

Experiments on Tropic and Secretory Nerves, the Formation of Pepsin in the Pyloric Glands and in those of the Fundus, and his Method of Isolating the Cardiac End of the Stomach in Order to Collect its Secretion. Together with Bubnoff he published Observations on Motor and Inhibitory Phenomena in the Motor Areas.

In 1883 appeared his classical essay, *Physiologie der Absonderungsvorgänge*, in vol. v of Hermann's *Handbuch d. Physiologie*. This is still a standard essay on this subject, and it contains an account of his researches on the salivary, pancreatic, gastric, and other glands. The whole series extends to over four hundred pages. His results are incorporated in every textbook on physiology. These essays record a masterly array of work dealing both with the physiological and the histological aspects of the question, and there stands out the pre-eminent fact that in all glands secretion is accompanied by characteristic structural changes. These essays embody the work he published on this subject in *Pflüger's Archiv* and in *Archiv für mik. Anatomie*. All students of physiology know how his researches on secretion have revolutionised our ideas on that subject. His researches on the kidney with indigo-carmin led to a material modification of the theory of urinary secretion.

About 1880 "animal magnetism," as it was then called, attracted his attention, and in that year he published his observations on the subject—*Der sogenannte thierische Magnetismus* (Leipzig, 1880). This work was translated into English under the direction of the late Dr. Romanes. Heidenhain was not aware when he wrote this work of the researches of Mr. Braid, of Manchester; and, in fact, many of Heidenhain's observations were confirmatory of those of the Manchester surgeon.

In later years came his now well-known researches on Lymph Formation (*Pflüger's Archiv*, vol. xlix, 1891), in which he attributed such great importance to the activity of the capillary wall as secretory organs. With this is linked his discovery of a very heterogeneous group of bodies, to which he gave the name of "lymphagogues." Although Heidenhain's secretory theory of lymph formation has been attacked by many observers—and even by one of his own pupils—the impulse which his remarkable observations gave to the reinvestigation of this subject has led to a great increase of our knowledge on this point.

Closely akin to this are his equally well-known researches on the Structure of Intestinal Villi (*Pflüger's Archiv*, vol. xliii, 1888), and Absorption from the Small Intestine (*Pflüger's Archiv*, 1894) and from the Peritoneum (*Ibid.*, 1896).

From his laboratory also have appeared that long and important series of studies, published in *Pflüger's Archiv*, on Hæmodynamics, by his assistant, K. Hürthle, while from the chemical department under Professor Rohmann has come a whole series of important memoirs, also published in *Pflüger's Archiv*, many of them dealing with ferment action, which at present is attracting so much attention.

Throughout the whole of Heidenhain's researches we have exemplified the value of conjoint histological, chemical, and more purely physiological work, the one serving to elucidate the other.

It is easy to trace in the series of investigations above quoted how Heidenhain was led step by step to the study of the successive problems which he attacked so successfully. An interesting parallel might be drawn between the work of Ludwig and that of Heidenhain. At one time it might almost have seemed as if the mechanical theories of Ludwig on the secretion of urine and on lymph formation could no longer hold the field, but we are still far from being able to decide absolutely for the one theory or the other. Both attacked similar problems and by similar methods, but the inferences from the results obtained were as diverse as the personalities of the two observers.

Nor was the chemical side of physiological problems neglected. Heidenhain was an admirable example of an "all-round" physiologist who did not work in a limited groove, but had a wide and comprehensive grasp of his subject and directly by his own work and indirectly by that of his pupils added innumerable stones to the stately building of physiological science. He has left behind him numerous pupils in Germany, Russia, and England. Several of the younger English physiologists, for example, Starling and Shore,

studied under him, and some of them are carrying out investigations on problems which they commenced in his laboratory.

The loss of Heidenhain is a severe blow to physiological science, while to his numerous friends the loss will be felt as a very personal one, for he was of a loving kindly disposition, and attracted men unto him, not only by the admiration which his great abilities excited in younger men, but also by the genial traits of his fine and noble character.

EDWARD STAMER O'GRADY, M.B., F.R.C.S.I.,
Dublin.

It is with very deep regret that we record the unexpected death of this well-known surgeon. He died at his residence, Merrion Square, on Monday, October 18th, after a few days' illness. He complained of a cold on the previous Thursday, and was attended by Dr. Magrath, who was a neighbouring friend. He, however, was strong enough to go out each day, and even on Sunday paid visits in spite of a prohibition. He was so ill on Monday morning that he consented to see Sir George Duffey; but even then he almost refused to go to bed or to be confined to his room. He was found to be suffering from pneumonia, and he had in addition a very badly ulcerated throat. The heart was extremely weak, and as the day wore on he grew rapidly worse in spite of the most assiduous care of his physicians, and he breathed his last at 5 o'clock in the afternoon.

Mr. O'Grady's name has been much before the public of late in connection with the Mercer's Hospital troubles. It will be remembered that he and the rest of the staff were dismissed by the governors, and that he refused to seek re-election. He disputed their powers, and the whole question would have come before the courts at the next sittings.

Mr. O'Grady, who was the son of the late Edward Stamer O'Grady, of the 4th Dragoons, was born in Dublin in 1838. He studied in Trinity College, and graduated M.B. in the University of Dublin. Then he went to Paris, Berlin, Dresden, and Vienna, for the purpose of increasing his experience. He became Fellow of the Royal College of Surgeons, Ireland, in 1863, and was soon afterwards appointed a lecturer on anatomy in the Carmichael School of Medicine, Dublin. Later on he was appointed an examiner in the College, and he filled that position for many years.

Mr. O'Grady entered the profession in opposition to the wish of his relatives, and the ardent love of it which he then exhibited marked his subsequent career. When he became a hospital surgeon he threw himself into the work with great energy. He was a bold operator, and earned a high reputation throughout Ireland for his skill in this department. He did not enjoy a large practice, and indeed was independent of it, but he spent much time in his hospital, sometimes visiting the wards three or four times a day. No one who knew anything of him could fail to recognise his high sense of right and honour; and his dogged persistence in holding to the view which he believed to be right had much, perhaps, to do with the opinion of those who looked at him askance. He was a generous friend of the poor, and if his friendships in the profession were not many they were very true. The disputes at his hospital worried him a good deal, but he was full of confidence that when he got into court he would establish his right, and show that he at all events had done his duty fully. His death puts an end apparently to the legal side of the Mercer's trouble; but, however that ending may be desired, the public and the profession have lost a good surgeon and a man of high and unswerving honour.

LESLIE MILNE, M.D.

We regret to have to record the death of Dr. Leslie Milne, at Tulbagh Road, in South Africa. He was the eldest son of the Rev. A. J. Milne, LL.D., Fyvie, Aberdeenshire, was born in Kingston, Jamaica, in 1859; was educated at Fettes College and Edinburgh University (M.A., 1882), and Aberdeen University (M.B. C.M. 1886, M.D. 1890). For some years he practised in Forres, and on his leaving Forres for Rome he was entertained at a public dinner, and presented with a very valuable testimonial. For over four years he devoted himself in Rome to his profession, and was most successful; but his health failing him, he went to Cape Colony to try the benefit

of the climate there. In addition to professional work he bought a small fruit farm, and everything seemed to augur well for a full return of health and strength. Unfortunately, after a hard day's work, he was seized with an attack of intestinal obstruction, which carried him off in three days, at the early age of 38.

DR. JAMES BUNTON BARR, M.B., C.M., of Port Glasgow, died there on October 10th, in his fifty-third year. He was the son of a Lanarkshire farmer, and at first studied for the ministry, for which, indeed, he qualified before finally taking to medicine. He was a prominent citizen of Port Glasgow, of the School Board and Parochial Board of which he had been a member. He was also Surgeon to the local company of Rifle Volunteers. He is survived by a widow and family. At the funeral, which took place on October 13th, representatives from the various societies and orders with which the deceased was connected, were present.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON-CAPTAIN, on leave in England from Hong Kong, will exchange, to remain at home.—GIB, 2, Victoria Mansions, Western Parade, Southsea, Hants.

THE NAVY.

THE following appointments have been made at the Admiralty: HERBERT P. SHUTTLEWORTH, Staff-Surgeon, to the *Daphne*, October 21st; JAMES J. WALSH, M.B., Staff-Surgeon, to the *Edgar*, October 21st, and to the *Archer*, undated; RICHARD L. PRICE, M.B., Surgeon, to the *Edgar*, October 21st, and to the *Linnet*, undated; PATRICK W. MACBEAN, M.B., Surgeon, to the *Edgar*, October 21st, and to the *Peacock*, undated; THOMAS C. MEIKLE, M.A., M.B., and HUGH BURNISTON, M.B., Surgeon, to Hong Kong Hospital, October 21st; CHARLES J. E. COOK, Surgeon, to the *Active*, October 21st; JEROME BARRY, M.D., Surgeon, to the *Impregnable*, October 21st; WILLIAM L. MARTIN, Surgeon, to the *Northampton*, October 21st; MOYLE BRETON, Surgeon, to the *Spider*, October 21st; JOHN C. G. REED, Surgeon, to the *Rodney*, October 21st; M. JOHN C. MICHELL to be Surgeon and Agent at Lynmouth, October 14th.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL R. BLOOD is appointed to officiate as Principal Medical Officer Sirhind district, *vice* Surgeon-Colonel E. Townsend, M.D., appointed Principal Medical Officer Mohmand Field Force.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL F. A. SMYTH, Bengal Establishment, is appointed to officiate as Principal Medical Officer, Peshawur District, *vice* Brigade-Surgeon-Lieutenant-Colonel G. McB. Davis, D.S.O.

Brigade-Surgeon-Lieutenant-Colonel G. MCB. DAVIS, D.S.O., Bengal Establishment, P.M.O. Peshawur District, is appointed to officiate as P.M.O. Lahore District, *vice* Surgeon-Colonel G. Thomson, C.B., M.B., appointed Principal Medical Officer Malakand Field Force.

All the medical officers belonging to the Indian Medical Service now on leave at home have been recalled to duty, with the exception of those who are about to retire on the completion of their leave.

It is announced from the India Office that an examination for appointments to the Indian Medical Service will be held in London in February.

THE VOLUNTEERS.

SURGEON-LIEUTENANT E. M. CALLENDER, 12th Middlesex (Civil Service) Rifles, is promoted to be Surgeon-Captain October 20th.

THE TIRAH EXPEDITIONARY FORCE.

SINCE the Afghan war 1878-80 no such complete or extensive medical mobilisation has taken place as that for the Tirah Field Force. The arrangements made by the Principal Medical Officer of Her Majesty's Forces have received the approval of his Excellency the Commander-in-Chief, and are published in pamphlet form at headquarters for general circulation. The force consists of (a) the main column, consisting of the First and Second Divisions, each division having two brigades and divisional troops; (b) the Peshawur Column; (c) the Marai-Zera Force; (d) the Kurram Movable Column; (e) the Rawal Pindi Reserve Brigade. The following Principal Medical Officers are sanctioned: For the Army Staff, Surgeon-Colonel (with temporary rank of Major-General) G. Thomson, C.B., I.M.S., with Surgeon-Major W. A. Morris, A.M.S., as Secretary. For the First Division, Surgeon-Colonel E. Townsend, A.M.S. For the Second Division, Surgeon-Colonel G. McB. Davis, D.S.O., I.M.S. The Line of Communication, Brigade-Surgeon-Lieutenant-Colonel W. E. Saunders, A.M.S. The Peshawur Column, Brigade-Surgeon-Lieutenant-Colonel R. G. Thomsett, A.M.S. With the Marai-Zera Force the Senior Medical Officer will conduct the duties of Principal Medical Officer. The Kurram

Movable Column has Brigade-Surgeon-Lieutenant-Colonel W. R. Murphy, D.S.O., I.M.S. The Pindi Reserve Brigade, while at Rawal Pindi, will have the medical administrative duties carried out by the Principal Medical Officer of the district; and, if the Brigade moves forward, the administration will come under that of the Principal Medical Officer of the force to which it may be attached. Most of the field hospitals have already been equipped, with the exception of a few to be mobilised at various Indian stations. General hospitals are to be established as follows:

No. 1	British of 500 beds at	Rawal Pindi.
No. 2	" "	100 " Nowshera.
No. 3	Native of 500 "	Pindi.
No. 4	" "	150 " Nowshera.
No. 5	" "	200 " Kohat.

The general hospitals at Pindi will receive the sick and wounded, British and native, from the First and Second Divisions, and the British sick from the Kurram Column. The general hospitals at Nowshera will receive the sick and wounded from the Peshawur Column, and the Native General Hospital at Kohat will receive the native sick and wounded from the Kurram Column and the Marai-Zera force. Various hospitals are established on the line of communications and a rest depot hospital (European privates' tents) is to be formed at Kushalpur, and also one at Gumbut if deemed necessary, to receive both British and native troops and followers. Field medical store depôts. No. 1, already equipped and attached to the Malakand field force, will supply the medical units of the First Division; and No. 2, Field Medical Store Depot, mobilised at Meean Mir, will supply those of the Second Division. Both depôts will be provided with a special reserve of 100 lbs. of quinine, and will be moved forward under orders issued by the Quartermaster-General. All field hospitals detailed for the expeditionary force, with the exception of those on the lines of communication and in the reserve brigade which will be supplied with tongas and dandies, will be equipped with riding mules or ponies (with saddles) and dandies. The force will move along Pindi, Kushalpur, Kohat, Haugu, and Thul. There is a tonga road to Kohat some thirty miles. The line of communications will be some fifty miles beyond Kohat to the foot of the Samana range. Tirah is a high plateau of very difficult access. The passes are difficult, and wheeled transport cannot go much beyond Kohat.

No. 11 British Field Hospital mobilised at Lucknow proceeded to Kohat on September 30th; the following officers of the Army Medical Staff are attached for field service: Surgeon-Lieutenant-Colonel S. H. Carter, in medical charge, and Surgeon-Captains Trotter, Withers, and Morphew.

THE NEW WARRANT.

QUALIS AB INCEPTO writes: I have always maintained that the fixed policy of the War Office is to keep the Medical Department in an undefined, anomalous, and, if possible, ridiculous position. The titles foreshadowed in a supposed new warrant show a continuance of this unworthy policy: such a title as Surgeon and Captain is preposterous. Imagine a man announced as Surgeon and Colonel Jones! Two individuals would naturally be looked for. The messes would be delighted with the fun of it. Truly the fatuity of the authorities should be knocked out of them by an indignant public. What ought to be a flourishing department goes begging for recruits. The Secretary of State for War should think for himself, and not with the brains of his military advisers. The cry goes forth, Make the "good doctors" the butt of all and sundry at the sweet will of the heaven-born combatant! I have seen the surgeon of a regiment treated in the ante-room of a mess with the utmost indignity by a bumpitious subaltern, who was all deference to the captain of his company. So much for rank. I maintain that what is needed is the resignation of the so-called "Reserve," which would bring the matter before the public, and the authorities to their senses.

MEDICO-LEGAL.

RECOVERY OF CHARGES.

E. P., writing from Ireland, inquires as to the best course to be taken by him for the recovery of fees for attendance on the wife and family of a gentleman who resides in India.

"* Our correspondent, we gather, expects some difficulty in the matter, the gentleman declining to recognise his responsibility for the debt. We have no doubt that the practice in Ireland is similar to that in England, and that our correspondent might commence proceedings in the proper court in Ireland, and make application, which will be of a special nature, for service of the writ on the defendant out of the jurisdiction. If and when judgment is obtained, such judgment could, we believe, be enforced in India in a summary manner. It is not impossible that the defendant may defend the action on the ground which we understand he has taken up; but, unless he had given sufficient notice that he would not be responsible for his wife's debts, we doubt if such defence could be successfully maintained.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

PROFESSORSHIP OF PATHOLOGY.—The Electors to this Chair will meet on Saturday, November 6th, at Downing College Lodge, for the purpose of filling up the vacancy caused by the death of Professor Roy.

ADDENBROOKE'S HOSPITAL.—Mr. E. H. Douty, M.B., having found it necessary on account of the state of his health to resign the office of Assistant-Surgeon to the hospital, a vacancy has been declared. The nomination of candidates, of whom four or five have already announced