

A SPECIAL CRUTCH FOR MEN WHO HAVE LOST BOTH AN ARM AND A LEG.

BY
R. LANE JOYNT, LIEUT.-COLONEL R.A.M.C.,
DUBLIN.

The accompanying illustrations show a crutch designed by me for a man who has suffered a double amputation (Figs. 1 and 2). He has lost the left leg below the knee, and the left arm at the surgical neck of the humerus, so that there is no axilla capable of bearing weight on that side. The appliance enables a man so disabled to move about either while he is waiting to have an artificial leg fitted or when he is tired of using the new leg.



FIG. 1.—Crutch for loss of left leg and left arm; the patient standing beside it.



FIG. 2.—The patient using the crutch.

The appliance consists of two crutches of the bifurcated type morticed into one axillary piece in the form of the letter A. The crutch, on the side on which the leg is lost, slopes more than that on the sound side and its timbers are morticed inside the latter (Fig. 3). Cross-bars of wood complete the horizontal part of the letter A, but project to the outer side of the more sloping crutch to form, with a curved aluminium plate, a shelf on which the man places his flexed leg stump. The two crutches are braced together above, and a steel wire truss takes up the side strain on the more sloping crutch. A handle is fitted in the usual place on the sound side. The legs of the crutch are two feet apart at their base.

In use the man places his stump on the shelf and swings

his sound leg between the crutch legs. No weight need be borne on the axilla of the sound side.

The total height of the appliance should be at least two inches less than that of ordinary crutches intended for a man of the same height. This is necessary to enable the man, by fully straightening his sound leg, to lift the crutch forward clear of the ground. A man with only one hand can stand on the appliance and remove his hand from the handle to open a door, or use his hand for other purposes. If the patient has lost an arm on the opposite side to the leg, the handle is placed outside the stump shelf, the axillary piece of the crutch being on the armless side, not necessarily carrying any weight.

Both types are being used in the Duke of Connaught's Hospital for Limbless Soldiers at Bray, co. Wicklow, for

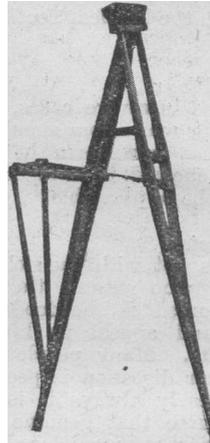


FIG. 3.—Crutch for loss of left leg and either arm.

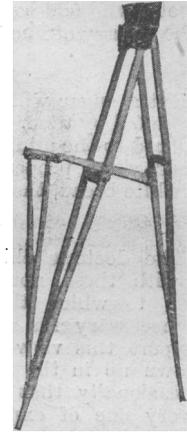


FIG. 4.—Extemporized crutch for loss of left leg and either arm.

double amputations as well as for cases of crutch paralysis.

For emergency work the appliance may be rapidly constructed, as shown in Fig. 4, by lashing together two strong bifurcated crutches with the head of one crutch below the other; a few pieces of timber lashed crosswise serve to brace them firmly and by their projecting ends to form the shelf. Vertical pieces of timber lashed from the shelf to the foot of the more sloping crutch relieve the side strain.

It is made by Messrs. Smith and Sheppard, of St. Stephen's Green, Dublin, in its various forms, and the following measurements should be given: Height from sound axilla to ground, height from sound axilla to middle of sound hand, height from perineum to ground, and state which arm and leg are lost.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TOXIC JAUNDICE: ATROPHY OF LIVER: REGENERATION AND RECOVERY.

The observations of Dr. Crawford (p. 450) on the recuperation of the liver tissue after an attack of toxic jaundice caused by the action of T.N.T., agree closely with those which I have been able to gather at another big filling factory.

Of the number of cases reported since notification came into force we have 33 still remaining at work with us. Ten of these were notified erroneously and there is doubt as to the nature of a further three; but the remaining twenty were apparently cases of true toxic jaundice. I have made a full examination of all these within the last six weeks. I am not able to say in every case to what extent the area of liver dullness was diminished during the attack, as in the early days of the factory the patients were allowed to go to their own homes about the country for treatment; but when I made this examination, from six to eighteen months after their return to work, the fact was marked that they did not show diminution in the area of liver dullness nor interference with nutrition or the digestive functions.

The most noticeable thing about some of the cases is that though the liver seems to have recovered they show signs of deterioration of heart muscle, with inability to undergo sustained exertion, and general signs of heart distress—in fact, they present the same picture as those workers who have suffered from severe toxæmia without jaundice, and my experience here is that those workers who recover from toxic jaundice do not afterwards suffer from damage to the liver function so much as they do from degeneration of heart muscle. I feel that the toxæmia is the general affection, and that jaundice is an accidental symptom in certain cases, determined by some at present unknown cause in certain of the victims of toxæmia. One very general feature is the complaint for the first few months after convalescence of pain in the right side, either over the liver area—front or back—or in the abdomen just to the right of the umbilicus.

I note with interest Dr. Crawford's statement that in her cases the motions were not completely bile-free; this, to my mind, should be a common sign in toxic jaundice, owing to the fact that some of the liver tissue is operative, and that the bile ducts are not occluded. My experiences also coincide with Dr. Crawford's statement that cyanosis is not a necessary antecedent to toxic jaundice, many cases showing no signs of it when the first tinge of yellow showed in the sclerotics.

Chilwell, Notts.

W. BOWER, M.A., M.B., B.C.

A WAX THERMOMETER PRIMARILY DESIGNED FOR USE IN HOT-AIR STERILIZING CHAMBERS.

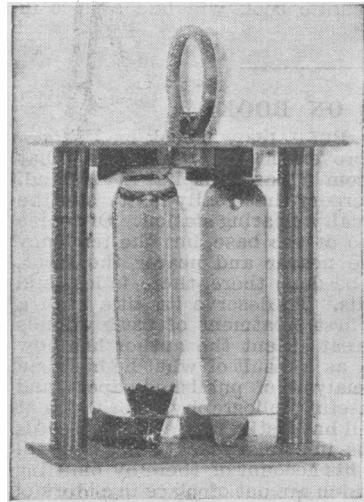
The thermometer here shown is intended to be introduced with each batch of clothing. It consists of a metal frame provided with two sets of spring clips, into which fit two glass bulbs—large vaccine ampoules do admirably—the one containing wax melting at the minimum temperature adopted for sterilization, the other wax melting at a temperature beyond which it would be dangerous to expose clothing. In each bulb are a few small black glass beads.

The bulbs are placed in position beads uppermost, and after use, when the wax has rehardened, are slipped out and put back again with the beads at the top end.

Since at the required temperature the wax in the bulb takes ten minutes to melt, the deposition of the beads at the bottom of the bulb indicates, for instance, in the case of the minimum bulb, that this temperature has been

reached and maintained for, at any rate, this length of time.

In order to ascertain what reliance might be placed upon the sterilizing effect on lice and their eggs of a temperature of 60° C. maintained for ten minutes, experiments were very kindly carried out by Mr. A. Bacot, of the Lister Institute, both upon lice and their eggs exposed in this manner in a hot-air sterilizing chamber in France, and subsequently dispatched to London for the determination of their viability, and upon lice and eggs similarly



From a photograph of the thermometer.

exposed by Mr. Bacot himself. In each instance the experiment proved that an exposure at 60° C. for ten minutes is lethal to lice and their eggs.

With this knowledge, therefore, a wax melting at not less than 60° C. may be adopted for the minimum bulb, and a wax melting at a temperature not higher than 75° C. or 80° C. for the maximum bulb.

This thermometer is, in essence, an adaptation of Bacot's idea of placing dishes containing wax in hot-air sterilizing chambers, and I take this opportunity of expressing my best thanks for the keen interest he has taken in this appliance during the testing of its practicability.

I wish also to express my thanks to the O.C. — Army Wireless Company, R.E., in whose workshop the original model was made; to Captain W. H. Smith, R.F.C., for the excellent photograph; and to Captain Jacobs, R.A.M.C., for opportunities for testing the appliance in the hot-air sterilizing chambers he has designed.

Note.—Care must be taken to ascertain by actual trial in the bulbs if the wax supplied by the makers complies with the indicated melting point. If necessary, suitable adjustments should be made by mixing waxes of different melting points.

E. EMEYS-ROBERTS, M.D.,
Captain R.A.M.C.

FRACTURE OF INTERNAL CONDYLE OF HUMERUS BY MUSCULAR ACTION.

PRE. R., aged 29, jumped from the ss. —, while she was sinking, on to the deck of a rescuing ship. To break his fall he caught a tightly stretched rope with his left hand, and as he gripped it, felt a sudden pain in his "crazy bone." He did not fall, but landed on his feet with his arms above him holding on to the rope, and is quite certain that nothing hit his elbow. The radiograph showed a separation of the internal condyle, undoubtedly due to muscular action of the flexors of the wrist. At the present time, three months after the fracture, the separated

condyle is displaced downwards, firmly adherent to the humerus, and the joint movements are perfect. All the man complains of is a continuous dragging pain at the site of the fracture. The reattached condyle is very tender to touch, evidently due to injury or implication in callus of the ulnar nerve, although there is no anaesthesia below the elbow.

GERALD LAWRENCE,
Captain R.A.M.C.

Reviews.

AMERICAN ADDRESSES.

IN the autumn of 1917 Sir BERKELEY MOYNIHAN gave some addresses to American audiences, and he now publishes them under the not very perspicuous title of *American Addresses*.¹ The dedication is to G. W. Crile, and the preface indicates that they are intended for the use of American colleagues entering upon war conditions from which we have learnt, and unlearnt, many things. That three-fourths of the book is a summary, eclectic certainly, of professional war literature, the author candidly acknowledges when he says on the first page, "I have gathered a posie of other men's flowers." The paper called "The Causes of the War" might, indeed, well have been elaborated, for even if he cull others' blooms, Sir Berkeley is skilled in arranging the bouquet; he carries one in fancy to the native soil of the flowers. There is no question here of diplomacy or armaments or murders. It is the elemental question of Auramazda or Ahirman, freedom or tyranny, voluntary dedication or authoritative subjection.

"That one man," said Glanvill (*The Vanity of Dogmatizing*), "should be able to bind the thoughts of another, and determine them to their particular objects; will be reckoned in the first rank of *Impossibles*: Yet by the power of advanc'd *Imagination* it may very probably be effected." Sir Berkeley is all for imagination; says of it that "it is the scaffold upon which one stands to build the structure of truth," and thinks it is just because the Prussian state has found another means of binding men's thoughts and determining them to its sinister purposes, that we are at war. The German has deliberately perfected a system of education to mould the mind, from the cradle to the grave, into the conviction that expediency backed by power is "right." To none will the moral appeal more forcibly than to American citizens; where a fundamental ideal is at stake, compromise is out of the question; it must be a fight to a finish. American surgeons and, we believe, the whole people of the United States are in the war to see it to that finish.

The second paper, on "Gunshot Wounds and their Treatment," describes the bewilderment amid which aseptic surgery found itself suddenly out of its depth, with the art of swimming nigh forgotten; describes the recovery of old and the development of novel strokes wherewith to ride the flood. The story is well told in a manner adapted to the author's purpose. It seems doubtful if he has made clear enough the essential difference between the use of bipp and similar agents in wounds excised within six or eight hours of receipt, when the function is to inhibit the development of organisms; and their use in wounds not only "contaminated" but already "infected": in which the bacterial strains are already established.

The third study is on the treatment of injuries of peripheral nerves, which was published in full in our columns on November 3rd, 1917. The experience of some surgeons may dispose them to disagree with the author's dictum that "nerve anastomosis is to be sharply condemned." In cases in which a large defect precludes suture, the careful insertion of peripheral and proximal ends within the sheath of a neighbouring trunk has, we understand, been productive of a result that is, to say the least of it, better than none.

Two other papers, on gunshot wounds of the knee-joint, and of the lungs and pleura, give a good general account of the principles upon which more recent methods are based.

¹ *American Addresses*. By Sir Berkeley Moynihan, C.B., M.S., F.R.C.S. Philadelphia and London: W. B. Saunders Co. 1917. (Demy 8vo, pp. 143. 7s. 6d. net.)

Society and the presidency and vice-presidency of the Obstetrical and Gynaecological Section of the Royal Society of Medicine. He was also an honorary member of the Obstetrical Societies of Leipzig, Munich, Belgium, and Rome, and he was honorary president of the International Obstetrical and Gynaecological Congresses held at Amsterdam, Rome, Paris, and Berlin, and president of the British Section at the Congress at Petrograd. Dr. Macnaughton-Jones was a ready writer and a fluent public speaker. His work on *Diseases of Women*, in two volumes, reached its ninth edition in 1904, and the *Handbook on Diseases of the Ear and Naso-pharynx* passed through six editions. He was one of the founders and an early president of the first Branch of the British Medical Association formed in Ireland. At the annual meeting at Bath, in 1878, he was vice-president of the Section of Obstetric Medicine, and he held the same office two years later at the Cambridge meeting. He was for long one of the leading spirits of the Irish Medical Schools' and Graduates' Association, of which he was thrice president.

By the death of Dr. SEYMOUR H. MUNRO of Nantwich, at the age of 85, a fine example of the old school of country practitioners has passed away. He studied medicine at Edinburgh University, graduating M.D. in 1857, and took the L.R.C.S.E. diploma in the same year. Settling down in practice at Nantwich fifty-three years ago, his great energy and ability soon established his reputation and secured a large practice in the town and neighbourhood, whilst his kindness endeared him to his patients. Outside his profession he threw himself into every phase of public life; every movement likely to promote the welfare of the community or the good of the individual had his whole-hearted support. A lover of country life, an expert judge of horses, he was a familiar figure in the show ground and the sale yard, and his horsemanship is now a tradition amongst the people. He was for many years a justice of peace of the county, and took an active part in all magisterial duties. He leaves a widow, a daughter, and six sons, of whom two are in the profession—Dr. J. D. Munro, who succeeds him, and Dr. Ronald Munro of Northenden. The funeral service bore striking testimony to the esteem and affection in which he was held and the grief felt at his death.

THE LATE MR. GUY ELLISTON.—Mr. George C. Franklin, M.B.E., who was president of the Association when the annual meeting was held in Leicester in 1905, desires to add to the appreciations of Mr. Elliston, published last week, an expression of his recognition of the excellence of the arrangements made by Mr. Elliston for the week's work in Leicester and of his management generally. His loss, Mr. Franklin adds, will be most keenly felt by every member of the British Medical Association who knew him.

The Services.

ROYAL NAVY.

Deputy Inspector-General R. Gavin Brown, R.N., has been awarded a Greenwich Hospital pension of £150 a year in the vacancy caused by the death of Deputy Inspector-General Stephen Sweetman.

INDIAN MEDICAL SERVICE.

Temporary Rules for Accelerated Promotion.

Pending the resumption of normal conditions, the following rules shall govern the claims of officers of the Indian Medical Service to accelerated promotion:

(i) (a) Officers under twelve years' service at outbreak of war: Those who qualified in part, and those on study leave or combined study leave, who were recalled to duty, shall receive accelerated promotion with pay and position.

(b) Officers who have completed twelve years' service and over at outbreak of war: Those who qualified in part, or who were recalled from study leave or combined study leave, shall receive accelerated promotion with advantages of position but without back pay; provided that in the opinion of the Director-General, Indian Medical Service, such officers produce satisfactory evidence of their intention to have qualified fully before the expiry of sixteen years' service.

(ii) In the case of all other officers, the period within which they are required to qualify for accelerated promotion (that is, while in the rank of captain or within four years of their promotion to the rank of major) shall be extended by a period equivalent to the duration of the

war. Officers qualifying within the latter period shall receive exactly the same concessions as if they had qualified within the prescribed time.

Badges.

The introduction of a collar badge of the following description has been approved of for wear by officers of the Indian Medical Service with the service dress jacket in place of the departmental gorget patches which have been abolished:

Description.—An eight-pointed star encircled by a laurel wreath and surmounted by a Tudor crown. On the star, the garter and motto; within the garter, the rod of Aesculapius with a serpent entwined. Below the star, a scroll inscribed "Indian Medical Service."

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

At a congregation, held on April 26th, the following medical degrees were conferred:

M.D.—H. F. Marris.*
M.B., B.C.—R. French.
B.C.—H. W. Hales.*

* Admitted by proxy.

UNIVERSITY OF GLASGOW.

The degree of M.D. (with commendation) was conferred, on April 23rd, upon Margaret E. Robertson.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At an ordinary comitia on April 25th, when the President, Dr. Norman Moore, was in the chair, the following candidates were admitted as Members of the College:

Wm. John Hart, L.R.C.P.; Helen Ingleby, M.B.Lond., L.R.C.P.; George Carmichael Low, M.D.Edin.; Arthur Lisle Punch, M.B.Lond., L.R.C.P.; Walter Rupert Reynell, M.D.Oxf., L.R.C.P.; George Riddoch, M.D.Aberd.; Adam Niven Robertson, M.D.Edin.; Douglas Robert Chaplin Shepherd, M.B.Lond., L.R.C.P.; Eric Wordley, M.B.Camb., L.R.C.P.

The Censors Board recommended that the licence to practise be restored to Mr. Alfred Banks. Licences to practise physic were granted to 101 candidates who had passed the required examinations, having conformed to the by-laws and regulations. The following elections to the Fellowship of the College were made on the nomination of the Council:

Walter Broadbent, M.D.Camb.; Hugh James Moore Playfair, M.D.Lond.; Sydney Walter Curri, M.D.Camb.; Frederick Lucien Golla, M.D.Oxf.; Archibald Montague Henry Gray, M.D.Lond.; Harold Benjamin Day, M.D.Lond.; Alfred Ellington Stansfeld, M.D.Camb.; William Whiteman Carlton Topley, M.B.Camb.; Charles Hubert Bond, M.D.Edin.; Percy William Bassett-Smith, C.B.

Nominated by the Council under By-law LXXI, Regulation 3, and proposed to the College for election to the Fellowship:

Sir Walter Morley Fletcher, M.D.Camb., F.R.S.; Sir George Newman, K.C.B., M.D.Edin.

The President resigned the office of member of the Committee of Management, and appointed Dr. W. Hale White to succeed him. He informed the College of the names of the Fellows nominated to serve on the committee to consider the proposed Ministry of Health.

On the motion of Dr. H. Russell Andrews, it was resolved that a committee be appointed to consider questions arising out of the "twilight sleep" method.

On recommendations of the Committee of Management the Technical Institute, Newport, already recognized for instruction in chemistry and physics, was recognized for instruction in biology; Brighton College was added to the list of schools recognized in chemistry and physics; and the following universities were added to the list of universities whose graduates in medicine are admissible to the final examination of the Examining Board in England, under the conditions of paragraph IV, section 3, of the Regulations, namely: (a) Creighton University, Omaha; (b) Georgetown University, Washington; (c) the University of Maryland and College of Physicians and Surgeons, Baltimore.

IN 1915 Gorter and Ten Bokkel Huinink described a method for determining in advance if a given typhoid vaccine would prove protective for man. This consisted in finding that the vaccine would protect guinea-pigs against an intraperitoneal injection of typhoid bacilli that would be fatal to control animals, and was considered to be most satisfactory. But it assumes that what holds true for guinea-pigs can be applied to man, and Aldershoff (*Folia microbiologica*, Delft, 1917, v) has repeated the work on guinea-pigs and investigated its practical application by estimating the agglutinating and bactericidal powers of men inoculated with the vaccine. The object of his research was to find out if in man a vaccine that fulfils the guinea-pig test gives better results than one that fails completely or partially when thus tested; he concludes that the criterion set up by Gorter and Ten Bokkel Huinink cannot be relied on in practice.

Medical News.

THE next session of the General Medical Council will commence at 2 p.m. on Tuesday, May 28th.

MR. CHARLES J. HEATH, F.R.C.S., has been elected President of the Wildfowling Association of Great Britain and Ireland.

THE annual general meeting of the London and Counties Medical Protection Society will be held at 32, Craven Street, Strand, W.C., on May 15th, at 4 p.m.

MR. CHARLES W. DEAN, F.R.C.S. (Edin.), surgeon to the Lancaster Royal Infirmary, has been appointed deputy coroner for Lancashire (Lancaster Division).

DR. W. HANDFIELD HASLETT, J.P., C.C., chairman of the South Middlesex Division of the British Medical Association, has been unanimously elected, for the fifth year in succession, chairman of the Sunbury-on-Thames Urban District Council.

SIR A. GRIFFITH-BOSCAWEN has stated that the Insurance Commissioners accept responsibility for cases of tuberculosis in an early stage, but not for those that are far advanced. The Pensions Ministry is making arrangements for the use of annexes to sanatoriums belonging to the Metropolitan Asylums Board in London.

THE Lord Roberts Memorial Fund (122, Brompton Road, S.W.) is giving permanent employment to nearly 1,200 disabled men at its workshops in London and the provinces. A special appeal is to be made in London in the week beginning May 20th for contributions to an extension fund.

THE "Earlsmead" Home of Recovery, Hornsey, providing 35 beds for the use of the Great Northern Central Hospital, was opened on April 30th by Lady Crossfield in the presence of the Mayor of Hornsey, Mr. H. J. Tennant, M.P., deputy chairman of the hospital, and others interested in its welfare, including the donor, Mr. Harrop.

THE Osiris prize of the value of £4,000 was founded for the recognition of the most important discovery or work in science, letters, arts, industries, or generally anything for the public benefit. The prize has been held in abeyance since the beginning of the war, but the Institute of France has decided to make an award this year.

THE report presented to the annual meeting of the Invalid Children's Aid Association stated that during last year 9,185 invalid children had been assisted, of whom 423 had been sent away to convalescence; 584 surgical appliances had been supplied and 211 children apprenticed and trained. Of the £30,707 raised, £7,526 had been collected from parents. Owing to the difficulty of obtaining accommodation at hospitals four new convalescent homes had been opened.

THE committee appointed last October, with Sir George Makins as chairman, to report on the organization and equipment of hospitals for British troops in India, has concluded its labours, but its report has not yet been published. We note, however, that in the Indian Budget for 1918-19 a vote of £200,000 is taken for the introduction of the station hospital system for India and improvements of hospitals.

IN consequence of the passing of the Military Service No. 2 Act, 1918, the Local Government Board and the Secretary for Scotland have issued new regulations which came into operation on May 2nd, 1918. Provisions have been inserted excepting disabled men who have been discharged, and who by reason of the Review of Exceptions Act (now repealed) or of pledges given by the Minister of National Service were not to be called up for service. The members of local tribunals in England and Wales are in future to be appointed by the Local Government Board, and the new regulations provide that the existing tribunals and their members shall be deemed to have been appointed by the Local Government Board. Considerable changes of details are made by the new regulations, the principal object being to accelerate the decisions of cases. The grounds on which exemption may be claimed remain as at present, but the need for men being greater than ever the standard must be stricter. Exemptions must not in future be granted for more than six months, except where the National Service representative otherwise agrees, or in the cases of certificates on the ground of ill health or infirmity or of conscientious objection. Special regulations will be issued relating to applications concerning qualified medical practitioners, and the regulations now issued do not apply to any such applications. It is not necessary for any qualified medical practitioner who wishes to claim exemption to take any action until the special regulations are issued.

Letters, Notes, and Answers.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Attitoley, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin. The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

QUERIES AND ANSWERS.

C. T. S. wishes to hear of a substitute for glycerin for enemata.

HAY FEVER.

A CORRESPONDENT asks for advice as to some suitable substance with which to spray the nose in severe hay fever. Reference to Sir StClair Thomson's recent book on *Diseases of the Nose and Throat* shows that quinine in a spray (gr. j to 3j) or ointment (gr. xxx to 3j of vaseline) has been well reported on, and its employment is so easy that it is worth trying. Dr. Watson-Williams recommends that at the beginning of the hay fever season the nasal passages should receive one spraying with a solution of mercury biniodide (2 to 5 per cent.), the application being preceded by cocaine and followed by a hypodermic injection of morphine. Sir Andrew Clark recommended painting the nasal mucosa with the following: Glycerin of carbolic acid 3j, quinine hydrochloride 3j, mercury perchloride gr. 1. Its use, which should be preceded by the application of cocaine, is often followed by considerable reaction. If necessary it may be repeated on the second to the fourth day, but not more than three applications are required. If any readers can make better suggestions we should be very glad to receive them.

LETTERS, NOTES, ETC.

THE VALUE OF THE WASSERMANN TEST.

DR. A. S. LEYTON (Oxford) writes: A most remarkable factor in the discussion about the value of the so-called "Wassermann test" (it is a bad habit into which we have fallen to label these biological reactions with the names of the alleged inventors, often regardless of historical accuracy) is the unanimity with which the question has been begged, that because the complement deviation test is positive, therefore the case is one of syphilis. A more flagrant example of begging the question has rarely happened in scientific literature. We know much too little about the factors involved in the reaction to make such an assertion, and the result obtained by a positive reaction is in many cases quite as contradictory, from a clinical aspect, as it is in the case of a negative reaction. Personally, I do not regard the complement deviation test as any more pathognomonic than the agglutination test, and I think we should be as slow in diagnosing syphilis on account of a positive complement deviation test as we should in diagnosing typhoid on the result of a positive agglutination test.

DR. H. MILLER GALT, Pathologist, Stephen Ralli Memorial Laboratory, Royal Sussex County Hospital, Brighton, makes the following observations in the course of a letter on this subject: Perhaps the commonest error into which the practitioner falls when presented with the results of Wassermann tests is to assume that the results admit of no other interpretation than the words "positive" and "negative" imply. A negative Wassermann reaction does not necessarily prove syphilis absent any more than a positive result proves in all cases its presence. The positive or negative result is simply a link in the chain of evidence; and while its value is usually great, it may actually be misleading in a small proportion of cases. No pathologist claims 100 per cent. of results which are in accordance with the clinical evidence, but the 95 per cent. or so of such results form a most valuable help to diagnosis. The medical officer in charge of the venereal diseases clinic at this hospital informs me that he has never failed to obtain a positive Wassermann reaction where the case was clinically one of syphilitic sore. After discussing possible fallacies in the cases reported by Dr. J. S. Robertson, April 13th (p. 427); Dr. Galt concludes as follows: Certainly a negative Wassermann reaction in a patient as the result of treatment is of slight value as a sign of cure. How many such negative results should be obtained, and over what period, are points still undecided.

DR. JAMES S. ROBERTSON writes with reference to the case mentioned by him in his note on April 13th (p. 427), of the pregnant woman who complained of a small, painless, persistent, slowly-growing vulval "spot," that the pathologist consulted was attached to a large London general hospital; it