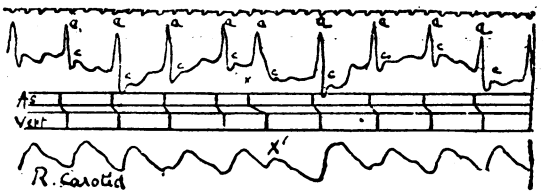
simultaneous contraction of auricles and ventricles. This type of pulse is one variety of the so-called bigeminal pulse. Though the abnormal extra-systoles reach the pulse they are considerably smaller than normal, and are followed by a considerable pause.

In the last two tracings the extra-systole originated in the ventricle; in Tracing X a too early contraction of the auricle gave rise to a premature contraction of the ventricle. This tracing came from a case of mitral stenosis.



Tracing No. X.—Auricular extra-systole. The carotid extra-systole x^1, which corresponds in the jugular tracing with the mark *c*, is preceded by a large *a* wave, due to an auricular extra-systole.

At x^1 there is a premature and smaller beat in the carotid artery. This might be due to the fact that either the ventricle itself has generated a premature impulse or that the ventricle has the stimulus to contract conducted to it from a premature auricular beat. We find that the distance from the ordinate of the carotid to x^1 falls exactly at the beginning of the small *c*. This gives us the time of ventricular systole. Just previous to that there is a very big wave which can only be due to the contraction of the auricle. The jugular pulse shows that the *a* waves rise with perfect regularity, except at this particular spot, where the contraction of the auricle has occurred too soon. The sequence of events can be more easily understood from the interposed diagram. I have indicated the extra-auricular systole at *x*. This is followed at a considerable interval by the small contraction of the carotid at *c*. The interval of time occupied by the passage of the stimulus from the auricle to the ventricle is in the case of the extra-systole considerably longer than normal, owing to the fact that the too early auricular systole finds the conducting fibres of the auriculo-ventricular bundle in a resting or refractory condition, and the stimulus conduction is delayed. Further, the interval of time occupied by the extra-systole and the previous normal contraction is less than the interval of time occupied by two normal contractions, in contradistinction to the long compensatory pause which I pointed out in the case of a ventricular extra-systole.

Whenever an extra-systole occurs, it means that the muscle is in an unduly excitable condition. It means, further, as in the examples I have shown you, that the auricle or ventricle contracts prematurely in response to impulses other than the normal. It has been suggested that these abnormal impulses have their origin in the bundle of His, and therefore that they may arise in the auricle, in the node of tissue between the auricle and the ventricle, and lastly in the ventricle itself. One frequently meets with extra-systoles in elderly people, and it has been suggested that in these cases the heart muscle is made more excitable from lack of proper blood supply, due to thickening of the coronary arteries. In old people extra-systoles, apart from signs of heart failure, have no particular significance. They have no sinister meaning unless they are discovered at a time when some particular call is being made upon the heart. If a patient with extra-systoles is attacked with a disease which causes fever and quickening of the heart-rate it is a favourable sign if, with the quickening of the heart, the extra-systoles disappear. I presume that in such a case the quickened heart-beat exhausts the irritability of the cardiac muscle, or at any rate that part of the muscle which gives rise to the extra-systole. The extra-systole occurs sometimes in dyspeptic and neurotic people, and is simply an evidence of the general lack of nervous control. Further, one meets with extra-systoles in young people in whom there is no rheumatic history and no cardiac sclerosis. I would sum up the significance of extra-systoles by saying that their presence has no serious import except when they occur in such diseases as pneumonia and rheumatic fever. In these conditions the heart muscle is involved in the disease process. In other cases the most serious result lies in the knowledge of the patient that he possesses an irregular pulse. He keeps feeling his pulse, and the irregularity fills him with unnecessary alarm.

I have endeavoured to show how by a graphic method we are able to unravel pathological conditions of the heart and to obtain a detailed knowledge of its mechanism which we previously did not possess. In fact, our ideas of heart disease are being revolutionized. Up to now too much attention has been paid to the valves and too little to the nervous and muscular components of the heart. As I said earlier, I believe that this recent knowledge of the heart's action will place our treatment of heart disease on a more exact basis. We must beware lest we are carried too far into the intricacies of a complicated mechanism like that of the heart, and place too much importance upon it; for, after all, the main question in any heart lesion amounts to this, What is the heart capable of doing? It is, however, always better to possess exact information rather than to work in the dark, and I have no doubt that with our more exact knowledge a more rational therapeusis will arise.

I take this opportunity of expressing my great indebtedness to Dr. Mackenzie for his help and encouragement, and to Dr. William Ritchie and Dr. John Cowan for their assistance in early difficulties. I thank also my colleagues at the Royal Victoria Infirmary for so readily placing their material at my disposal.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SALVARSAN.

I HAVE recently had the opportunity of using this preparation upon a badly syphilized pregnant woman, and the notes of the case may be of interest.

A woman aged 26 was admitted to the union infirmary on February 27th, 1911, seven and a half months pregnant. The mouth and throat were extensively ulcerated, the voice husky, there were gummata on the chin and cheeks, a typical rash all over the body, numerous condylomata on the labiae and around the anus, and a foul vaginal discharge. There was severe dyspepsia and continual vomiting. She was placed on liquid diet, put to bed, and treated with mercury perchloride internally and black wash to the condylomata. She improved generally, vomiting ceased, and all the local conditions were modified. On March 21st an intramuscular injection of salvarsan was given. Beyond a slight soreness in the injection area no discomfort was felt. On March 23rd the patient said she felt much better. On March 24th the vaginal discharge had quite ceased, and the ulcers in the mouth and pharynx were looking much healthier, as also were the condylomata. On March 30th the ulcers were quite healed, the condylomata nearly gone, and all soreness had ceased in the vagina and vulvae, the patient stating that she felt quite well. On April 7th she was delivered of a male child of fully average weight and in good condition. The skin on its face, hands, and soles of feet had a puckered, dry appearance, otherwise there was none of the usual conditions found in the newly-born syphilized child. From its birth there was desquamation, especially on the hands and feet, until the fifth day. On the seventh day the child's appearance was that of a perfectly normal and healthy infant, and there had been no sign of any tendency to ophthalmia. The placenta was dark, soft, and "rotten looking."

Although the mother showed the excellent effect of salvarsan, the interest of the case centres in the condition of the child, which but for the new treatment would no doubt have been born with the usual syphilitic lesions.

On the same day a dose of salvarsan was given to another badly syphilized woman. She had been under mercurial treatment at intervals for several years, and had got steadily worse. On admission she was very emaciated. The soft palate was in a foul sloughing condition. She could barely swallow liquids and the voice was practically gone. Three days after the injection she could swallow. On the fourth day she could speak. Ten days after the pharynx and soft palate were healed, and on the twenty-fourth after the injection she appeared and felt quite well and had quite lost all appearance of emaciation.

Personally, I am disposed to think that the intramuscular method is preferable to the intravenous, at any rate in general practice.

Bishop Auckland. MARK WARDLE.

CONGENITAL ABSENCE OF ONE KIDNEY.

HAVING noticed in the issue for January 28th the report by Dr. J. Maughan of a case of congenital absence of one kidney, I beg leave to record a similar abnormality.

In July, 1907, I made a *post-mortem* examination of the body of a male Mozambique Kaffir, aged about 30 years, who had died of pneumonia in the compound hospital of the South Geldenhuis Deep Mine at Germiston, Transvaal. The right kidney lay unusually far over to the left, the upper end coming quite across to the mid line, and the hilum looking almost downward. On removal it was found to be very large. The upper part was enlarged so that about three-quarters of the bulk of the organ lay above the ureter. The posterior lip of the hilum was very prominent. The pelvis and ureter were both large. But for cloudy swelling the organ was otherwise healthy.

The left kidney was absent, and also the left suprarenal, and there were no left renal vessels. The lower end of the left ureter was present and had a lumen in part of its length. Just above the point where it crossed the iliac vessels it became a fibrous cord, and this tapered off till two or three inches higher up it lost its identity, becoming merged in the areolar tissue over quadratus and psoas.

The subject of congenital absence of a kidney is mentioned by Greenfield (*Pathology Lectures*, 1904), who indicates that the condition is not of surpassing rarity. It would be unfortunate if a person thus defective were unwittingly subjected to nephrectomy. For this, then, as well as other reasons, one should determine the renal activity of both sides of the body by means of the Luys's segregator, or otherwise, before surgically interfering with any kidney.

Eketahuna, N.Z. J. P. S. JAMIESON, M.B., Ch.B.Edin.

PAROXYSMAL PULMONARY OEDEMA.

I READ with interest the article (231) in the EPITOME of the BRITISH MEDICAL JOURNAL of April 22nd on paroxysmal pulmonary oedema. I have a case under my care which corresponds closely to the description given.

A married lady aged 46 has a history of frequent attacks of "asthma" (?) for the last two years; during these attacks she was unconscious, and had a great amount of frothy blood-stained fluid coming from the nose and mouth. I saw her first in a typical attack about two months ago. She was quite unconscious, had a high degree of cyanosis, much bloodstained frothy fluid coming from the nose and mouth. I promptly gave her ¼ grain of morphine hypodermically, and applied a hot linseed poultice to the chest. She recovered consciousness in about half an hour. Next morning the temperature was 100·7° F., respirations 35, pulse 100. The cardiac sounds were normal except that the aortic second sound was accentuated. The urine was pale, specific gravity 1010, slightly albuminous. The morning after she got up and was apparently quite well. The urine was normal, specific gravity 1020, and contained no albumen.

Within the next fortnight she had three attacks of much the same severity. During the next month she had four attacks of dyspnoea, but with no sign of oedema. Lately she has been taking a mixture containing potassium iodide and tincture of digitalis, with a dose of sal volatile when an attack threatens.

At first I thought she was suffering from cardiac or renal asthma, but that was quickly disproved. Later I attributed the oedema to the high blood pressure she occasionally suffered from. I intend to try a small hypodermic injection of adrenalin if she has another severe attack.

Liverpool. OLIVER CARLYLE, F.R.C.S Edin.

MEDICAL AND SURGICAL APPLIANCES.

Fine Pencils of CO_2 Snow for General Practice.

DR. JOHN ASTON SWINDALE (Whitchurch) writes: The various forms of apparatus for CO_2 snow look cumbersome and complicated, and are somewhat expensive. It is necessary that the outfit be as portable as possible, and the initial outlay is a consideration, as also is the time entailed in packing up and sending empty gaskettes or cylinders for refills. The Prana apparatus answers our purpose very well (Aërators, Limited, Upper Edmonton, N.). It costs £2 10s. and packs into a box 11 in. by 3½ in. by 5 in.; the gaskette costs 6s. and is also most portable and light, length 16 in. by about 1½ in. Both are easily carried in the ordinary bag. It is a good plan to have three gaskettes. Two can go up for refills together at 6d. each and the train fare; the other remains behind for work. Full instructions as to fitting the parts together are supplied with each outfit. In fair-sized port-wine stains, and most naevi, the pencil obtained with this apparatus is of efficient size, and quite satisfactory. But as it is friable and cuts and pares badly, it is not so useful for small moles and other blemishes, or for small naevi. To treat such cases one feels the need of a very small-bored and flat-ended hard pencil of the snow, and so I had the little apparatus made shown in Figs. 1 and 2.

Fig. 1.

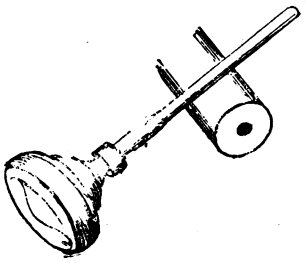


Fig. 2.

Fig. 1 represents a section of solid steel bar, about 3 in. in height and 1 in. in diameter. It is carefully funnelled at the top end to a depth of nearly 1 in., the other end being quite flat, so that it stands easily on any flat surface. A hole is bored completely through to the desired size—namely about that of the end of a fine penholder. In Fig. 2 is shown the plunger, a steel rod, accurately fitting the hole, and mounted on a comfortable handle, with good grip. After the snow has been prepared, enough of it is placed in the cuplike funnel to fill it completely. It is then cleared from the sides of the funnel with a spatula and forced down bit by bit with the plunger. The resisting power at the other end being the base cap of the Prana apparatus, a piece of stout metal or glass, or a firm table. If a pencil of somewhat larger or smaller bore be required, all that is necessary is to make use of one or two more sections of the bar, the same plunger handle could be made to act by screwing the new rods into it.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

WESTMINSTER HOSPITAL.

ULCERATIVE COLITIS AND THE BACILLUS PYOCYANEUS.

(Under the care of Dr. DE HAVILLAND HALL.)

[Reported by ALFRED BERNSTEIN, M.B.Lond.]

THE following case is recorded on account of the obscurity of the etiology of the disease:

Margaret H., aged 32, admitted to Westminster Hospital on April 6th, 1910.

Complaint.—Pains in the abdomen and blood in the stool.

Family History.—Father died of consumption; nothing else notable.

Previous History.—Always good health, except slight dyspepsia. Bowels regular. The patient had never been abroad.

Present Illness.—At the beginning of March, 1910, the patient first noticed blood in the stool. She then had diarrhoea for two weeks with several attacks of severe pain in the abdomen daily, which made her lie down. She had nausea, but no vomiting and no headache, and went about her work. Since about March 23rd she had only taken beef-tea for food.

Condition on Admission.—Moderately nourished; teeth fair; tongue coated. Abdomen soft; some tenderness and pain in left iliac region. Per rectum *nil*. Chest *nil*.

Course.—On April 8th the stools contained much blood and pus. In the first twenty-four hours there were twelve motions, chiefly blood. On April 14th distinct pieces of mucosa were mixed with the blood and pus. The stools were much less frequent and smaller, but the patient was weaker and paler. On April 16th the blood was in clots and darker. On April 19th it

interesting little monograph, *Report on Epidemic Cerebro-spinal Meningitis in India*, Calcutta, 1906. For the past five years he had been Superintendent of the Central Lunatic Asylum for natives at Barhampur, better known to English readers as Murshidabad, the old capital of the Mussulman kingdom of Bengal. He was also the author of the *Bengal Lunatic Asylums Manual*, Calcutta, 1910, and contributed the chapter on insanity to the last edition of Lyon's *Medical Jurisprudence for India*.

Major Milne's father was also an officer of the Indian Medical Service—Surgeon Robert Moir Milne, who died of cholera at Benares on August 11th, 1875, after less than ten years' service. Major Milne had lately been much affected by the unexpected loss of his wife, who died in Edinburgh on February 22nd, 1911, and, when attacked by a severe type of enteric fever, he had no desire or power to make a struggle for his life.

The Bengal Medical Service has been hit very hard by the hand of death in the last few months, having lost four officers, all much above the average in attainments and reputation: Colonel J. A. Cunningham on December 31st, Lieutenant-Colonel J. W. T. Leslie on March 27th, Major G. Lamb on April 11th, and now Robertson-Milne.

Universities and Colleges.

UNIVERSITY OF OXFORD.

Degrees.

THE following were among the degrees conferred on May 27th:

M.D.—A. S. MacNalty, H. L. Tidy.

Lectureships.

Mr. A. P. Dodds-Parker, of Magdalen College, has been re-appointed University Lecturer in Applied Anatomy for three years from October 10th, 1911; Dr. W. Tyrrell Brooks has been appointed to the Litchfield Lectureship in Clinical Medicine, and Mr. D. L. Chapman, of Jesus College, has been approved as an Examiner for the Diploma in Public Health.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—H. P. Crampton, C. Roper.
M.B.—C. K. McKerrow, K. Pretty.
B.C.—C. K. McKerrow, J. Van Schalkwijk.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.

Lectureship in Genetics.—At a meeting of the University Court on May 18th, it was resolved, on the recommendation of the Senatus, to institute a Lectureship in Genetics, and Mr. A. D. Darbishire, M.A., was appointed to the office of Lecturer, and it was arranged that a course of six lectures on Heredity should be given by Mr. Darbishire during the current summer session, the course to be free to all matriculated students.

Examiner in Surgery.—Mr. A. A. Scot Skirving, M.B., F.R.C.S.Edin., was appointed an additional Examiner in Practical Surgery.

Grants for Research.—Grants recommended by the Senatus from the Earl of Moray Endowment for the promotion of original research were approved.

Rectoral Election.—The next rectoral election was fixed for October 28th, 1911. The candidates are the Earl of Crewe and the Earl of Minto.

Recognition of Teachers.—Recognition was granted to the following extra-academical teachers in the Natal University College for purposes of graduation in medicine: (1) Professor J. W. Bews (botany); (2) Professor R. B. Denison (chemistry, certificate to include elementary inorganic and practical inorganic and elementary organic and practical organic).

Students' Representative Council.—Alterations proposed by the Students' Representative Council in the constitution and laws of the Council were approved.

Professor Chiene.—The gift of a bronze replica of a silver medallion, presented to Professor Chiene by his old house-surgeons, was accepted with thanks. A letter from the honorary treasurer of the Chiene Portrait Fund was read, intimating that the Executive Committee of the fund had resolved to hand over to the university the balance of the fund, amounting to between £310 and £320, to form a fund to provide a bronze medal, to be called "The Chiene Medal in Surgery." The court resolved to accept administration of the fund.

THE report of the Nightingale Fund for 1910 shows that the year ended with a satisfactory balance on the right side, and that nurses trained at the school of the fund at St. Thomas's Hospital continue to carry off a considerable proportion of the vacant appointments at different institutions. The report also records the retirement of Dr. Sharkey after eighteen years' valuable service to the fund as lecturer on medical subjects and in other capacities.

Medical News.

THE dinner of the Durham University Medical Graduates' Association will be held at the Imperial Restaurant, Regent Street, W., on Saturday, June 17th. The President, Dr. J. Inglis Parsons, will take the chair at 7.30 p.m.

THE American Breeders' Association, which has its head quarters at Washington, has recently turned its attention to the consideration of questions relating to the deterioration and improvement of the human race by the neglect or adoption of methods practised in the breeding of animals. The association includes three sections, which respectively concern themselves with the breeding of plants, animals, and men. President Jordan, of Stanford University, is the chairman of the section of eugenics. This section has four standing committees—one on the heredity of insanity, of which Dr. Adolph Meyer, of the Johns Hopkins University is chairman; one on the heredity of feeble-mindedness, presided over by Dr. A. C. Rogers, Superintendent of the Minnesota Institution for the Feeble-minded; one on the heredity of epilepsy, of which Dr. M. W. Ballard is chairman; and one on the heredity of criminology, of which the chairman is Dr. Charles R. Henderson, of the University of Chicago. The Association publishes a quarterly journal entitled *The American Breeders' Magazine*.

A MOST enjoyable entertainment took place at the Natural History Museum, South Kensington, on the evening of May 30th, when the Royal Society of Arts held a *conversazione* for some fifteen hundred guests. The chairman, Sir John Cameron Lamb, C.B., C.M.G., and other members of the council received their visitors in the central hall, where an excellent selection of music was played by the band of the Royal Artillery, whilst a vocal and instrumental concert was given in the shell gallery, and a miscellaneous programme of dancing, recitations, and music was provided in the fish gallery under the direction of Mr. Patrick Kirwan. A remarkable feature of the reception was the large proportion of visitors from the overseas dominions to be observed among the guests, who included the Raja Dhiraj of Shapura, the Raj Kumar Sardarsing of Shapura, the Sirdar Charanjit Singh of Kapurthala, and the Tikka Saheb and Saheba of Nabha; whilst the Portuguese Minister, Sir Herbert Maxwell, Colonel Sir David Bruce, Judge Rentoul, Professor Luigi Ricci, and Sir William Crookes were amongst those who put in an appearance during the course of the evening.

THE spring dinner of the Glasgow University Club in London took place at the Trocadero on May 26th, and brought together about 150 members and guests. The chairman of the evening was Professor J. M. Thomson, now of King's College, who in the course of a sketch of the progress of the university claimed that his connexion with it probably constituted a record, for having been born in the Old College buildings he entered the university on the day of his birth, March 7th, 1849. The Universities of Oxford and Cambridge were of a special kind, and did their work admirably, but otherwise education was much better carried on in Scotland than in England. In the former country there was close relationship between the high schools and the universities. The latter were founded for the people, appealed to the people, and kept themselves in close contact with the people down to the peasant on the land. The small band of men who founded University College in Gower Street included many Scotsmen, and it was intended to be a Scots college in London. For a plan they unfortunately went to Edinburgh instead of Glasgow, and but for this fact King's College, to which he now belonged, would probably never have been called into existence. It was a pity that the old B.A. degree at Glasgow in languages and philosophy had been abolished; it only required two years' work, and was a much better preparation for after-studies than a matriculation examination. The correlation between the medical faculty and the Royal Western Infirmaries was a matter for congratulation. So, too, was the correlation recently sanctioned between the university and the West of Scotland Technical College. Professor Thomson also mentioned that the Glasgow Club in London now numbered over 300 members. During the course of the evening Dr. C. L. Hawthorne proposed a toast to Dr. W. Walton Don, who is about to retire from the office of treasurer after having rendered seven years' service. The toast having been duly honoured was suitably acknowledged by Dr. Don.