abscess.

Here, unfortunately, the coincidence ends. H. S.— made an immediate response, with steady uninterrupted progress. On the day following operation his improvement was remarkable. There was no sign of cerebral hernia; he smiled and said that he never felt better in his life. His convalescence was thenceforth uneventful. By July 30th only the faintest evidence of optic neuritis was present.

W. B.—, on the contrary, after immediate temporary improvement got steadily worse. Daily examination of the optic discs soon showed that the neuritis was increasing. The wound was repeatedly opened up and explored, with fresh attempts at complete drainage. Without any marked change, he gradually fell into a condition of stupor, but did not die until November 8th. At the autopsy the brain can only be described as one large abscess-cavity. In spite of an exhaustive search no sign of any foreign body could be found in any part of the brain.

I can only regard the exactly parallel course of the two cases, bearing in mind that the original wounds had been received on dates sixteen days apart, as an extraordinary coincidence, unless, indeed, the “touch of the sun” or some other common factor really started up the cerebral disturbance (which must, of course, have been smouldering) simultaneously in the two cases, so that both burst into conflagration at the same time. Otherwise why should two infections with a very different latent period arrive at maturity at precisely the same moment?

## THE WORK OF ASSISTANT MEDICAL OFFICERS IN THE PUBLIC HEALTH SERVICE.

By W. E. ROPER SAUNDERS, M.R.C.S., L.R.C.P., D.P.H.,  
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**H**AS been suggested to me that a short account of the ordinary routine of Assistant Medical Officers in the Public Health Service would be of interest to the many men who are now contemplating taking up such posts.

It must be understood at the outset that the statements made hereafter are not universally applicable, as local authorities differ very widely in the duties assigned by them to their Assistant M.O.'s, e.g. some authorities call all their assistants Assistant M.O.'s.H., but employ them in tuberculosis and school medical work as well as in Public Health work proper.

I will, first of all, explain the organisation of a Public Health Department in a large county borough—say of 200,000 population. The administrative head is, of course, the (Principal) Medical Officer of Health. With his duties, which are almost entirely administrative and supervisory, we are not concerned in this article, but it must be understood that the heads of each department are responsible to him for the efficient working of their departments, and are usually called by him into consultation when the Council or the M.O.H. himself desires to make any important change in the method of administration of the particular department concerned.

The Deputy M.O.H.—who may be assisted by Assistant M.O.'s.H. as well as by M.O.'s. for particular duties, e.g. inspection of aliens and other port sanitary work acts as chief of the sanitary staff proper, viz. sanitary inspectors, etc., and during the absence of the M.O.H. carries out his duties.

The tuberculosis work is supervised and its administrative portion carried out by the Chief Tuberculosis Officer, while the greater part of the actual executive work, viz. diagnosis and treatment, is carried out by the Clinical (Assistant) Tuberculosis Officers.

The administrative part of the school medical work is similarly carried out by a Chief S.M.O., while the executive work is done by Assistant S.M.O.'s.

Similar organisation exists in the Maternity and Child-welfare and Venereal Departments. In this connection it should be noted that there appears to be a tendency among local authorities to confine appointments in the former speciality to lady practitioners.

The infectious diseases hospitals are administered by Medical Superintendents directly responsible to the M.O.H., and are staffed by one or more Residents. It is a common practice in large towns to allow such Residents sufficient time to attend a D.P.H. course.

I have drawn up a simple plan showing the above details in a graphic manner.

What has been described above for a large county borough is to some extent altered in a county, e.g. there may only be one or two Sanitary Inspectors on even a large county staff, as the actual sanitary work is carried out by District M.O.'s.H. (often part time) and S.I.'s.

A county, as a rule, has no infectious diseases hospitals directly under its control, and there will, in consequence, be no hospital M.O.'s.

The time of a Deputy or Assistant M.O.H. in a county

is largely occupied in assisting the M.O.H. in collating and comparing reports from the various county districts and in consulting with and advising the District M.O.H. In a county borough he may be required to direct the work of the S.I.s, and examine any food, premises, etc., about the condition of which they are in doubt. He will also be required to watch the incidence of infectious disease and to investigate any epidemic of it.

Clinical (Assistant) Tuberculosis Officers spend a considerable portion of their time in dispensary work, which consists of diagnosis of suspected cases referred to them by general practitioners, together with treatment of suitable cases, tuberculin being used if required. Occasionally they may visit patients' houses and examine "contacts," being accompanied on these visits by a nurse. It is more usual, however, for contacts to attend at the dispensary for examination. Some local authorities require their Tuberculosis Staff to examine sputa; others, which possess a Bacteriologist, refer all such examinations to him. In many cases where there is a local tuberculosis sanatorium or hospital for advanced cases which is too small to require a R.M.O., the Tuberculosis Officers visit it daily and treat the patients.

Those who intend to take up the tuberculosis aspect of Public Health will be well advised to act as H.P. in an ordinary general hospital for six months, followed by six months as R.M.O. in a sanatorium, preferably in one which has an attached hospital for advanced tuberculosis.

It is only quite recently that the treatment of surgical tuberculosis has been seriously taken up by local authorities, but in the near future a number of experts in this branch will be required in order to staff special hospitals. Mild cases of surgical tuberculosis, *e.g.* cervical glands, will continue to be dealt with at the dispensaries.

Passing next to the consideration of School Medical Work, it should be noted that those who wish to take up this work should—

- (1) Obtain the D.P.H.
- (2) Attend the practice of a children's hospital for six months or act as Resident in one for a similar period.
- (3) Obtain a specialised knowledge of refraction work and the diagnosis of nose, throat and ear diseases. Six months' work in the Eye and Ear O.P. Departments should suffice.

Some authorities in appointing Assistant School Medical Officers give preference to those with experience in the

operative treatment of enlarged tonsils and adenoids and in the X-ray treatment of ringworm.

In most places about two-thirds of an A.S.M.O.'s time is occupied in the medical inspection of school children. This, being routine work, tends to become rather monotonous, but interest may be maintained by watching some special group of defects, *e.g.* skin diseases. Assistance is usually given by a school nurse in the weighing and measuring of the children, and in the examination of their heads, bodies, and clothing, with reference to cleanliness or otherwise. The remainder of the A.S.M.O.'s time is devoted to school clinics, at which he supervises the treatment of minor ailments by the school nurses, and at which more serious diseases may be diagnosed and referred elsewhere for treatment, to refractions, throat, nose, and ear work, and the diagnosis of mental deficiency in persons under sixteen years of age. Some authorities provide an X-ray outfit and allow the A.S.M.O.'s to use it for the treatment of ringworm.

It will be unnecessary for me to deal with the work of Maternity and Child-welfare M.O.'s as its scope is obvious, and as it is, as mentioned above, almost entirely in the hands of lady practitioners.

Veneral disease work, likewise, is familiar to everyone, and the entry to specialism in it is by acting as a Clinical Assistant or Resident in a V.D. Department.

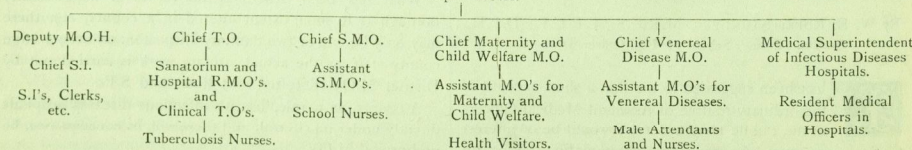
It may be safely assumed that not one in ten of the Assistant M.O.'s in the various subsidiary branches, tuberculosis, school medical, etc., will ever attain to the position of Principal M.O.H. This is due to the great increase in the number of Assistant M.O.'s.

Perhaps the best course for an ambitious man would be:

- (1) To act as H.P. in a general hospital.
- (2) To get a D.P.H. and an M.D. degree.
- (3) To act as R.M.O. in an infectious disease hospital.
- (4) To get an appointment as Assistant or Deputy M.O.H.

Although, if one is ambitious to enter Public Health proper, the above is the best course, it must not be thought that the subsidiary branches do not offer a good career to those keenly interested in the work of some particular department, as promotion to the position of Chief M.O. of that department under a large local authority should be within the reach of every capable man, while the salary offered for such positions is already fairly good, and there is promise of a considerable improvement in the future.

Principal M.O.H.



Glossary of Abbreviations.—M.O., Medical Officer. M.O.H., Medical Officer of Health. S.M.O., School Medical Officer. S.I., Sanitary Inspector. R.M.O., Resident Medical Officer. H.P., House-Physician. O.P., Out-Patient. T.O., Tuberculosis Officer. V.D., Veneral disease.

## THE BRITISH MEDICAL ASSOCIATION AT CAMBRIDGE.

THE Eighty-eighth Annual Meeting of the British Medical Association was held in Cambridge at the end of June under the Presidency of Sir Clifford Allbutt. When war broke out arrangements for holding it in Cambridge during 1915 were well in hand, and Sir Clifford Allbutt, then President-Elect, continued in office all through the war until the first meeting after the declaration of peace could be held. The last meeting in Cambridge, the Forty-fourth, took place in 1880 under the Presidency of Dr. Humphry, then Professor of Anatomy, afterwards Sir George Murray Humphry, Professor of Surgery.

Cambridge is especially suitable for such an event, and University, town and county combined to endeavour to make the meeting a great success, and so it proved to be. University and municipal buildings were freely placed at the disposal of the Association, and the authorities of the colleges very kindly offered to the local committee the use of a large number of sets of undergraduates' rooms, and these were assigned to members unaccompanied by ladies. They were thus able to live in college and take their meals at the high table in the College Hall. Much hospitality was shown by Heads of Houses and Residents. Fortunately the weather, on which the success of any meeting in Cambridge largely depends was most favourable, and the open-air evening receptions given by the Vice-Chancellor in Emanuel, by the Mayor in Christ's, and by the Master and Fellows in Trinity College grounds were largely attended and much enjoyed. The proceedings commenced with the Medical Parliament of some 270 representatives from all over the Kingdom, and much useful medico-political work was accomplished in four strenuous days. Among the subjects for discussion were Professional Secrecy, Secret Remedies, Treatment of School-children, Child-welfare Centres, Salaries for Public Appointments, and the Report of the Consultative Council.

The Presidential Address was delivered by Sir Clifford Allbutt in the Senate House to a crowded audience, which enjoyed with rapt attention a masterpiece of oratory, erudition and sound judgment. The subject was "The Universities in Medical Research and Practice." The address is full of helpful information and suggestion and should be read by all medical men and students. Afterwards at a reception given by the local branch in King's College, the portrait of Sir Clifford Allbutt, painted by Sir William Orpen and exhibited in the Royal Academy, was presented to him by Sir Norman Moore on behalf of a large body of subscribers from the medical profession. Sir Norman compared the Regius Professor with others who

had been Professors of Physic at Cambridge, and gave some interesting and amusing facts from his deep store of knowledge of the history of medicine.

The clinical and scientific sectional meetings were exceptionally well attended, and it was remarkable what a number of eminent medical men the subjects for debate had attracted. Bart's, as usual, was very much to the fore, many of the Staff were present, and a large number of old Bart's men. Among those taking part in the discussions and demonstrations were Sir George Newman, Sir Wilmot Herringham, Sir Walter Fletcher, Dr. Drysdale, Sir Thomas Horder, Dr. Langdon Brown, Dr. Gow, Mr. McAdam Eccles, Mr. Gask, Sir Gordon Watson, Dr. Williamson, Dr. Donaldson, Dr. Mervyn Gordon, Dr. Hine, Mr. Cumberbatch, Mr. Kenneth Walker, Dr. Mackenzie Wallis, Dr. Dale, Dr. Christopherson, Dr. Buttar, Dr. Sevestre, Mr. Strangeways, Dr. Gaskell, Dr. Hele, Dr. Rivers, Dr. Adrian, Dr. Peters and Mr. Keynes.

The place of preliminary science in the medical curriculum was discussed in the Section of Medical Education; it was generally agreed that chemistry and physics should be made school subjects and should be taken in examination before registration as a medical student.

In the Section of Medical Sociology the subject dealt with was "The Future of Medical Practice." A very interesting and illuminating series of papers were read, treating the matter from the point of view of the State, the consultant, the G.P., the research worker and the hospitals. Among those who spoke were Mr. D. T. Jenkins, Secretary to the Labour Party Health Committee, Mr. E. W. Morris, House Governor of the London Hospital, and Dr. T. R. Browne, of Johns Hopkins University, U.S.A.

An innovation at this year's meeting was the introduction of a series of afternoon demonstrations. Thus Major Sinclair gave a wonderfully complete exhibition of the treatment of fractures, Mr. Gillies and Mr. Cole demonstrated plastic surgery of the face, Mr. Cooke and Dr. McNeethe technique of blood-transfusion, and Mr. Tilley endoscopy of the lower air-passages, while the physiologists, neurologists, pathologists and pharmacologists were fully engaged in showing the latest advances in their several departments. In fact an endeavour was made to make the meeting more scientific in character and less of "a picnic" than formerly, and, while the social side was not neglected, the success which attended these demonstrations fully warranted their introduction, and will probably ensure a continuance at future meetings of the Association.

During the meeting a Congregation was held, and the Honorary Degree of Doctor of Laws was conferred by the University upon the following distinguished members of the profession: Sir Clifford Allbutt, Dr. Jules Bordet (Brussels), Dr. Simon Flexner (Rockefeller Institute), Dr. Piero Giacosa (Turin), Sir George Makins, P.R.C.S., and

Sir Norman Moore, P.R.C.P. The degree was also conferred at a later date on Prof. Harvey Cushing and Prof. Abel, who were unable to arrive in England in time for the meeting. The recipients were presented by the Deputy Public Orator (the Rev. C. E. Raven, Dean of Emanuel College), and the following are some extracts from his Latin speeches as translated in the *British Medical Journal*:

Sir CLIFFORD ALLBUTT: "We are glad to crown with our highest honour our Knight here present, who for many years has been at the head of our Medical School. Though medical men may claim him as their own, since he has looked deeply into many aspects of medicine, has written admirably about them, and has fired young men with his own keenness, yet we do not altogether give him up to Medicine; in truth he belongs to the whole University; he would not wish our alumni to be ignorant of polite literature or wanting in the art of writing, and is himself one to whom Greek and Latin afford a peculiar joy. When the British Medical Association chose such a man to preside over its deliberations, it was safe to prophesy that the alliance which has always existed between the nobler arts would continue."

Sir NORMAN MOORE: "There is in the *Regimen Sanitatis Salerni* an ancient and excellent rule: 'If doctors fail you there are these three doctors—a cheerful mind, rest, and moderation in diet.' No one will have any difficulty in obtaining a moderate diet in these days of high prices. At a time when the Chancellor of the Exchequer will deprive you of your gains, it is better to repose. You will win cheerfulness of mind by reading the history our guest has written, in which he has told how medicine has flourished among the English during the seven centuries since Rahere's hospital was consecrated to St. Bartholomew. To-day we gladly honour the man who has accomplished this work with such good taste, wit, and learning."

### DUNNINGHAM'S MANUAL OF PRACTICAL LAWN TENNIS.

**B**EFORE commencing to play the student should make himself thoroughly familiar with the surface markings of the court and of its surroundings. He will find that he has first to deal with a large, fairly quadrilateral area lying upon the superior surface of the ground. This constitutes the *court* proper. It is bounded anteriorly, posteriorly, and on each side by *linee albae* or white lines. Similar lines subdivide it into a number of smaller internal segments; and the whole is cleft into two parts by a median transverse septum called the *net*. The net presents special characteristics of its own, and must now be studied in greater detail.

*The net (rete).*—This is a tough, fibrous structure lying perpendicular to the long axis of the court, and dividing it, as already stated, into two parts. It is attached laterally on

each side to an erect ligneous shaft known as the *post*. From above downwards it springs from a narrow white aponeurosis called the *tape*. Lower down its structure consists of an immense number of dark-brown cords anastomosing with one another in a very remarkable manner. The student should endeavour to unravel one of these. When fully extended it should measure well over five hundred miles in length.

*The racquet (O.T. bat).*—The racquet, for purposes of description, is arbitrarily divided into two parts: (1) A large, flat, broadly-elliptical area known as the *frame*, and containing in its centre the vast *semilunar foramen*; (2) a long, narrow, cylindrical, rod-like structure generally referred to as the *handle*. These two segments are united at about the middle of the racquet by a small triangular block of wood, which merits the attention of the student on account of its extreme rigidity. During play the handle is (or should be) firmly inserted into the hand of one of the players. The actual hand used varies considerably in different subjects, but the student should note that on very few occasions is a racquet inserted into two hands at once.

Reference has been made above to the enormous *semilunar foramen*, which occupies the greater part of that half of the racquet distal to the player when he holds it, by the handle, at arm's length. It is bounded externally by the frame, but a careful examination of its inner surface will show that it is, more or less completely, filled in by a striking plexus of red and white fibres. The function of this plexus is obvious. Were there no such barricade to impede its course a ball, on reaching the racquet, would pass straight through the semilunar foramen on to the ground. But with this arrangement, if the fibres be sufficiently taut it at least stands a chance of passing back over the net on the rebound. Thus the racquet plays a most important part in maintaining the excitement of the game, and its state of preservation or otherwise is a matter of considerable significance to the advanced player.

The relation of the racquet to the court varies at different points in the game.

*The balls (O.T. pills).*—There are usually about six of these. They are small pliant structures, generally spherical in outline, but sometimes presenting the form of an irregular four-sided pyramid. The latter condition has been the commoner of late. They are covered externally by a soft, thin capsule not unlike flannel to the touch. The colour of this capsule varies according to the age of the ball. In early life it is white, later it becomes green, then dark green, and finally dirty-brown. Sometimes, in very old balls, the capsule may disintegrate altogether, leaving the cortex exposed to the fury of the weather. Hissington has remarked that the longer a ball he used upon a grass court, the more green will it become. Whether or no this conjecture be correct remains to be proved, but the idea is strongly supported by the experimental work of Sym, who found that a ball, which he had bounced two thousand times upon his grass plot, showed a distinctly darker tint of green than one which he had retained in his pocket during the experiment.

*The Players.*—This is the name given collectively to

those people who take part in a game. They may be single or paired upon each side. Individual players may be classed under one of the following three headings:

- (a) Good.
- (b) Bad.
- (c) Indifferent.

The student should not be content with merely reading this fact. He should endeavour to verify the same from personal observations upon the play of himself and of his friends.

F. H. K. G.

### REVIEWS.

**HANDBOOK OF SANITARY LAW.** By R. BURNETT HAM, M.D., D.P.H. Edited by HENRY R. KENWOOD, C.M.G., M.B., D.P.H. (H. K. Lewis & Co., Ltd.) Eighth Edition. Pages xxiv + 210. Price 5s. net.

The revised edition of this very handy book will be welcomed by candidates preparing for the Diploma of Public Health examinations. It contains in a condensed form the whole law bearing upon the Public Health in England and Wales brought up-to-date, including the recent Acts relating to maternity and child welfare, midwives, and venereal diseases.

This little volume should be very useful also to general practitioners, who are sometimes at a loss as to which sanitary authority is responsible for the administration of the various statutory Acts, by-laws and regulations relating to public health matters.

This is the eighth edition, and having been edited by Prof. H. R. Kenwood is a sufficient guarantee of the accuracy of its contents, and the care taken in the setting up of the book to serve its purpose for examinations and for reference.

**SWANZY'S HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT.** Edited by LOUIS WARNER, M.B., F.R.C.S.I. (H. K. Lewis & Co., Ltd.) Twelfth Edition. Pp. xviii + 671. Price 22s. 6d. net.

The mere fact that this book has run into twelve editions is sufficient evidence as to its usefulness and popularity. The term "handbook" is a misnomer: it is much more than that, covering as it does the ground very thoroughly.

The whole subject of ophthalmology is of increasing importance and one which is calculated to play a much more prominent part in the student's curriculum of the future. For this reason we are glad to see this standard text-book so thoroughly up-to-date.

The present volume has been subjected to a careful and thorough revision. Diseases of the cornea have been reclassified and some additions made, including a brief account of superficial linear keratitis. The most noteworthy addition in the present edition perhaps is the improvement in the details regarding operations of excision of the lacrymal sac and in connection with trichiasis.

As in previous editions the illustrations are excellent, especially the coloured plates.

**PHARMACOLOGY.** By DOUGLAS COW, M.D., (J. & A. Churchill.) Pp. 132. Price 7s. 6d. net.

This excellent little volume is one of the first of a Students' Synopsis Series which Messrs. Churchill propose publishing. If they are all as useful as the one devoted to pharmacology, we can with confidence predict their immediate success. The book is not, of course, intended as a text-book; in fact the author clearly points out in the preface that his object is merely to provide a small volume which will serve to remind the student of the matter he has studied *in extenso* in the laboratory and in the text-book.

The alphabetical arrangement of the matter does away with the necessity for an index, and the system of cross-references is in every way excellent. Incidentally it is a matter of some interest to learn that the iodine content of the thyroid gland and the activity of the gland follow parallel curves, especially as it is generally recognised that the administration of the so-called active principle iodothyrene is nothing like so effective as when the whole gland is used.

**THE NEW PHYSIOLOGY.** By A. RENDLE SHORT, M.D., B.Sc., F.R.C.S. Fourth Edition. (John Wright & Sons, Ltd., Bristol.) Pp. xi + 291. Price 9s. 6d. net. (In-paper cover, 7s. 6d. net.)

We have no hesitation in saying that the latest edition of *The New Physiology* is one of the most readable books published since the war. Previous editions were excellent, but the present volume is far in advance of its predecessors, and should find its way into the hands of every medical man interested in the advancement of medicine.

The chapter on food deficiency diseases admirably summarises the great advances made in this direction during the last five or six years. The sections dealing with researches on blood and surgical shock are also valuable. A new chapter on the heart, especially written by Dr. Carey Coombs and Dr. C. E. K. Herapath, discusses the latest aspect of cardiology. For the most part the information respecting the ductless glands is excellent, but we think that it might have been possible to write more than a page on the pineal gland.

But the book is so delightfully original that we hesitate to criticise. Again we say the book should be read not only because it is written in an entertaining way, but because it proves very definitely that physiology is the basis of surgical and general practice.

**AN ATLAS OF THE PRIMARY AND CUTANEOUS LESIONS OF ACQUIRED SYPHILIS IN THE MALE.** By MAJOR CHARLES F. WHITE and DR. W. HERBERT BROWN. (John Bale, Sons & Danielsson, Ltd.) Price 27s. 6d. net.

This atlas is the outcome of a photographic record of cases made at a large venereal hospital in which some 19,000 cases of syphilis came under observation. Some seventy-nine photographs of typical syphilitic lesions are excellently reproduced, their value being greatly enhanced in that, in the great majority of cases, the photographs are nearly as instructive as actual observation.

The atlas also includes five of the most beautifully reproduced coloured plates we have seen—in fact the whole book is a veritable triumph for the printer.

A description of the primary sores and the secondary and tertiary skin-lesions is included, and while the text is not intended to be a treatise on syphilis, yet the details add very materially to the value of the atlas as a guide to diagnosis.

**CHILD-WELFARE AND THE TEACHINGS OF CERTAIN DENTISTS, SCHOOL MEDICAL OFFICERS, MEDICAL OFFICERS OF HEALTH, AND OTHER MEDICAL MEN.** By J. SIM WALLACE, M.D., L.D.S. Price 6s. net.

This book is a collection of five essays, and in itself is incomplete. It is claimed to be a sequel to the author's previous work, *Dental Disease in Relation to Public Health*, and he presupposes that the reader is conversant with his other work. It would be better if the essential points of these two volumes were published as one book so that the reader could grasp, as a whole, the prevention in his own case of the dental diseases which he is so often called upon to prevent. The main theme of the book, "Prevention is better than Cure," must have the support of all, but Dr. Wallace is better than most in his insistence upon the whole of the dietary of modern civilised peoples. In these busy times this is hardly practical, but one might accept this view if one were sure that it would bring about the elimination of dental caries. As, however, this is extremely doubtful, and more practical way of obtaining oral cleanliness, as, for example, Wallace makes several statements which lead one to think that he must be very pessimistic as regards the capabilities of the dental profession. To select two instances: On p. 2 he says, where a child of five years has more than six decayed teeth in his mouth, "it is quite impossible by treatment, afterwards, to remedy this most disastrous start in life." This, besides being pessimistic, is untrue. Again, on p. 73 he says that "abnormal occlusion of the teeth is one of the commonest abnormalities and one of the most incurable." The last part of the sentence is surely pessimistic when one thinks of the great strides made during the last few years in the science of orthodontics. The book, however, contains many sound ideas, and most dental surgeons will benefit by reading it.

## EXAMINATIONS. ETC.

UNIVERSITY OF CAMBRIDGE.

## Diploma in Medical Radiology and Electrology.

Part I. *Physics and Electrotechnics*.—G. E. Dyas, W. C. Long, G. T. Loughborough, C. A. Robinson.

Part II. *Radiology and Electrology*.—G. E. Dyas, W. C. Long, G. T. Loughborough, C. A. Robinson.

UNIVERSITY OF LONDON.

## First Examination for Medical Degrees, July, 1920.

(For Internal and External Students.)

J. S. Aldridge, H. G. Anderson, J. R. Beagley, F. A. Bevan,\* F. P. O. Bridgeman, D. J. Brims, E. Büchler, A. G. Chamberlain, E. E. Claxton, J. B. Crabtree, B. W. Cross, R. N. Curnow, C. S. Drawmer, F. G. France, R. Green, G. S. Hale, J. S. Hensman, H. F. Hiscocks, W. Holdsworth, G. K. Loveday, J. G. Paley, D. C. Price, J. A. F. Storrs, W. R. Thrower, L. B. Ward, W. Wilkinson.\*

\* Awarded a mark of distinction in Inorganic Chemistry.

## Second Examination for Medical Degrees, July, 1920.

(For Internal and External Students.)

Part I. *Organic and Applied Chemistry*.—H. I. C. Balfour, S. Brest, D. J. Brims, E. Büchler, L. I. M. Castleden, F. R. Corle, D. B. Fraser, P. Garson, H. S. Gordon, A. Gross, G. E. Harries, F. Heckford, J. T. Hunter, H. P. Lehmann, A. R. Macdonald, D. G. Martin, B. A. J. Mayo, N. Moulson, H. A. Nicholls, J. Parrish, E. B. Pollard, W. A. Robb, C. R. Steel, A. F. Taylor.

ROYAL COLLEGE OF PHYSICIANS.

The following have been admitted Members:

G. K. Bowes, M.B.(Oxon.), R. J. Perkins, M.B.(Lond.), G. J. Sophianopoulos, A. G. Williams, M.B.(Cantab.).

CONJOINT EXAMINING BOARD.

The following has been granted the Diploma in Public Health: A. S. Cane, M.D., B.Ch.(Cantab.).

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

H. S. Baker, L. E. R. Carroll, D. Crawford, R. S. Fawcett, J. N. Laing, D. G. P. Moore, C. W. Narbeth, M. H. Renall, W. R. Sadler, N. S. B. Vinter.

First Examination, July, 1920.

Part I. *Chemistry*.—H. C. J. Ball, A. C. Dick, P. H. Diemer, J. L. C. Doyle, A. J. Enzer, A. W. Gardner, A. H. Kynaston, K. C. L. Paddle, A. E. Ross, E. J. H. Roth, A. D. H. Simpson, H. A. M. Whitty, C. H. Wright, Z. M. Yusuf.

Part II. *Physics*.—H. C. J. Ball, A. C. Dick, P. H. Diemer, J. L. C. Doyle, A. J. Enzer, A. W. Gardner, A. R. Hill, S. Jenkinson, A. H. Kynaston, A. J. Moody, K. C. L. Paddle, A. E. Ross, E. J. H. Roth, A. D. H. Simpson, Z. M. Yusuf.

Part III. *Biology*.—E. L. Davies, A. C. Dick, C. M. H. Hicks, J. D. Hunt, D. D. Kenny, A. J. Moody, E. W. Morgan, R. Stuart, R. M. Williams.

LONDON SCHOOL OF TROPICAL MEDICINE.

The following candidates have been successful in recent examinations for the above Diploma:

H. R. Dive, S. A. El Daab, M. D. Mackenzie.

## CHANGES OF ADDRESS.

CHRISTOPHERSON, W. B., The White House, Cottishall, Norwich.

CONSTANTIN, D., 3, Gower Street, Bedford Square, W.C. 1.

DODD, P. V., Kapallo, Hythe, Kent.

HERINGTON, C. E. E., Spratslade Drive, Longton, Staffs.

HEYWOOD-WADDINGTON, W. B., Troy House, Arundel, Sussex.

PAGET, T. L., 23, Queen Street, Palmerston North, New Zealand.

RAIL, W. A., "Whitburn," c/o Main and Park Roads, Plumstead, Cape Province, S. Africa.

THOMAS, J. LEWELLYN, 10, Christchurch Road, Clifton, Bristol.

WHITE-COOPER, W. R., "North Ford," Dartmouth, S. Devon.

WHITTINGDALE, J., General Hospital, Nottingham.

WILLIAMSON, J. S., Dunbeath, Osborne Road, Pontypool, Mon.

WYNDHAM, T. L., 23, Porchester Gardens, W. (Tel. Paddington, 4889).

## APPOINTMENTS.

DANKS, W. E. H., M.R.C.S., L.R.C.P., appointed Second House

Surgeon to the Halifax Royal Infirmary.

CHRISTOPHERSON, W. B., M.R.C.S., L.R.C.P., appointed Tuberculosis Officer to the County of Norfolk.

WHITTINGDALE, J., F.R.C.S., appointed Casualty Officer at the General Hospital, Nottingham.

## BIRTHS.

BRASH.—On July 24th, to Gwendoline, wife of Dr. E. J. Y. Brash (of Exeter), 27, Trumpington Street, Cambridge—a son.

CRUDDAS.—On July 27th, at Nathia Gali, N.-W.F.P., India, the wife of Lieut. Col. H. M. Cruddas, C.M.G., O.R.F., Indian Medical Service, of a daughter.

CUNNINGTON.—On August 6th, at 25, Orlando Road, Clapham Common, S.W. 4, to Mr. and Mrs. William Alfred Cunnington—a son.

DOBSON.—On August 15th, at 3, Windsor Road, Church End, Finchley, N. 3, the wife of J. R. B. Dobson, M.B., B.S., of a son.

ROXBURGH.—On August 16th, at 19, Belgrave Crescent, Edinburgh, the wife of A. C. Roxburgh, M.B., M.R.C.P., of a son.

SMYTHE.—On August 7th, at 41, Southgate Street, Winchester, the wife of Gerald A. Smythe, M.D., of a daughter.

WOOLLEY.—On August 13th, at 67, Brunswick Place, Hove, the wife of Lieut. Col. J. M. Woolley, I.M.S., of a son.

## MARRIAGES.

CUTHBERT—MONTGOMERIE.—On July 14th, at Poona, India, Captain Edmund Sheppard Cuthbert, R.A.M.C., only son of Mr. and Mrs. Robert S. Cuthbert, Stapleton, Newmarket, to Noel Rose, Q.A.M.N.S. (India), youngest daughter of Mr. and Mrs. J. C. Montgomerie, 9, Walpole Gardens, Strawberry Hill, Middlesex.

HICKS—HICKS.—On July 30th, at All Souls Church, South Hampstead, by the Master of the Temple, Eric Perrin, son of Dr. William Mitchinson Hicks, F.R.S., and Mrs. Hicks, to Doris Margaret (Mollie), daughter of Mr. and Mrs. Arthur Hicks, of 113, Finchley Road, N.W.

MURRAY—HARDMAN.—On August 12th, at Holy Trinity Church, Darlington, by the Rev. T. L. Murray, Vicar of SS. Mary and Chad's, Longton, Staffs., brother of the bridegroom, assisted by the Rev. T. Anderson, Dr. Charles Stormont Murray, of 85, Gloucester Place, Portman Square, London, W., to Sylvia, younger daughter of Mr. Thomas H. Hardman and Mrs. Hardman, of Darlington, late of London.

WATTS—DUNHAM.—On August 7th, at St. Stephen's, Tonbridge, by the Rev. S. A. Martin, Harry John Manning Watts, M.R.C.S., L.R.C.P., of Salford House, Tonbridge, to Winifred Mary, second daughter of Henry Symes Dunham, of Bankside, Tonbridge.

## DEATHS

RHODES.—On August 5th, 1920, at 30, Brechin Place, S.W., Herbert Rhodes, M.B., M.R.C.P., aged 45.

HENSLEY.—On August 8th, 1920, at the Ark, Farnham, Philip John Hensley, M.A., F.R.C.P., M.D., late Fellow of Christ's College, Cambridge, and late Senior Physician, St. Bartholomew's Hospital, aged 81.

MORFORD.—On August 8th, 1920, the infant son of Arthur and Marion Morford, at 51, Kidderminster Road, Croydon.

## NOTICE.

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