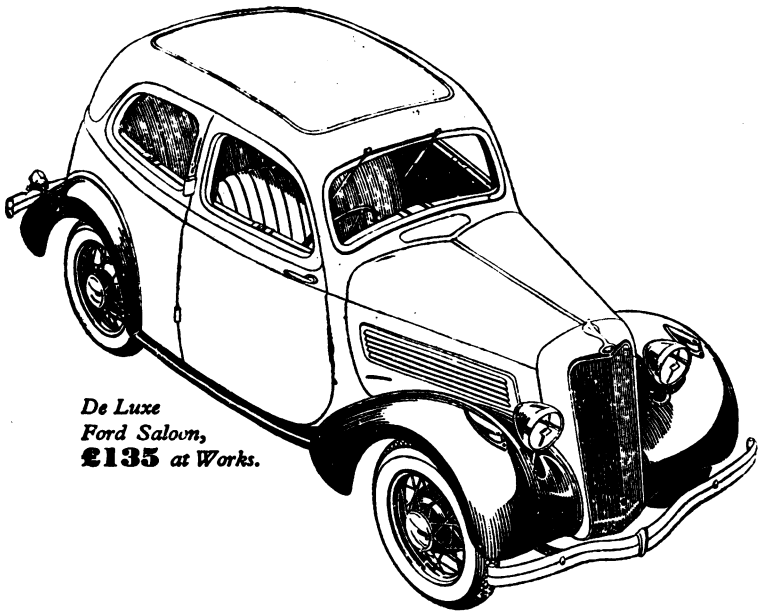
JULY, 1935

THE ULSTER MEDICAL JOURNAL

PUBLISHED BY
THE ULSTER MEDICAL SOCIETY

All you can expect from a car

De Luxe Ford



De Luxe Ford Saloon, **£135** *at Works.*

"There is no Comparison"

What do you expect from your car? Low lines, durable and attractive upholstery, roominess and comfort. In addition you want reliability and economical running and maintenance costs. You would like all this at a price less than anyone should expect to pay. Also you would like a dealer who is equipped to look after your every wish and see that your car serves you long, faithfully and well. Get your De Luxe Ford from us and your every wish will be fulfilled.

R.E.HAMILTON & CO.

MAIN DEALERS

32 LINENHALL STREET

PHONE 5108

BELFAST

The fame of the

DUNLOPILLO

MATTRESS

spreads throughout the world

In hospitals, as in the home, the incomparable hygienic, labour-saving, and ease-assuring qualities of the DUNLOPILLO Mattress are winning rapid recognition all the world over.

✦ THE MEDICAL SUPERINTENDENT

of a large Hospital for Children in AUSTRALIA has written to the Dunlop Perdriau Rubber Co. Ltd. of Melbourne as follows:—

"The Dunlopillo Mattresses are reported to be most comfortable, of definite value in preventing bed sores, most appropriate in the nursing of fracture and spine cases, and in my opinion occupy a definite place in the armamentarium of any large hospital."

●

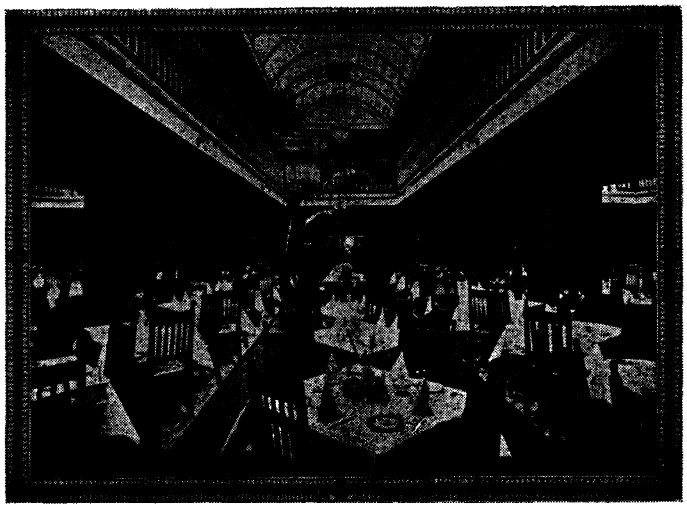
DUNLOP PRODUCT

DUNLOP RUBBER COMPANY LIMITED, CAMBRIDGE STREET, MANCHESTER
IRISH ADDRESS: DUNLOP HOUSE, UPPER ARTHUR STREET, BELFAST

5DP2/53 C.F.H.

for

MORNING COFFEES, LUNCHEONS AFTERNOON TEAS, AND DINNERS



visit Belfast's most popular rendezvous

THE CARLTON

DONEGALL PLACE

Open 8 a.m. till 8 p.m. ✱ ✱ ✱ *Orchestral Music Daily*

PRIVATE ROOMS FOR BANQUETS, DINNERS, AND DANCING, FOR PARTIES OF TEN TO FOUR HUNDRED

For Wedding Parties and other events requiring efficient and up-to-date catering apply to the Manager, who will only be too pleased to submit quotations and make all necessary arrangements

Telephone 6501 (four lines)

TESTED BY OVER 20,000 MOTORISTS—
ON ROADS THE WHOLE WORLD OVER
TESTED AND FOUND GOOD!

You want your new car to be as up-to-date as any on the market, and yet utterly trustworthy and reliable.

You want to *know*—but how can you be *sure?*

Well you *can* be sure—if you choose a 1935 Standard.

For the 1935 Standards are advanced up-to-date editions of the Standards of 1934 . . . Standards which have been *proved* good by more than 20,000 motorists like yourself.
The 1935 Standard — trustworthy — reliable — tested and brilliantly modern — the car for you!

FIVE "OWNER TESTED" MODELS

1935 "NINE" 2-door (4-cyl.) from	1935 "TEN" (4-cyl.) from	1935 "TWELVE" (4-cyl.) from	1935 "SIXTEEN" (6-cyl.)	1935 "TWENTY" (6-cyl.)
£145	£185	£215	£285	£395

1935 STANDARD CARS

AND THE NEW "SPEED" 10–12 MODELS . . . AND A NEW 4-DOOR "NINE"
SALOON £245 COUPE £265 4-DOOR "NINE" SALOON £165
Triplex Glass *Dunlop Tyres* *All prices ex works*

CLARENCE ENGINEERING CO., LTD.

Jasper Johnstone

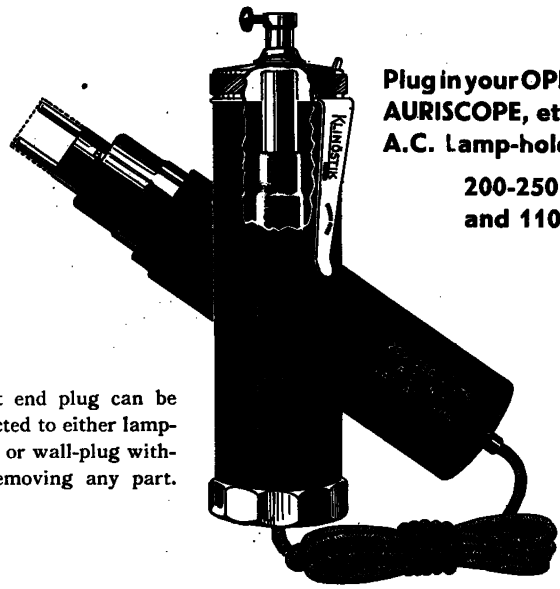
24 ORMEAU AVENUE - 43-47 CHICHESTER STREET - BELFAST
TELEPHONE 5456

NEW KLINŌSTIK

British Throughout

Dual-Purpose Handle and Adaptor

PATENT APPLIED FOR



Plug in your OPHTHALMOSCOPE, AURISCOPE, etc., to the nearest A.C. Lamp-holder or Wall-plug.

200-250 Volt. A.C. and 110 Volt. A.C.

Patent end plug can be connected to either lamp-socket or wall-plug without removing any part.

● Economical and Efficient

BATTERY HANDLE can be used with BATTERIES where no current is available

TRANSFORMER WITH ADAPTOR ONLY

(state size of handle when ordering) PRICE **22/6**

SUPER BATTERY HANDLE, complete with Transformer and Adaptor and spare Base Cap for use with Unit Cells. (As illustration.) PRICE **42/6**

STANDARD BATTERY HANDLE, complete with Transformer and Adaptor and spare Base Cap for use with No. 2015 Batteries. PRICE **37/6**

THE KLINŌSTIK DUAL-PURPOSE ADAPTOR introduces a new improvement to Battery Handles for lighting Ophthalmoscopes, Auriscopes, and other battery-operated instruments—a Mains Transformer 200-250 Volt. A.C. complete with cords and adaptor can be **applied to any Battery Handle,** and allows standard instruments without alteration to be used direct from the domestic electricity supply. Batteries can be used where no current is available.

JOHN CLARKE & Co. (Succrs.) Ltd.

8 DONEGALL SQUARE WEST, BELFAST PHONE BELFAST 1053

GARAGE SERVICE

reliable in detail

LIGHT MAINTENANCE.

● To maintain your car in proper running order you should have it periodically oiled and greased. We are specially equipped for light maintenance service, and will undertake to notify owners at set intervals when car is due for these services.

Part exchanges considered.

Hire purchase terms arranged

ENGINE OVERHAULS.

● We have recently equipped our works with the latest plant for cylinder re-boring, etc., and can guarantee speedy service and satisfaction in general repairs and cylinder reconditioning.

TYRE RE-TREADING.

● Beware of skidding! If your tyres are worn, have them re-treaded by our "PNEUGRIPPAD" Service. Tyres worn or smooth made "NON-SKID" for a few shillings.

BRAKE TESTING.

Official **Wakefield "CASTROL" Lubrequipment Service**

● We have installed a special brake testing apparatus, and suggest that, in owners' own interests, they should have their brakes tested at intervals. We issue a brake efficiency certificate.

LAUNDRY SERVICE.

● Our Laundry is equipped with the most up-to-date washing plant and vacuum cleaners. To ensure your car being always "spick-and-span" resolve now to have it periodically cleaned inside and out by us. We guarantee you satisfaction.

BELFAST CAR LAUNDRY

LIMITED

Authorised Agents for "Morris," "Singer," and "Wolseley" Cars

NEW CARS AND LAUNDRY SERVICE:

VICTORIA SQUARE - PHONE 7880

OPEN TILL 11 P.M.

USED CARS AND REPAIR DEPOT:

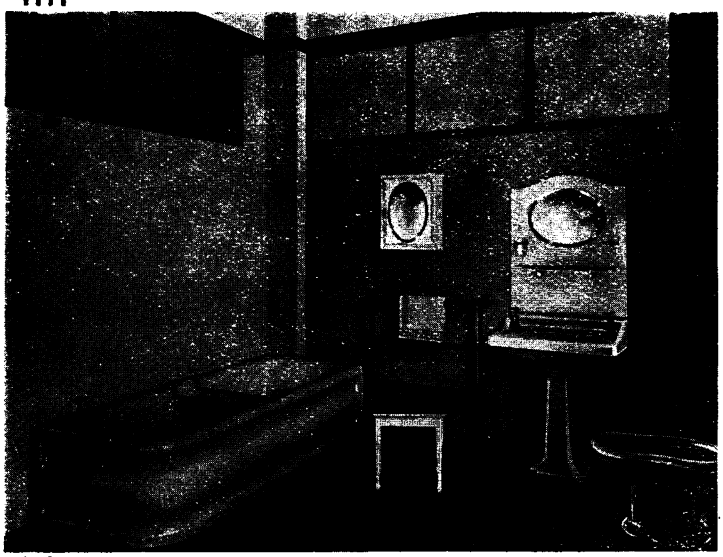
1A CHARLOTTE ST. - PHONE 5148

AND BALLYROBERT SERVICE STATION
CRAWFORDSBURN, BELFAST—BANGOR ROAD

AND BALLYHOLME GARAGE
62 GROOMSPORT ROAD, BANGOR. PHONE 701

MODERN SANITARY EQUIPMENT

● TELEPHONE BELFAST 8245 (four lines)



● This is a view of a bathroom suite in white, fitted with one of the new type porcelain enamelled baths cast in one piece. The basin is of the pedestal type complete with chromium fittings. There are four similar bathrooms with complete suites in colour displayed in our main showroom.

● For the Hospital with which you are connected — for the Nursing Home in which you are interested — for the Institute of which you are a member — a new Residence for yourself, or the renovation of your present Home, we offer you an unsurpassed range of Modern Sanitary Fittings from which to select.

● Our aim has been to so arrange our Display that selection is simplified to the utmost, both in regard to your possible requirements and your time. We cordially invite you to bring your Sanitary Equipment problems to us, without obligation.

STEVENSON & TURNER

LIMITED

EVERYTHING IN MODERN SANITARY APPLIANCES AND ACCESSORIES

1-17 WEST STREET, SMITHFIELD, BELFAST

SHORT-SERVICE COMMISSIONS IN THE ROYAL ARMY MEDICAL CORPS

THESE commissions are for a period of five years, and the remuneration, including allowances, rises at present from £481 per annum for a single officer and £552 per annum for a married officer to £566 and £675 for single and married officers respectively at the end of one year, when promotion to Captain occurs. (To qualify for the married rate, an officer must have attained the age of 30 years). Provision in kind may be made in lieu of certain of the allowances.

The scales of emoluments shown above are those applicable to officers serving at home. Officers serving at stations abroad (other than India) receive the same rates of pay as those serving at home, and their allowances are fixed with reference to the cost of commodities at the station at which they are serving. In most cases they are granted, in addition to their ordinary pay and allowances, a Colonial allowance to meet the extra cost of certain items at their station. Officers serving in India receive special rates of pay and allowances which, on the whole, are higher than the above-mentioned rates.

Officers not desirous of making the Army their permanent career, and officers not selected for permanent commissions, will normally retire at the end of five years service with a gratuity of £1,000.

Ample opportunities are available for professional work both in Military Hospitals and Military Families Hospitals.

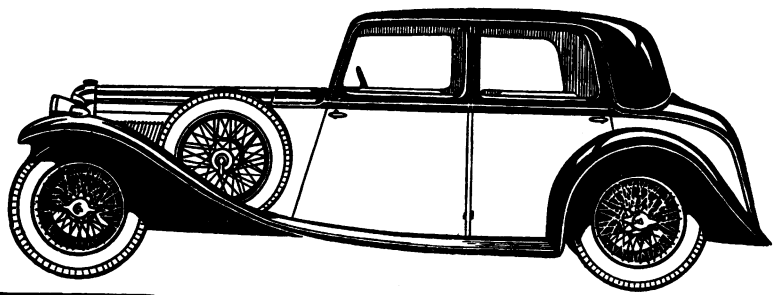
Full information can be obtained on application to the Assistant Director-General, Army Medical Services (A.M.D.1.), The War Office, Whitehall, S.W.1, or, if desired, a personal interview will be given.

Entrances take place at the end of April and end of October in each year. The next entry will be Thursday, 24th October, 1935.

NO OTHER CAR
gives such performance at anywhere near the price

New ALVIS "FIREBIRD"

The unique charm of ALVIS performance lies not in speed and power alone. Exceptional smoothness and silence of running, powerful brakes, superb steering, luxuriously comfortable suspension and a refined ease of control, are other features, which combine to make the ALVIS "FIREBIRD" quite different from any other car you can buy. Economical to run and maintain (1935 Tax £10. 10s.) it enables speeds in excess of 70 m.p.h. to be easily achieved—"ALVIVACITY" in its most economical form.



ALVIVACITY

from £490

SOLE DISTRIBUTORS FOR ULSTER

SALES **JOHN HANNA** **SERVICE**

34-36 Chichester Street — 17 Gloucester Street

Phone 1589 — **BELFAST** — Phone 4191

Active little bodies

MUST have nutritious food in plenty, food so nutritious that, along with bodily growth, there should be a corresponding development of brain power

R.S.O. FOOD

provides the necessary nutriment; it is a natural food in easily digested form

Product of

WHITE, TOMKINS & COURAGE Ltd., BELFAST

Manufacturers of Pure Foods since 1841

Make your patients Comfortable

WHILE IN YOUR RECEPTION ROOM

Consider their comfort during the time they are waiting in your Reception Room. If your existing Fireplace is an old and shabby one, then why not effect a pleasant change both for your patients and yourself by installing a

WARICO

"THE FIREPLACE BEAUTIFUL"

It is during the waiting period prior to being ushered into your Consulting Room that a patient's state of mind is most disturbed. Why not try to help them control themselves by providing the most comfortable conditions possible— a beautiful Fireplace with a glowing Fire of BARKLEY'S Coal.

If you are interested—our wide experience in Fireplace Renovation, in the matter of suggestions, is at your disposal without obligation, and remember you may always

Buy YOUR Coal with confidence from

"The Better Coal People"

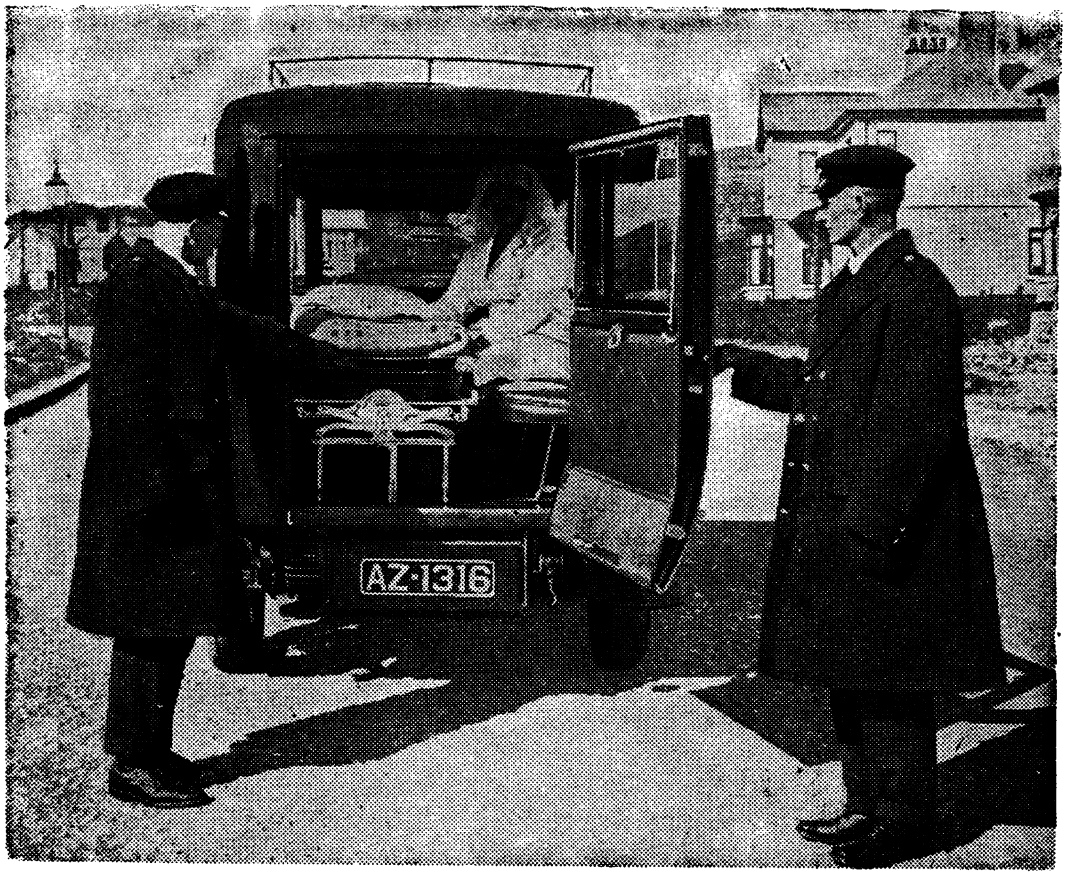
WE ARE
SOLE AGENTS
IN ULSTER
FOR
WARICO
FIREPLACES

AND SHALL BE GLAD TO SUBMIT DETAILED PARTICULARS AND ILLUSTRATED FOLDERS ON REQUEST

WM. M. BARKLEY & SONS, LTD.

5 WELLINGTON PLACE, BELFAST

TELEPHONES: BELFAST 7974-5-6



OUR MOTOR AMBULANCE

is ever ready for conveying patients to and from Hospital or Nursing Home in city or country—distance no object. Specially designed and equipped to ensure safe, comfortable travel under all conditions

MODERATE CHARGES

MELVILLE & CO., LTD.

TOWNSEND STREET - BELFAST

In time of need ——— 'Phone ——— Belfast 6272 (Four Lines)

TRACTATVS
de Peſte,
S E V
BREVIS, FACILIS,
& experta methodus curandi peſtem.

AVTHORE MAGISTRO
NELLANO GLACAN *Hiberno,*
apud Toloſates Peſtiferorum
pro tempore, Medico.

TOLOSÆ,
Typis RAYM. COLOMERII,
Regis & Academiæ Toloſanæ
Typographi. 1629.

ONLY SPECIALISATION CAN GIVE YOU A PERFECT CAR THROUGHOUT

The MORRIS EIGHT

as big as an ordinary "Ten"

the only Eight built by Specialisation

"The most popular car of 1935" is the latest distinction (proved by figures) of the precision-built Morris "Eight"—the ECONOMICAL small car which has big car performance, big car comfort and very nearly big car roominess . . .
SPECIALISATION AGAIN!

MORRIS EIGHT 4-DOOR SALOON (Sliding Head) Ex Works (Tax £6) **£142.10**
(Other models from £118)

- Lockheed Hydraulic brakes
- Hydraulic Shock absorbers
- Synchromesh Gearbox
- 45 miles to the gallon and over 55 m.p.h.

MORRIS

THE CAR WITH THE LOWEST UPKEEP COSTS

For full particulars apply to:

W. H. ALEXANDER

MAY STREET, DONEGALL STREET, CHICHESTER STREET, HOLMES STREET
BELFAST

BUY A CAR MADE IN THE UNITED KINGDOM

4IA

PRINTED FOR THE ULSTER MEDICAL SOCIETY BY GRAHAM AND HESLIP, LIMITED, BELFAST.
ADVERTISEMENT AGENTS : GEO. A. STEWART & CO., 100 HIGH STREET, BELFAST.

CONTENTS

Fellows and Members of the Ulster Medical Society receive the Journal free
Subscription to non-members, five shillings annually

CONTENTS

Fellows and Members of the Ulster Medical Society receive the Journal free
Subscription to non-members, five shillings annually

THE ULSTER MEDICAL JOURNAL

NOTICE TO CONTRIBUTORS

1. Manuscript should be typewritten and fully corrected. Contributors will be responsible for the payment of any sum charged for correction of the printer's proof in excess of ten shillings per sheet (16 pages).
2. Illustrations must be in finished form ready for reproduction. They must be properly labelled in type or by hand, with reference pointers if necessary.
3. Line drawings must be sent whenever possible. Illustrations requiring half-tone blocks are costly, and unless printed on special art paper are often unsatisfactory. Authors will be charged for these half-tone blocks at cost price.
4. The legend describing an illustration must be inserted in the appropriate place in the text, and should not be placed on or appended to the drawing.
5. Orders for reprints must be given when the author returns the printer's proof. The cost of these may be obtained from the printers in advance.
6. Editorial communications should be sent direct to the Acting Editor, Dr. Hunter, Department of Anatomy, Queen's University, Belfast.

ADVERTISEMENTS

First advertisement forms go to press thirty days in advance of the date of issue. In forwarding copy, time must be allowed for setting up and submitting proof. All communications for space must be sent direct to the advertisement controllers : Messrs. Geo. A. Stewart & Co., Publicity House, 100 High Street, Belfast. 'Phone : Belfast 3091.

DATES OF PUBLICATION

1st January, 1st April, 1st July, 1st October.

THE ULSTER MEDICAL SOCIETY

THE MEDICAL INSTITUTE,
COLLEGE SQUARE NORTH,
BELFAST.

Dear Sir (or Madam),

If you are not a member of the Ulster Medical Society, we would appeal to you to give the question of joining your consideration. The Society has been in existence since 1862, and has always been active in keeping its members interested in the advances in medical science as well as in current professional affairs. The Medical Institute, situated in College Square North, belongs to the Society (through the generosity of Sir William Whitla), and is ideally adapted for meetings, committee meetings, and recreation. There is a library with current medical periodicals, and facilities for reference to medical literature are available in conjunction with the library at the Queen's University. There is also a billiards-room available to members, and lighter periodicals are also provided. An annual dinner is held each year in December, and a golf competition in June. Meetings are held at intervals of a fortnight during the winter months, and papers are contributed by members. Distinguished visitors are occasionally asked to contribute papers on subjects upon which they are specially qualified to speak. THE ULSTER MEDICAL JOURNAL, the official organ of the Society, is issued to all Fellows and Members free of charge.

The subscription to the Society is one guinea for Fellows and Members living in the country; two guineas for Fellows living in Belfast; and one guinea for Members living in Belfast who are not qualified more than seven years. The payment of a sum of twenty guineas entitles one to election to Life Membership.

May we, therefore, appeal to you to join the Ulster Medical Society, and so enable us to widen its influence and sphere of usefulness still further? Please make application to the Honorary Secretary, which will ensure your name being put forward for election to membership of the Society.

If you do not wish to become a member of the Society, will you consider entering your name as a subscriber to THE ULSTER MEDICAL JOURNAL? The subscription is five shillings per annum, payable in advance to the Honorary Treasurer.

We remain,

Yours faithfully,

S. R. HUNTER, *President.*
F. P. MONTGOMERY, *Hon. Secretary.*
C. A. CALVERT, *Hon. Treasurer.*

.....19.....

To MR. C. A. CALVERT,
8 UNIVERSITY SQUARE,
BELFAST.

Please have my name proposed for election to the Ulster Medical Society.

Name.....

Postal Address.....

.....

Year of Qualification.....

BANKER'S ORDER

(Ulster Medical Journal)

.....19.....

Name of Bank.....

Address of Bank or Branch.....

Please pay to the account of the Ulster Medical Society (Northern Bank, Shaftesbury Square, Belfast), ULSTER MEDICAL JOURNAL *Account, the sum of five shillings, and continue to pay this amount on the 1st November each year until further notice.*

Signature.....

Address .....

2d.
STAMP

This should be sent to the Honorary Treasurer, MR. C. A. CALVERT,
8 University Square, Belfast, for registration.

THE
ULSTER MEDICAL JOURNAL

PUBLISHED QUARTERLY ON BEHALF OF THE ULSTER MEDICAL SOCIETY

VOL. IV 1st JULY, 1935 No. 3

The Early Diagnosis of Pulmonary Tuberculosis

A DISCUSSION FROM A MEETING OF THE ULSTER MEDICAL SOCIETY

C. O. S. BLYTH BROOKE, L.R.C.P.LOND., M.R.C.S.ENG., D.P.H.,
Chief Tuberculosis Medical Officer, Antrim County Council

DESPITE the introduction into modern medicine of a scientific era, the time has not come, nor indeed is in sight, and I doubt if it will ever come, when the practice of our noble art can be superseded by robots evaluating health and disease formulæ from the results of specialized examinations. It is right and proper that we should continually seek for better methods of examining our patients, making full use of every advance in the whole field of knowledge, but having discovered these, it is our duty to relegate them to their proper place, and not allow ourselves to be improperly guided by them away from any road clearly indicated by what I will call clinical acumen, and thus shall we remain worthy successors of the great physicians of old, and become the lights of our own and future generations.

The art of medicine requires us to collect all the available information with regard to the present condition of our patient, his probable future, and the likely effect of every possible treatment upon his well-being; and then to so carefully weigh all this, like a juror balancing oft-times conflicting testimony, that we may to the best of our ability give our advice accordingly.

This appeal to consider the true value of evidence discovered in relation to the health of our patient, should extend to the whole realm of medicine and surgery, but is here particularly directed to the consideration of the diagnosis of pulmonary tuberculosis. This disease may assume any form, from that benign type from which we are told ninety per cent. of us have suffered to that of galloping consumption so common in the last century. When, therefore, we are bold to make a diagnosis of this complaint, it is beholden on us to go yet farther and to determine as accurately as may be possible the exact nature of the lesion, as to whether progres-

sive or retrogressive, and as to its probable reaction to any possible line of treatment—for it is only so that we can advise our patient fully, and it is only so that our verdict to the patient can be of service to him. To do all this requires a nice judgment of all the evidence, frequently only collected with considerable care and difficulty.

I think it is scarcely necessary before this august assembly to stress the importance, both to the individual and to the community, of early diagnosis. Eradication of this social evil depends largely on the control of human infection, which in its turn depends on the immediate recognition of each potential source of infection, and it is well known how unsatisfactory are the results of treatment initiated only after the disease has already passed beyond the first stages. But while early diagnosis is of paramount importance, the indiscriminate use of a label of tuberculosis for every cough, for every case of debility, for every abnormal chest skiagram, and for every mysterious case of uncertain nature, may cause untold harm, and yield little benefit to the patient and others. On account of prejudice, employment may be lost, friends may be alienated, benefits of insurance refused, and, above all, habits of introspection and of invalidism may thereby be developed. It is a curious fact that chronic bronchitics and those suffering from general debility often seek the title of tubercle, knowing that the legislature provides certain benefits therefor, and delighting in the dignity of having such a high-sounding name given to their ailments; whereas those to whom it truly belongs more frequently fear it, knowing perhaps within themselves that their fate is already sealed. In spite of this, it is, however, our duty to give the patient the benefit of a true doubt, and it may at times be right to send a patient into sanatorium for general treatment and care, when this cannot otherwise be effected, before the diagnosis is finally established.

Inquiry will, of course, be made into the family history and circumstances. Whatever views we may hold on the possibility of pre-natal tuberculous infection, or on the inheritance of a diathisis, we are bound to acknowledge the danger of infection from an "open" case when contact has been close and when hygienic environment has been unsatisfactory. Attention should therefore be particularly directed to the question of contact with a known case, whether recently or long ago, rather than to the remote family history, especially as diagnosis has at times been somewhat loose, and many cases of bronchitis have been described as phthisis. If, however, contact be established, there is a certain presumption in favour of infection having taken place, and consequently the possibility of active disease being present must be more prominently before the mind of the examiner.

A history of measles or of whooping-cough is significant if the present symptoms are dated from the time of, or soon after, the attack, as these infections do unquestionably reduce the specific anti-tubercular resistance. The same may be said of influenza; but here it must be borne in mind that the initial symptoms of a localized tuberculous lesion in the lungs are often acute, and resemble influenza, and may be diagnosed as such, especially in times of epidemic. Some have stressed this aspect to the extent of denying the frequency of tuberculosis arising as an

aftermath of influenza. Personally, I believe that influenza does lower resistance, thereby predisposing to the activation of a latent lesion or the occurrence of a *de novo* infection. I therefore regard with grave suspicion doubtful cases whose symptoms followed on from those of even a most typical influenza, and in parenthesis would appeal for adequate convalescence to be given to every case of influenza, avoiding as far as possible an unduly hasty return to a strenuous occupation.

Acute dry pleuritis, when not associated with lobar or broncho-pneumonia, is nearly always tubercular in nature. Pleural effusion, when not a complication of some general disorder such as chronic nephritis or morbus cordis, or of some definite pulmonary lesion, such as a neoplasm, and excluding the rare cases of rheumatic etiology and polyserositis of doubtful etiology, is generally an early manifestation of thoracic tubercle. It is imperative, therefore, that these conditions should not only be adequately treated with proper and sufficient convalescence at the time, but that they should be carefully watched thereafter, and should doubtful symptoms arise at any later period, the presence of a tuberculous focus should be taken as accepted. On account of the great importance to be attached to a history of pleurisy, I would suggest greater hesitation than is sometimes exercised in using this expression to designate indefinite types of pleurodynia, in order not to mislead other physicians who may be called in later. Owing to the rather free use of this term, I feel it is safer not to take a history of pleurisy into account unless from the patient's own story it was apparently definite, or has been reported personally by the doctor in charge at the time.

Reference must also be made to other conditions recognized as usually, if not always, tubercular, namely, fistula-in-ano and scrofula. The former is undoubtedly very frequently associated with latent or subactive pulmonary tuberculosis very near the breaking-down stage, and should be regarded in much the same way as pleurisy. Scrofula, on the other hand, is not often associated with pulmonary disease, and may, I think, generally be ignored in considering the possibility of a lung infection.

A history of other illnesses may lead one to fasten attention on an alternative diagnosis, but has little bearing on tuberculosis.

A week or two ago I was asked to see a farmer, aged 35, who complained of cough and lassitude, with some pain in his chest, dating from an attack of influenza just before Christmas. There was no history of contact with any other case, and health and strength had been normal up to the time of the influenza. Careful questioning, however, elicited the information that he had had a similar illness when a sailor fifteen years ago, but soon regained his health.

Had he been a little younger, one would have been very suspicious, from this history, of the presence of an acute progressive tuberculosis, requiring immediate treatment, and even at 35 or any other age such may be the case. Had he been older, on the other hand, one would definitely have expected some more chronic form of this or other condition to be the cause. Suspicions are already formed from the story that he may have a re-activation of a tubercular focus which has remained

more or less quiescent during the fifteen years that have passed since he had somewhat similar symptoms. In that case there will be difficulty in assessing the present activity, even if the basic condition be easy to identify.

The symptom which took him to his doctor was persistent cough, and of those associated with pulmonary tuberculosis this is unquestionably the most constant, the quantity of sputum varying, but being generally of a tenacious or muco-purulent character. If the quantity of sputum is very large, and especially if this is expectorated in large amounts at a time, followed by periods with less, one may suspect bronchiectasis rather than tuberculosis—if it is frankly purulent again, suspect bronchiectasis or pulmonary abscess. If there is little or no sputum, suspect bronchial irritation or pulmonary fibrosis, and if the sputum is frothy, suspect chronic bronchitis with or without emphysema.

Although, therefore, cough may be due to many things, and is of course more often due to bronchitis than more serious diseases, yet I believe that it is a physician's bounden duty to investigate fully every fresh case of persistent cough until he is fully satisfied that it is not a symptom of early phthisis.

Where, however, a cough has existed for some years, either throughout the year or in winter only, chronic bronchitis and emphysema is the most likely cause, and this is not often part of a tuberculous lesion, and even so, is more probably fibrotic in character, and not to be confused with chronic pulmonary tuberculosis.

My patient also complained of lassitude, undue fatigue after work, and loss of energy, and these, whether associated or not with loss of weight, should always put one on guard against tuberculosis, if no other satisfactory cause has been established. If tubercular infection is present, and especially if there is recent loss in weight, a certain degree of activity is probably present. In this case there was no loss of weight, though the man had always been of the thin type, and so the slight debility might be either post-influenzal or low-grade tubercular toxæmia in origin.

Again, he complained of pains in his chest, which, apart from the pains of a pleurisy (to be distinguished by its localized character made worse by deep respiration, and relieved by strapping even if no friction is heard), are more often associated with fibrosis and non-tubercular conditions than with active lesions.

Night sweats he denied, but these are usually only present in the advanced and very active case. The real night sweat is a definite entity, and to the patient a most unpleasant incident, lowering in the extreme, and one may take it that it has not transpired when glib reference is made to undue sweating at night. My old chief used to settle the matter by asking how often the night attire was changed. After a sweat, pyjamas become wringing wet, and simply must be changed, often several times in the night. However, it is rarely, if ever, an early sign, and usually only occurs, and that not very frequently, when toxæmia is great. I personally entirely disregard this symptom, except when it is so emphasized by the patient that I feel it really must be a true story, and even then only give it much attention when it occurs during an attack of or during convalescence from influenza. It may then sometimes act as a useful pointer to the lungs, but otherwise it is to my mind of little significance. I have dealt on this in detail because I think that some are misled

by this symptom when it is alleged to have occurred, and by its absence when it is not reported.

Of gastric symptoms he had none, though these may occur and even predominate in early phthisis, leading the examiner astray from the respiratory system. This fact should be remembered when vague cases of indigestion without apparent cause do not respond to their proper treatment. Such cases are generally of the fibrotic type.

His voice was normal. This is not of great significance, but every now and then a case of lung disease is manifested first through its laryngeal complications causing hoarseness. Though not always so, this generally occurs when the disease is very active and progressive.

It is scarcely a matter for wonder that he did not complain of amenorrhœa, but in the female this is sometimes a very early symptom, and should suggest a chest overhaul if menstruation has previously been regular, and its cessation is not otherwise accounted for.

A rise in body temperature, especially if it is greater in the evening and after exercise, and normal after rest, is, I believe, the most definite evidence we can obtain of the activity of any disease present, provided of course that there is no other cause. To obtain this striking evidence, however, requires the regular and accurate taking of the temperature over a period of several days, and such a chart is rarely available except in hospital. Unless there is a well-marked rise, little information of value can be had by taking the temperature once only, or at irregular intervals. Even on careful charts, absolute reliance must not be placed, for it is certain that some persons have physiologically higher temperatures than others. Again, other sources of toxæmia may be present, and quite a number of persons with active and progressive tuberculosis only have raised temperature in the last stages.

In the case described I had not the advantage of seeing a temperature chart, and although I should have liked this information, I did not consider it necessary to admit him to hospital for this purpose.

The pulse-rate is so generally raised when I examine a patient for the first time, that I attach little importance to this unless I am informed that it has been consistently raised. In that case I regard the information in the same way as if the temperature were raised.

Whilst speaking of symptoms, particular reference ought to be made to hæmoptysis. Every case must be completely overhauled, not once only, but repeatedly until the cause of the hæmorrhage is satisfactorily accounted for. By itself it is not sufficient to warrant any definite diagnosis being made, but being so often the herald of serious things to follow, the physician may never safely pass it by on the other side, and I would suggest the following scheme of investigation. First, be satisfied that real hæmorrhage has taken place—false and exaggerated reports are easily repeated. Then be sure that the blood is coming from the lungs, and not from the stomach, or even from the gums, and the bleeding produced intentionally. After this determine if hæmorrhage is consequent upon damage to the lung, as in pulmonary tuberculosis, bronchiectasis, pulmonary neoplasm, and hydatid disease; upon increased pressure in the pulmonary circulation,

as in mitral stenosis; or upon changes in the blood, as in some forms of purpura and other blood diseases. A reminder is perhaps here not out of place, that blood from the lungs may be swallowed and later vomited, making a true hæmoptysis appear to be a hæmatemesis.

Though not exactly a symptom, I should like here to refer to spontaneous pneumothorax, a not very uncommon accident among cases of the advanced type, but a rare complication of early phthisis. If, therefore, there has been no history otherwise arousing suspicions, one may generally assume that this condition, especially if it has arisen during or after exercise or strain, to be the result of the rupture of an emphysematous bulla. Certainly it is unnecessary to overwhelm the patient and his relatives by a discussion of the treatment of a possible tubercle infection before careful examinations have been completed.

Before proceeding to the actual examination, it is well to review, thoughtfully, the information so far collated. In the majority of cases, by no means all the classical symptoms are illustrated, and in the case of my farmer, as in many others, we have the presence of a very few only. His cough following upon an attack of influenza with lassitude makes one anticipate an active disease. His chest pains and his age make one wonder if he really has got tubercle at all, and if so, expect to find a fibrotic condition. Further evidence is therefore needed, and we pass on to the clinical examination.

The examination must, of course, be complete, for it is necessary to exclude the presence of every kind of disease, for I doubt if there is any condition which may not at times simulate tuberculosis; but I will here restrict myself to calling attention to certain special points.

The general appearances of my farmer did not assist me at all, and are rarely of great service, and often misleading. Sometimes I feel too much stress is laid upon them. They should, of course, be noted, and may sometimes be of help in leading one to examine especially systems other than the respiratory. For example, cyanosis may guide one to the heart. Before going to the chest I usually feel the pulse, noticing at the same time if clubbing is present. This is distinctly rare in phthisis, and if at all marked is considerable evidence in favour of chronic pulmonary sepsis, of a pulmonary neoplasm, or of cardiac disease.

Active phthisis, as the Greek word from which this term is derived implies, is usually, but not always, accompanied by wasting of the body generally, and of the thorax in particular, and this often more so over the seat of the underlying disease. The reason for this is by no means clear, but let us just remember that the chest wall is the "near neighbour of the lung, and its companion in suffering."

The symmetry and regularity of the normal movements of respiration may be interfered with by the presence of pleural adhesions, loss of elasticity by diseased lung, and probably also by reflex innervation.

All this, therefore, requires us to inspect the chest and its movements methodically in a good light, and to follow this by careful palpation. By this we may confirm our findings by inspection, and also note the character of the vocal fremitus; if this is markedly increased over localized areas, it is very significant of an under-

lying lesion, but as its intensity is normally so variable, little attention need be paid to other findings.

Unless the disease is very central in the lung, or is in the very early stages of development, some change in the percussion note is almost constantly to be observed. I have personally been unable to develop the art of percussion so as to be able to differentiate the bands of dullness described by Clive Riviere, and alleged by him to be due to alteration in the reflex changes in the lung by early tuberculosis, and I am afraid I believe that such methods are beyond the power of ordinary mortals like myself. Nevertheless, I do claim that painstaking percussion can discover, approximately at least, the size and position of the heart and the degree of aeration of the several parts of the lung.

From auscultation we learn the character of the breath sounds—bronchial breathing naturally indicates the presence of fairly advanced disease; but slighter changes in the character of the breath sounds require very considerable skill and experience in detection, and my advice is, in general terms, not to attach very great importance to these. The classical fine crepitations heard best during the first inspiration following a cough cannot be ignored if heard, and nearly always spell activity. The coarser the crepitation, however, the less serious is its import, and the greater the degree of percussion-note impairment accompanying it the more serious its import. Evanescent medium crepitations without any change in percussion note indicate a simple catarrh of the post-influenzal type.

In this present age our methods of chest examination have been greatly enlarged, for not only can we assess the density of lung tissue by means of percussion, but we can tell with a remarkable exactitude its relative translucence to röntgen rays, and a correlation of those enables us to form a very clear picture in our minds of the character of the lung, and any morbid conditions which may be present. This aspect will, I understand, be dealt with at greater length by the next speaker.

I have discussed the clinical examination in a very sketchy manner, not because I wish to belittle its value, or consider that it may generally be passed over so rapidly as too time-consuming, when other methods of examination are available, for on the contrary I believe it an essential part of every examination. It is solely because a complete discussion would last for hours, if not for days, and be absolutely beyond the scope of this meeting to-night.

To return to my patient again—I have mentioned that general appearances did not help me; inspection of the chest, however, showed some retraction of the left side with some muscular wasting. That is to say, we have evidence of disease on the left side; the retraction suggesting a fibrotic condition, and the muscular wasting a toxic process. Respiratory movements were seen and felt to be less on the left than on the right, and irregular, confirming the findings of inspection. The percussion note was considerably impaired over the upper zone, also on the left side, this being consistent with either marked fibrotic or proliferative tubercle. Breath sounds were versicular and perhaps slightly harsh, but no added sounds even after coughing were heard, this being more in favour of fibrosis.

The history and physical signs, therefore, lead us to the definite conclusion that

tuberculosis of the left lung is present, but leave us still somewhat in doubt as to its character and activity, but with the impression perhaps that it has probably been present for a longer period than recent symptoms would suggest, that some degree of activity followed upon the attack of influenza, but is now gradually passing into an almost quiescent state.

In this case these impressions were confirmed by other examinations, of which Dr. Clarke will speak, and it remains for time alone to disclose the verity of my conclusions.

B. R. Clarke, M.D.,

Forster Green Hospital for Chest Diseases, Fortbreda, Belfast

My part in this discussion is to refer to certain special tests which have proved of practical value in diagnosis.

I agree with Dr. Brooke that the early diagnosis of tubercle depends on a balanced survey of the history, symptoms, and physical signs, together with such accessory tests as may be required.

These tests can never supersede clinical experience and close individual study of the patient, but, in almost every case, some of these tests are indispensable for accurate diagnosis.

The routine application of the sputum test, the blood sedimentation test, and the X-ray photograph, will bring to light many early cases which would otherwise have been missed, and in another important group of cases will serve to exclude active tuberculosis.

My personal view, with which others taking part in this discussion may not agree, is that phthisis cannot be excluded without the tests I have mentioned, if there are suspicious symptoms. Of course, I do not refer to patients who have signs pointing to some other disease.

Fishberg and many others have said that active tuberculosis should not be diagnosed in the absence of symptoms; and if the term 'symptoms' included all evidences of toxæmia, such as fever, tachycardia, loss of weight, and increased blood sedimentation rate, this is correct. Subjective symptoms are remarkably slight in many early cases, and even in rather advanced cases the patient may complain of little—except on skilled cross-examination.

It is well recognized that many patients with phthisis have far-advanced disease before they consult a doctor at all, and in this group (not all of whom are poor or uneducated people) early diagnosis is impossible.

The diagnosis of pulmonary tuberculosis is complicated by the fact that most adults have been infected with the tubercle bacillus. There are excellent tests for tuberculous infection, some very reliable and easy of application, such as the Von Pirquet and Mantoux tests; some very complicated and much less trustworthy, such as the complement fixation test and Vernes's flocculation test. These tests are of practical value only in children, for they cannot distinguish between latent infection and active disease. Even in children, a negative result is of more definite

significance than a positive result. The subcutaneous tuberculin test has a greater diagnostic value than the other tuberculin tests, but the result requires to be interpreted by an expert. One must also consider the risk of activating the tuberculous lesion, if such is present, by subcutaneous tuberculin.

The importance of the sputum test could hardly be over-estimated, and indeed an accurate diagnosis of pulmonary tuberculosis cannot be made at all without this test. Open pulmonary tuberculosis and closed pulmonary tuberculosis are phases of the disease which imply an entirely different prognosis and often different treatment.

The difficulty of finding tubercle bacilli early in the disease may often by overcome by repeated examinations, by concentration of the sputum, or by culture of the sputum. If there is a loose cough without sputum, a stimulating expectorant will often bring it up. An excellent method of obtaining sputum is the employment of the laryngeal reflex, as advised by Professor Thomson. The stomach washings and fæces may also be searched for tubercle bacilli when there is no sputum, and in miliary tuberculosis the bacilli may be present in the urine before there is any sputum.

Recently we have been testing a new method of concentrating sputum with petroleum-ether at the Forster Green Hospital, and the test appears to be remarkably delicate. A mechanical shaker is required, but this is not an expensive piece of apparatus. Twenty specimens of sputum negative on direct examination have been tested by petroleum-ether concentration and simultaneously by concentration in hypertonic saline. We had ten positives with the petroleum-ether method; only two positives with the hypertonic method. We are also trying to grow tubercle bacilli from sputum on Loewenstein's medium, and the results suggest that this method may prove to be of practical value.

When proper technique is followed and acid-fast bacilli are found in the sputum, they are almost certainly true tubercle bacilli. Many observers have tested series of specimens of sputum for pathogenicity, and have found the virulence of the organisms remarkably constant. Very rarely, non-pathogenic acid-fast bacilli have been reported in sputum. An instance of this is the "M" strain studied by Professor Lyle Cummins which grew from the sputum of a case of acute lung abscess. This "M" organism, which resembled a tubercle bacillus in its appearance and staining properties, behaved quite differently on culture, and was not pathogenic to either the guinea-pig or the rabbit.

Dr. Gloyne has shown that tubercle bacilli may adhere to old slides even after boiling in strong caustic solutions.

The only common fallacy of the sputum test is fraud, for example, when pension rights or compensation are in question.

If the sputum is negative on repeated examination, the diagnosis of pulmonary tuberculosis should be made only on strong evidence. Eighty-two per cent. of the tuberculous patients discharged from the Forster Green Hospital during 1934 had a positive sputum at some time while in hospital. Of course the majority of these were not early cases, and of fifty-four incipient cases discharged during 1933 and

1934, only twenty-two had a positive sputum. Eight of the twenty-two patients were positive on concentration only, and thus it appears that concentration is of practical importance in the early case.

The thirty-two patients who had a negative sputum in 1934 showed a very different clinical picture from the positive cases. Two had evidence of cavitation on physical examination and X-ray examination, and two others had a small cavity without physical signs. Collapse therapy was practised in only two of the thirty-two patients, and twenty-six of the thirty-two were discharged quiescent.

The tubercle bacilli positive group show an entirely different picture, for more than half of them had evidence of a cavity, and required some measure of collapse therapy. Mr. Wheeler has shown that tubercular laryngitis is nearly always associated with a positive sputum, and indeed all the serious complications of pulmonary tuberculosis occur rarely in the tubercle bacilli negative group.

When one considers that the earliest recognizable stage of pulmonary tuberculosis is a small deposit on one of the lungs, giving rise to no symptoms or indefinite symptoms, it is easy to understand that early diagnosis is difficult. The new method of physical examination, radiology, is an enormous advance on the older methods. Technically perfect shadow-pictures of the lung-fields show a tuberculous deposit half an inch in diameter or even much smaller deposits. However, in many early cases radiology cannot distinguish between a tuberculous lesion and a non-tuberculous lesion, and still less often can radiology answer completely the all-important question, "Is the lesion acute, chronic, progressive, quiescent, or healed?"

Oblique and lateral views, stereoscopic pictures, and pictures taken after diagnostic artificial pneumothorax or the injection of lipiodol, are very helpful in a small but important group of obscure cases.

The advantages of radiology in the investigation of obscure chest conditions are so obvious and so striking that the value of this method of examination has been over-estimated in certain quarters. It is rumoured that there exists a sanatorium physician who sees his patients only in a dark room, where he makes a fluoroscopic examination, on which diagnosis and treatment are based. It should be remembered that radiology is neither more nor less than a refined method of physical diagnosis, and that clinical findings must have full weight, no matter what the X-ray appearances may be.

On the other hand, it has been proved that technically good X-ray pictures often show abnormalities in the lungs (and in other organs) which cannot be detected by inspection, palpation, percussion, and auscultation. This applies particularly when any condition is present which hinders the satisfactory examination of the chest by ordinary physical methods. Such conditions are numerous and common, for example, hirsute chest, thick muscular chest-wall, obesity, asthma, bronchitis, emphysema, laryngeal disease, pleurisy with acute pain, and failure of the patient to co-operate on account of nervousness, timidity, or stupidity.

The estimation of the blood sedimentation rate is a very valuable aid to early diagnosis. The fact that the test is not at all specific detracts little from its import-

ance. Fever and tachycardia are not specific diagnostic tests, but they are universally regarded as of value in diagnosis. The blood sedimentation rate is a more delicate test for toxæmia than the temperature chart, and can be applied more easily and more rapidly in out-patient, dispensary, or private practice. While many early cases have no fever, it is very rare for these cases to show a normal blood sedimentation rate. The usefulness of the test is due to the fact that the sedimentation rate is normal in many chest conditions likely to be confused with early pulmonary tuberculosis, such as simple bronchitis, asthma, emphysema, non-tubercular fibrosis of the lung, chronic catarrh of the upper respiratory tract, and dry bronchiectasis.

Other blood-tests for toxæmia, such as the Arneth count and the Schilling count, may be preferred to the blood sedimentation measurement, when the services of a skilled hæmatologist are available.

The tubercle bacilli negative cases in which pulmonary tuberculosis is suspected are the only ones which constitute a real diagnostic problem, and they may be divided into five groups.

1. A characteristic clinical picture of active pulmonary tuberculosis without tubercle bacilli in the sputum.
2. Definite evidence of tuberculous lesions in the lungs, but no signs or symptoms of activity and therefore no indication for treatment, except hygienic measures.
3. Suspicious symptoms, but no demonstrable lesions and no evidence of toxæmia. This large group should be reassured and sent back to their work or play.
4. Some definite lesion in the lungs, probably only shown on the X-ray film, and definite evidence of toxæmia, e.g., loss of weight, loss of strength, and increased blood sedimentation rate. These are the true early cases of pulmonary tuberculosis, and their recognition at this stage will usually result in the cure of the disease.
5. A lesion in the lung or definite evidence of toxæmia or both can be demonstrated, but full investigation points to some cause other than pulmonary tuberculosis, such as new growth, bronchiectasis, lung abscesses, hyperthyroidism, or some other disease.

In differentiating these groups, the X-ray film and the blood sedimentation rate are very useful aids, but a period of observation and further investigation may be necessary. Early diagnosis can never be easy, for if the diagnosis is obvious the disease is no longer early. It is a most annoying experience to miss an early case of active phthisis, and it is possibly even worse to label a patient as tubercular without sufficient cause. A full investigation of every suspected case is the way to reduce the number of errors and avoid gross mistakes.

THE DENVER CHEMICAL MFG. CO.—CHANGE OF ADDRESS.

We are asked to state that the Denver Chemical Mfg. Co. have moved to their new premises. In future all communications should be addressed to the Denver Chemical Mfg. Co., Carlisle Road, London, N.W.9.

Recent Trends in Psychiatry.

By A. R. MARTIN, M.D.BELF., D.P.M.LOND.

Sheppard and Enoch Pratt Mental Hospital, Towson, Baltimore, Md., U.S.A.

I WELCOME this opportunity for two reasons, firstly because there is a great need for a wider recognition of the character and magnitude of the problems that confront psychiatry to-day, and, secondly, because in our recent approaches to the study and treatment of our patients, we are finding that closer association and co-operation with ministers of religion is becoming more and more desirable and mutually helpful.

As to the immensity of our problem, I wish to draw your attention to certain statistics that are very revealing and cannot fail to be impressive. There are, in the United States of America to-day, over 400,000 patients confined in psychiatric hospitals. This constitutes one-half of the total hospital population of the United States. A similar situation exists in most of the European nations. If, then, we include the great floating population of dependent neurotics, we have the astounding fact that so-called mental illness is the commonest total and permanently disabling factor in western civilization.

Impressive as this may seem to us now, we lack the perspective thoroughly to grasp its deeper meaning. It must be left to the future historian and ethnologist to evaluate the deeper significance of this state of affairs in the light of its cultural setting, and on the basis of contemporaneous philosophies, just as we have endeavoured to evaluate human phenomena, cults, and rituals of the past on the basis of the philosophies that characterized earlier cultural levels. We should never forget that our ideas and concepts tend to change with time, and that what is regarded as common sense in one century may be considered nonsense in the next.

In an effort to acquire something of a perspective, let us try to project ourselves forward into the future and retrospectively review the existing total situation relative to psychiatry.

It will be observed that, during the so-called machine age, a period characterized by man's great knowledge and control of the outer world of objective reality, the prevailing philosophies were mechanistic. During this phase of culture, large numbers of individuals were confined to hospitals with conditions that were called physical. This meant conditions to which the mechanistic concepts of causality could be effectively applied. The widespread and firm belief in those concepts led to the concentration of great wealth on the development of medical schools and centres for the study and treatment of physical conditions, also there were intensive world-wide research programmes. An increasing number of men and then women took up service in this great movement, to such an extent that the field of trained workers —doctors and nurses—became, in some countries, overcrowded.

Now, during this same period, there was an *equal* number of individuals confined to other hospitals with conditions that were called mental. This meant conditions that did not conform to the prevailing mechanistic concepts of causality—conditions

in which, despite intensive effort, no adequate physical cause whatever could be discovered in eighty to ninety per cent. of cases. It is important to notice that toward these so-called mental conditions, the cultural attitude that obtained for physical conditions was absolutely reversed. On this equally large field there was no concentration of great wealth. Students, reared and educated in a materialistic mechanistic culture, were unattracted and discouraged because of the failure of these mental conditions to conform to accepted dogma. Training for work in this field was not only shunned, but even ridiculed. As a result of all of this, we find that throughout the entire western world hospitals for mental conditions were inadequate, greatly under-staffed, and all of them over-populated.

This view of America to-day is very instructive. Surely this contrast, this one-sidedness, this over-emphasis on one type of human problem, to the exclusion of another equally great, demands a re-examination of ourselves and the philosophic concepts we have been utilizing.

It would seem that we are still strongly dualistic or even pluralistic in our concept of the individual; that we tend to split him into two distinct parts, body and mind, or into independent organs as implied by the cult of the medical specialist. But, furthermore, we have not only split him up, but we have then proceeded to develop a negative, resistive, apathetic attitude toward the subjective component—the inner man. Science, then, in excluding this inner world of thought and feeling and impulse, has only given us a fractional view of the individual.

It is rather characteristic that man should be unwilling to modify the concepts through which he has attained such control of the physical world. He is loath to admit defeat as regards what cannot be seen or felt, measured or weighed. In his occasional explorations, fully armed, of the inner world, he tries to force the psyche into some electro-physical-chemical framework, and, failing repeatedly, he places the blame upon his instrument or upon his technique, and not upon the preconceptions that he takes with him. Rather than adopt a new philosophy or modify the old, he will say, "A physical cause is there, and in time we will find it." So the paradox develops of the objectivist ceasing to be be objective.

I have stressed what has perhaps been recognized by many, but I am doing this purposely, so that by comparison a better appreciation of the present-day trends in psychiatry, to which I am now going to refer, may be possible.

Psychiatry is in the vanguard of a new philosophic movement that is taking place in a somewhat opposite direction to the above. In our thinking, there is definitely a tendency to be more dynamic and more monistic in our conceptions of the individual. The element of time must enter into our reckoning. We no longer think of man in terms of structure *and* function, but rather in terms of structure *in* function. The modern physicist is utilizing similar concepts when he tells us that mass and energy are fundamentally inseparable, that they are one, and are no longer to be regarded as distinct entities. Furthermore, and this is most important, we now look upon the individual as a totally integrated being, and human development as a wholly integrated moving pattern in time and not as a static pattern in space. This integrated dynamic process is neither psychic nor is it physical. It is psycho-

physical or psycho-biological. We think of *every* reaction as a reaction of the *total* personality, in response to a total situation. No matter what simple or complex conditions or reactions we are observing, to us they are not psychic nor are they physical, but they are always both, that is, they are psycho-biological.

Extending the whole idea of integration further, we see the individual, not as a separate and detached entity, but rather as an integral part of his cultural setting.

Stated in more simple terms, what we are now trying to do is to see and study the whole before the part. Herein we are joined by the modern embryologist and physiologist, who tell us that during very early development, movement of the whole organism always takes place before the movement of individual parts—that total integration always precedes individuation. The new Gestalt psychology has a similar basic conception. According to the Gestalt school, the infant's first awareness of the outer world is the whole pattern of sensual experience. Growth or knowledge of this outer world then occurs as a gradual process of differentiating more and more parts from the original whole pattern.

These trends in psychiatry have brought about radical changes in medical education. Psycho-biology, the study of the individual as a totally integrated structure *in* function, is now a first-year course along with anatomy and physiology in many Class A American medical schools. The emphasis on the individual as a whole has led to the discouragement of premature specialization in medicine.

Adherence to the psycho-biological concept demands a closer working interdependence between psychiatry and those non-medical sciences that deal with man's subjective being, such as psychology and theology, and those non-medical sciences that have to do with man's objective being, as sociology, ethnology, and etymology.

Coincidental with the above-mentioned trends there has been a partial renunciation of mechanistic concepts in favour of concepts that are more vitalistic in their implication. In the study and treatment of human problems, we are now thinking more in terms of a fundamental vital principle—a *vis a tergo*—similar to the élan vital of Bergson, the libido of Freud, or the spiritual force of theology. We see all the psycho-biological reactions of the individual as manifestations of this primary force.

Another recent trend in psychiatry which will be responsible for a more unified rather than a fractional view of the total personality, is our increasing interest in the inner man, the inner world of thought, feelings, dreams, and fantasy—the subjective universe.

A review, then, of these recent general developments in psychiatry, discloses the following :—A shift from static to dynamic concepts, from dualism to monism, from mechanism to vitalism, from what is objective to what is subjective.

I should now like to speak of some of the specific ways in which these new modes of thinking have been utilized and have found expression in our re-evaluation of mental illness.

First, as to what we see. We have applied our dynamic and psycho-biological concepts to the study of all forms of mental illness, and also to the study of the

progressive phases of normal racial and individual development. As a result, we have come to see that with so-called mental illness we are not dealing with anything that is essentially foreign or unique in human development. We see, rather, that we are dealing with extreme, accentuated, or intensified forms of human behaviour and thinking, with differences of degree rather than of kind, with types of human phenomena that were normal and characteristic for earlier cultural levels, or perhaps with reactions that are found normally in the modern infant, child, or adolescent. It is said that "psychotics and neurotics are just like ourselves, only more so."

Now as to our definition of what we see according to the newer concepts.

Regarding the mental patient as a dynamic pattern in time demands a thorough investigation of his psycho-biological development from birth—we must see him, as it were, in longitudinal section. At the same time, we must carefully study the particular cultural continuum of which he was an intimate and integral part.

From data obtained by this method we now define mental illness as a failure of integration in a particular cultural continuum, or, if you wish, a failure to make a social adjustment. There is then a kind of experimentation of nature, and adjustment takes place at some different level.

In searching for a cause, we continue to examine the whole course of total personality development, laying emphasis upon the first years, that formative period of great plasticity, and particularly upon the earliest human relationships of the infant and child. As a result, the cause is coming more and more to be regarded as environmental, as due to early and prolonged immersion in certain types of family or cultural settings, particularly settings that are unlike the outside world, or settings in which there are very few and therefore very intense human relationships.

As to the part played by heredity, we are now somewhat inclined to think that the quantity or degree of fundamental vital force or *vis a tergo* may be innately determined, as may the degree of general non-specific susceptibility; but the outward and specific manifestations of that force, its mobilization and direction along certain paths, its form of expression and the level of integration at which it ultimately finds expression—these are felt to be environmentally determined. But it is important to remember that we are now laying the greatest stress upon the human or personal environment, and not upon the geographic or economic.

Perhaps no working principle has been of greater value to psychiatry than this concept of a fundamental vital force that motivates all human reactions. In its outward manifestations this force may show many forms and variations, but if we analyse it carefully we must see that its purpose is always to bring about some change in the outer world, that it is directed towards influencing and controlling the environment. Now, we have found it extremely helpful to regard this fundamental force as primarily and originally aggressive and attacking in character. When, therefore, something inhibits the child's sucking, biting, tearing, fighting, climbing, talking, playing, or any other activity, we may assume that what is being inhibited is the child's primitive aggression. All the above activities are

normal for the growing child. During the process of habit-training and socialization there are necessary restrictions, and there develops a kind of reservoir of aggression that must find expression in some way. If certain outlets are closed, the damned-up aggression will use those that remain, and, if repression is very great, there is a tendency for it to flow back and manifest itself in its most primitive forms of biting, tearing, throwing, attacking, and destroying.

Perhaps one of the most helpful effects of this hypothesis has been to remove the over-emphasis that has been placed on the sexual drive by modern psychology. We now see sexuality not as a primary, but rather as an important secondary manifestation of this fundamental aggressiveness of the individual.

One of the most recent elaborations of this theme, and one that may be of especial interest to you, is the theory of what we term introjection or inturned aggression. This is applied in instances where, because of the early and prolonged inhibition of normal aggressive activities, we assume that some of the primary aggression is turned in against the individual himself. On this basis we are explaining finger sucking, nail biting, head banging, nose picking. We feel that this hypothesis of inturned aggression gives us added insight into the human qualities of reserve, restraint, passivity. We see it operating in self-criticism, self-depreciation, self-condemnation, self-hatred, self-punishment. The term 'conscience stricken,' to some of us, carries the implication of inturned aggression, while in morbid state of guilt and asceticism we see further evidence of the process. Lastly, there are those of us who see homicide as the culmination of out-turned aggression and suicide as the culmination of inturned aggression.

Primitive aggressive impulses that are repressed belong to the realm of the unconscious. Being unaccepted by the group they are unaccepted by the individual. He is unwilling to admit that he possesses them, but that does not get rid of them. They continue to operate behind the scenes. They constitute the 'caveman' in every one of us—the animal nature.

However, we have come to take a different attitude toward this integral part of the total personality. We feel that the application of moralistic terms, such as bad, evil, etc., to our animal nature, to what is basic and fundamental, is injurious to psycho-biological development. Such cultural condemnation re-enforces the individual's condemnation, and we are of the opinion that the aggression is then turned inward and is conducive to a morbid sense of guilt. Carl Jung has pointed out Freud's error in referring to the primitive in us as the polymorphous perverse criminal. Jung sees primal aggression as a remarkable manifestation of nature, something to marvel at and be respectfully studied and recognized as our original endowment.

We feel there should be greater acceptance of its pure unsocialized expression in the infant—too much of the child's healthy and normal aggression and play is to-day being repressed by family or cultural taboos, and prematurely forced into narrow intellectual channels. We feel there should be greater tolerance toward aggression in youth and a wholesome recognition of its existence and potentiality

in the adult. All this is an important step toward prevention and resolution of some of our mutual psycho-biological problems.

A few words as to treatment. As man's concepts of disease and disease causality change, there must necessarily follow changes in his methods of prevention and care.

Attempts to treat mental conditions solely on the basis of a physical cause are unsuccessful. Every conceivable form of surgical, glandular, and medicinal therapy has been tried without avail.

Adoption of the dynamic psycho-biological concept has resulted in more effective methods of treatment. Because we are primarily interested in the whole and not the part, the total personality is treated, and also the total situation to which the personality could not adjust.

As in the case of cancer, we are emphasizing the necessity of an early diagnosis — that is, the recognition in early life of what is a maladjustment to a certain cultural setting. The individual is then completely detached from this setting for a long period, and placed in a new social setting that as far as possible is the reverse of the original one. Father-mother-child relationship is replaced by doctor-nurse-patient relationship. During this period in severe cases, no single element of the old culture should be allowed to enter—this means no visits from the family, relatives, or friends, and no letters or gifts.

Often a resolution of the problem demands little more than this from the patient, but calls for a radical re-adjustment on the part of the relatives that made up the original causative situation. Parents find it extremely difficult to understand, and every effort should be made to make them realize the seriousness of the condition and the extent to which quite unconsciously they may be perpetuating the difficulty. They must be weaned fom the persistent idea that the whole trouble is physical. Once they grasp the psycho-biological significance of the process, they see the justification for the therapy adopted, and full co-operation is secured.

During the period of isolation from the family in a controlled environment—best achieved in a modern psychiatric hospital—equal emphasis is placed on both the objective and subjective aspects of the total personality. We have acquired from our medical and mechanistic experience excellent technique for exploring the objective or physical—but we are now only beginning to develop techniques for exploring the subjective. Getting the patient to talk freely in his own language, without leading questions and without interruption, is of fundamental therapeutic importance. In order to facilitate this process, and to make the patient feel comfortable, we have learned that the best attitude on our part is one of humility and a willingness to listen. We must be on guard against our natural aggression and egotism. That superior attitude so frequently justified in the doctor-patient relationship is to be guarded against, inasmuch as the physician actually knows nothing of the patient's inner world except what the patient feels free to tell him. The physician, as far as possible, should use the patient's language throughout, and not medical terminology. If necessary, the condition should be referred to as an emotional illness, and never a mental illness. Patients will accept this because we are referring to some-

thing—emotion—which they know through experience has mental and physical components. The word 'emotion' has a certain psycho-biological significance.

The recognition that healing in this field, as in all others, is an art and not a science, will go a long way toward giving us the right attitude and approach to human problems. What we find in all symptoms, in all behaviour, thought, and dreams, we regard as manifestations of the primitive aggressive drive. We must remember that our primary purpose is to treat the cause and not the symptoms. Sleeplessness, overwork, drug addiction, worry, alcoholism, sexual maladjustment, over-conscientiousness, excessive guilt, which are frequently spoken of as causes of emotional illness, are now regarded as symptoms. Symptoms, if you wish, of some misdirection, distortion, or perversion of aggressive drives. We are taking the emphasis off sexuality, and we now see excessive guilt as bearing a much closer relationship to primitive hatred, aggressive and destructive impulses, than to sexuality. A morbid sense of guilt, according to some of us, is akin to self-hatred and is a manifestation of inturned aggression.

Therefore, one primary aim in therapy is to try to give the individual a healthy understanding of his primitive self—not as something bestial, loathsome, criminal, or immoral—but rather as something unmoral, immature perhaps, or inappropriate, but natural and fundamental.

The patient has considerable resistance to disclosing his basic drive in the form of repressed hatreds and destructive impulses, because of the moral implications. He should be encouraged to discuss frustrations throughout life where he has repressed resentment and hatred and the impulse to attack. The wholesome and satisfactory redirection of these impulses, their expression at an accepted level, and a return to health, cannot be achieved until there is, first of all, a clear recognition and not a denial of their origin, existence, and potentiality.

Even if we care to regard our primitive nature as the enemy within us, we still feel that the most successful way to conquer the enemy and subject him to our control, is not to ignore his existence or deny his strength, but rather to study him, to learn his hiding-places and the various disguises, tricks, and devices that he is likely to use.

In your daily life you, perhaps more than any other group of men or women, are in a position to see some of the earliest manifestations of social maladjustment. Because of your intimate relationships with families, your confidences with parents and adolescents, you cannot but consider each individual primarily as an integral part of his cultural setting. By holding to this psycho-biological point of view, and becoming sensitized to the potentialities of certain types of family settings, you will be able to function as an important medium through which the psychiatrist may learn of latent and nascent personality disorders, while there is still time for him to institute effective therapeutic measures.

It is rather imperative that the whole matter of individual treatment be left entirely to the psychiatrist, not only because of his experience, but, what is more important, because we know that in every total personality problem there are physical as well as mental aspects to be carefully considered. However, by educa-

ting families to a more wholesome and understanding attitude towards psychiatry, by lending support to the general principles of psycho-biology and thus removing the stigma from so-called mental illness, by frequent discussions of mutual interests and difficulties with psychiatrists, by helping to refer early social and personality problems to them—in any one of these ways will you be rendering the most valuable service to the cause of therapy.

In conclusion, I wish to emphasize what is perhaps the most important of all recent trends in psychiatry, and that is the very decided emotional trend in the direction of greater optimism, hope, and enthusiasm. The new dynamic philosophies and psycho-biological concepts have at last shown us the way to break down that unwholesome, despairing, and fatalistic attitude that too long has persisted toward mental illness. After years of using static concepts and remaining static, the dynamic point of view has brought us stimulation and encouragement, and we feel that we are now moving forward and are on the threshold of revolutionary developments and great progress in the understanding, prevention, and treatment of psycho-biological disorders.

The Doctor in the Witness-Box

By A. J. Belford, B.L.

A Paper read before the North-East Ulster Division of the British Medical Association

No one can question for a moment the important part played by the medical profession in the administration of justice in our own Courts to-day.

Formerly the medical witness was a *rara avis* in our Courts, but from the Courts of Petty Sessions to the Court of King's Bench, the spectacle of a doctor in the witness-box is now a daily occurrence, and this is due in no small measure to the advent of the Workmen's Compensation Acts, and to the enormous number of personal injury cases arising out of motor collisions with which our Courts are now obliged to deal. Consequently, as almost every practitioner is bound sooner or later to appear in the witness-box, it is up to him to present his evidence to the Court in such a way as will enable the Court to come to what he believes to be an honest determination of the matters in issue.

In some cases the medical questions involved are comparatively simple, such as in cases of assault or drunkenness, and the lay tribunal can to a certain extent exercise an independent judgment upon them. But speaking generally, the doctor in the witness-box is almost in the position of a man who is interpreting for the Court from some foreign language, and accordingly it is obviously his paramount duty to be scrupulously fair and frank. I may say in passing that the medical witnesses as a class prove worthy of the high confidence reposed in them.

Medical witnesses belong to the class known as "expert witnesses," and the rules of evidence which apply to ordinary witnesses have been modified in an important respect in favour of this class. Speaking generally, the ordinary witness may only give evidence as to facts, and from these facts the Court draws its own

ting families to a more wholesome and understanding attitude towards psychiatry, by lending support to the general principles of psycho-biology and thus removing the stigma from so-called mental illness, by frequent discussions of mutual interests and difficulties with psychiatrists, by helping to refer early social and personality problems to them—in any one of these ways will you be rendering the most valuable service to the cause of therapy.

In conclusion, I wish to emphasize what is perhaps the most important of all recent trends in psychiatry, and that is the very decided emotional trend in the direction of greater optimism, hope, and enthusiasm. The new dynamic philosophies and psycho-biological concepts have at last shown us the way to break down that unwholesome, despairing, and fatalistic attitude that too long has persisted toward mental illness. After years of using static concepts and remaining static, the dynamic point of view has brought us stimulation and encouragement, and we feel that we are now moving forward and are on the threshold of revolutionary developments and great progress in the understanding, prevention, and treatment of psycho-biological disorders.

The Doctor in the Witness-Box

By A. J. Belford, B.L.

A Paper read before the North-East Ulster Division of the British Medical Association

No one can question for a moment the important part played by the medical profession in the administration of justice in our own Courts to-day.

Formerly the medical witness was a *rara avis* in our Courts, but from the Courts of Petty Sessions to the Court of King's Bench, the spectacle of a doctor in the witness-box is now a daily occurrence, and this is due in no small measure to the advent of the Workmen's Compensation Acts, and to the enormous number of personal injury cases arising out of motor collisions with which our Courts are now obliged to deal. Consequently, as almost every practitioner is bound sooner or later to appear in the witness-box, it is up to him to present his evidence to the Court in such a way as will enable the Court to come to what he believes to be an honest determination of the matters in issue.

In some cases the medical questions involved are comparatively simple, such as in cases of assault or drunkenness, and the lay tribunal can to a certain extent exercise an independent judgment upon them. But speaking generally, the doctor in the witness-box is almost in the position of a man who is interpreting for the Court from some foreign language, and accordingly it is obviously his paramount duty to be scrupulously fair and frank. I may say in passing that the medical witnesses as a class prove worthy of the high confidence reposed in them.

Medical witnesses belong to the class known as "expert witnesses," and the rules of evidence which apply to ordinary witnesses have been modified in an important respect in favour of this class. Speaking generally, the ordinary witness may only give evidence as to facts, and from these facts the Court draws its own

conclusions; but the medical witness is permitted to give his opinion upon the facts which he has observed, or which are submitted to him. In other words, the Court entrusts him with the duty of interpreting those facts, and this shows what a responsible and powerful position he occupies. Thus the case of Eccles v. Murphy was decided some time ago by the Court of Appeal in Belfast. Eccles sued Murphy in the High Court for damages for personal injuries. Murphy would have been entitled to have had his case tried in the County Court if he could have proved that Eccles's injuries were such that no jury would give him more than fifty pounds damages. He brought a motion to remit the action to the County Court, and medical affidavits were filed on behalf of both parties. These affidavits were exceedingly contradictory, and the Court of Appeal held that it was not going to try the case by affidavit, but that it was the duty of the Court to examine the medical evidence of the plaintiff, and that if this affirmed injuries of sufficient seriousness to warrant the action being retained in the High Court, then the medical evidence of the defendant should be disregarded and the case should be retained. Although the doctors for the plaintiffs in this type of case have virtually the power of deciding whether a case will be tried in the High Court or the County Court, this power is seldom abused.

At the outset of my remarks, I should like to say a few words about the position of doctors as regards "privilege" in cases which come into the Courts. For a witness in Court, there is no privilege recognized by the law as regards facts which the doctor may have observed, or with which he has become acquainted, in his capacity as medical attendant. Obviously this cannot be allowed, because it would conflict often with statute law, or hinder the administration of justice. In civil and criminal proceedings it is apparent that in many cases the ends of justice would be defeated if doctors were allowed to decline to give evidence of the facts which had become known to them. One can easily understand that in many cases it must be very unpleasant for a doctor to find himself asked to disclose information about his patients, but he can do no more than appeal to the judge to know whether he is bound to answer. The judge will say "Yes"; but the doctor will feel that he has done what he can to preserve the confidential relationship between himself and his patient; if he persisted in refusing to answer, he is liable to be committed for contempt of Court. Incidentally, I may mention that what a witness says in the witness-box is privileged, which means that it cannot be made the subject of an action for slander.

If the nature of a case to which a doctor is called is such as to suggest to him the possibility of ultimately being required to give evidence—it may be before a coroner or a civil or criminal Court—he should equip himself from the start for such an eventuality. He should record and observe most carefully everything that he finds. It is surprising how often great importance afterwards attaches to matters which at the time may not have seemed important. A doctor's connection with a case may begin only at a later stage, namely, when he is asked to examine with a view to be called as a witness; he may probably be furnished with views or theories by the parties engaging his services. He should keep an open mind: he should

make his examination fully first, and then see to what conclusion it leads; if he cannot to his own satisfaction support the case, let him say so plainly; if he can, let him be careful to include in his "case note" everything which really affects his conclusion. It may be a long time before he finds himself in the witness-box, and when there he may refresh his memory from his note; but he may also be asked to show it to the counsel for the other side; obviously if something to which in his evidence he has attached great importance is not to be found in the note made at the time, he lays himself open to criticism. As regards the making of the note, dictation will do, provided he takes the precaution to initial it and sees that it is dated. The note should be made at, or as nearly as possible at, the time of the examination; the witness should have the original note with him, but the doctor should not make the habit of using this note too liberally—any "refreshing" should be done before entering the witness-box; a witness is not likely to create such a good impression on the Court if he gives the appearance of not knowing the facts.

When a doctor is examining one party on behalf of another, he should limit his inquiries to the medical issues involved. If the patient alleges that he was knocked down by a car, it is no sphere of his to inquire how the patient was knocked down, or whether it was his fault or not. In all probability the doctor has been informed as to the circumstances of the accident by the person who has employed him, and whether he has or not it is immaterial. In case of alleged concussion, it may be necessary to ask a few questions about how the accident happened in order to test the powers of recollection of the patient; but the doctor should always remember that he is liable to antagonize the Court if he attempts to give evidence of alleged admissions made by the patient during examination.

Not infrequently, I suppose, you may wish to apply certain tests when making an examination to help you to decide whether a man's condition is really the consequence of an injury or is due to disease. It is not always easy to know what to do. Each case must depend largely, of course, on its own special circumstances, but this much I may say—if there is some test which in your view is really essential to forming a sound conclusion, but is perhaps lengthy and wearisome to the patient, you should at least ask him to consent to it, otherwise you may find when in the witness-box it is put to you: "Isn't 'so-and-so' an accepted test of the presence of such disease?" you have to say "Yes"; and when you are asked why you did not apply it, you can say, "Well, I asked permission to do so, but the man objected, and I could do no more." It will at any rate show that you were not avoiding it for fear it might have negatived your view of the case. Such cases are largely obviated under the Workmen's Compensation Act, because that Act contains provisions for what is in effect a compulsory examination of the man on behalf of the employer, and further provides that if he refuses to submit to or in any way obstructs such examination, his right to compensation may be suspended until he has submitted; so in cases under that Act you would report to the employer's solicitors that you were not able to make what you considered a proper examination, and the Court would then have to decide whether the man was refusing to submit or was obstructing the examination. In connection with such

examination, the House of Lords has held that there is no absolute right in the workman to have his own doctor present at such examination, so if a workman refuses to submit himself, unless his own doctor be present, it is for the Court to say whether his refusal is reasonable or not. From your point of view, you need not worry over any question of etiquette as regards the attendance of the man's own doctor, though doubtless you would not object to his presence.

When the case is one where you have to rely mainly or wholly upon subjective symptoms, test the man's credibility during your preliminary examination by such devices as appear best to you, so as to be able when in the witness-box to fortify your conclusions that he was or was not exaggerating his symptoms, or perhaps malingering.

Sometimes doctors from either side meet by arrangement of the parties for an examination of the applicant, with the hope of agreeing, say, for instance, as to whether there is any incapacity, or whether the condition is the result of accident or disease, and so saving litigation. This is an excellent thing to do, but on all such occasions the discussion should be by arrangement "without prejudice," so that neither doctor can be examined or cross-examined if the case should eventually come to Court, as to what was or was not said by one to the other.

Do not give your solicitor a stronger report than you can really maintain in the witness-box. The solicitor puts implicit confidence in you, and he may have incurred needless expense if in the witness-box you suggest, say in a High Court action, that the injuries are such that the matter could have been dealt with in the County Court. Remember that counsel opens his case largely from your report, and it is a fatal thing to open it too high and see it brought down. Make a point of seeing counsel before the case is called; counsel can get a better grip of the medical aspects from a talk with you, he can discuss with you the nature of the points which the other side is likely to put forward, and get your observations upon them. Also do all you can to get a correct version of the facts. In hospital cases, ask to see the notes; they are not strictly evidence unless produced by the doctor who made them (who has often gone away), but the Court of Appeal in England has expressed the view that they should be at the disposal of both sides. Of course, if in the progress of the case, facts new to you come out which cause you to modify or alter your views, you will naturally have to act accordingly in the witness-box; but in such a case take care to let counsel know how the new or altered facts affect your view.

Now, let us assume that a case has reached the Court, and that you are going to give evidence for the defendant's side. Do not think it is enough to be called by the telephone to hurry round when your evidence is wanted, and then hurry away again. In a great majority of cases it is most essential that you should hear all the evidence, and especially, of course, the medical evidence; you may thus obtain some entirely fresh light upon the matter, and you can then with your special knowledge be enormously helpful to your counsel; and further, when you go into the witness-box you will know exactly how the case stands and what you have to meet, and will be forewarned against the line of cross-examination.

As regards the actual giving of your evidence, remember that the simpler the language of the expert, the greater is his effect upon the Court.

Professional evidence should, therefore, be as unscientific as possible when given in Court. Take care to have ascertained beforehand what the real issues in the case are. I am afraid it does not always occur to those who engage your services that it is necessary for you to know the precise issues, but it almost always is, and you should see that you are well informed.

In many of the matters that come into Court under the Workmen's Compensation Act, the question is whether the injured man is now sufficiently recovered to do work. In these cases you are asked to give evidence as to his capacity for work and as to what work is suitable for him : you should therefore ascertain what work it is that the employer is suggesting as suitable, and go and get personal knowledge of the actual work and the surrounding conditions. Counsel for the man cross-examines you somewhat in this fashion : "Don't you think for a man with impaired sight the work is unsuitable because of his having to go about when machinery is in motion or chips flying about?" or whatever it is. If you can say "No; I have seen the place myself, under ordinary working conditions, and the job is quite suitable for him," you enormously increase the value of your evidence.

Again, always remember that though the medical aspect of the case is perfectly plain to you, it is seldom plain to the judge or jury; so that you should give your evidence in a way which will commend itself and be intelligible to the Court. Give in as simple language as you can the data upon which you rely and the reasons for your conclusions. When you are being cross-examined, keep your temper, for the gentle art of cross-examination embraces infinite styles and varieties, and some, I am sure, can be very irritating. Listen carefully to the question, beware of double questions, and if you do not understand what is put to you, say so and get it made intelligible to you before you answer. When being cross-examined, do not merely answer 'Yes' or 'No' to medical questions; such questions are being put to you presumably—at least they should be, because the witnesses for the other side are going to give them as their views, so explain your reasons for not accepting what was put to you.

Avoid arguing with the cross-examiner; if there is anything you consider really objectionable in a question, or in the way of putting it, appeal to the judge; you are entitled to be protected from unfair treatment—but, of course, don't do that unless it is really bad.

If an extract from a book is cited to you on cross-examination, remember that you are fully entitled to see the passage and its context before you give your answer; it not infrequently happens that when investigated with its context, the point which was intended to be made against you wholly collapses; or the quotation may be from a standard work now out of date; or from an old edition of a work in the recent edition of which a different view is given; or it may happen that the passage was one cited by the writer of the book for the purpose of contradicting it or exposing its fallacy. But when you know that you are giving a view which is really contrary to the usually accepted view, be ready to fortify it by your special experience or other good ground.

Sometimes it is necessary for a doctor to commit his views to writing, as when making an affidavit on a preliminary application, such as a motion to remit. If confronted with some earlier observation of your own, on a point on which you have altered your views, do not try to camouflage the two views, but say why you have changed your mind in the light of further experience or whatever the cause may be. I think myself that when such a situation is dealt with fairly by the witness in that way, the effect on the judge's mind is to confirm rather than detract from the value of the evidence. The judge knows as well as you do that science is never final—experience, new discoveries, further research, cause the modification or reversal of views previously held; and the judge respects a man who is strong enough to say that he has changed his mind in the light of experience. It may well be that injuries which were not and could not be at first discovered, have now come to light. If this is so, tell the Court why you were unable to diagnose them on your previous examinations. In this connection, a few months ago at Lurgan Quarter Sessions, I heard a very interesting case, where a workman was seeking to have his award increased on the ground that his condition had become worse. He had been employed in a foundry, and got caught in machinery and was obliged to have one leg amputated. He received compensation, but about twelve months after the accident he began to lose the power of his right arm. It was then discovered that his muscle of the shoulder, especially the deltoid, had completely wasted away, and he then claimed additional compensation. His application failed on grounds which are not material, but it was admitted by the medical experts that the wasting of the muscle was due to injury of the roots of the nerves at the spine, although this injury was not apparent until about twelve months after the accident.

If, as I suppose must sometimes be the case, even with doctors, in cross-examination you find yourself being cross-examined on a subject on which you have no particular knowledge, do not try to answer: say you cannot deal with that, and refer your examiner to some other witness who is going to deal with the matter. I assure you the Court will esteem you more highly for not pretending to have knowledge that you do not possess. I need hardly advise you to avoid making any sort of attacks upon the other medical witnesses, or giving the impression that you consider yourself far superior.

It is often a matter of amazement to counsel, and must even sometimes be so to yourselves, to find how completely doctors differ or appear to differ from each other in the evidence that they give about a case. Presumably both sides cannot be right: though I believe that in the great majority of such cases both sides are honestly giving their opinion; the reasons for this difference are no doubt various. Perhaps the most influential one is that of unconscious partisanship. You have become identified, as it were, with the one party; you are for his side; you cannot help noticing particularly and perhaps magnifying the points that assist your side's case; you overlook or fail to give due weight to the points that do not fit in so well. The medical witness should be on his guard against this from the beginning. He should remember that he has probably approached the case at the very start with one side's view placed before him; he begins by looking for something and expecting to find it, instead of looking with a quite open mind to see what he does find.

Or again, when he is in the witness-box, and is being cross-examined, he feels that it is "up to him" to justify the confidence placed in him by his side; it is human nature to want to "play up" accordingly, and almost unconsciously he adds a little or omits a little: he cannot bear the idea of "letting down" his side, or being what might seem "disloyal," and when faced with a point which he sees might be unfavourable, he screws himself up just a little bit to enable him to discount it, justifying it to himself perhaps by saying, "Well, I know my man really is in the right, and is entitled to succeed." A clever cross-examiner will comprehend your state of mind, and try to get you to go a little farther and still a little farther, and in the end you have to go too far and the damage is done.

Sometimes the cause of this difference of views is of quite another kind: there may be a real division in the profession upon the point under discussion—some think this, some think that. Here is a chance for you to help counsel, for, as a rule, doctors know something of one another's views and theories.

Again, it may be in some cases that the respective doctors may have made their examinations at widely different times, and the patient's condition may have essentially altered. No doubt various other reasons will suggest themselves to your minds. I mention these matters to impress upon you that you can frequently be of great assistance to counsel, not only by giving your evidence in the witness-box, but by closely following the whole evidence and giving advice to him on points of this kind which may be useful for cross-examination. May I add, when possible jot down your "tips" on paper and let him have them; it is not at all easy to take them in from a whispered conversation while perhaps counsel is on his feet examining or cross-examining. You must remember that rarely, if ever, has counsel sufficient medical knowledge of his own to hope to cross-examine a medical expert effectively, and rarely too, I am glad to say, has he any ground for cross-examining such a witness as to his honestly or credibility; and so his only chance of making any impression is being supplied by you with material whereby he may throw some new night on the case, or lay bare the reason why the doctor under examination may have been misled in forming his view of the case.

If you make a deduction from certain stated facts, be sure there is no flaw in your deduction.

When you are being cross-examined, be on the look-out for questions which assume that you have said something which you have *not* said, or that something has been proved which has *not* been proved, and for questions to which you cannot properly answer 'Yes' or 'No.' For example, "Have you given up beating your wife?" Considerable latitude is allowed to the cross-examiner, but he has no right to put unfair questions or make inaccurate statements, and the witness is fully entitled to point out the inaccuracy, and, as I have said, in extreme cases to appeal to the judge, if he thinks the question unfair. When you feel you have scored a point and floored the cross-examiner with your answer, be content—do not try to kick him as well. That proceeding is apt to do harm. Your parting kick discloses something that provides him with a new weapon. So let well alone. Remember the epitaph on the tombstone of one who failed to do so: "I was well, I wanted to feel better, I took physic, and here I am."

Bear in mind always that your position is to assist the Court to arrive at what you believe to be a correct conclusion upon the medical question in the case, and you will do that most effectively by not showing any resentment at cross-examination, or trying to score off counsel personally, but by answering the question courteously and simply, and as opportunity arises giving the reason why you cannot accept this or that suggestion that is put to you. So long as the medical witness conducts himself as an impartial expert giving assistance to the Court, no counsel will gain any advantage by attacking him; it is only when he shows himself biased or gives the impression that he is keeping something back, that he really exposes himself to effective cross-examination.

A medical witness in the box usually gives his evidence-in-chief (that is, for the party who calls him) with greater effect if he is allowed to give it in his own way; it is enough as a rule for counsel to say, "You examined Mr. X on such a day : what did you find?" Then you state all that you regard as of importance, and he then asks for your conclusions. This is far preferable to the half-and-half sort of way that so often occurs when counsel asks about this and that, and then the doctor is left wondering whether or not to mention other matters that have not been specifically asked. When this position does occur, I advise the doctor to go on and complete all that he thinks bears on the point. But such misunderstandings seldom arise when there has been a previous consultation. Again, when you are giving your evidence for the defendants—that is, after the doctors for the plaintiff have been in the witness-box, you should be prepared for your counsel to travel beyond your report, because he will almost certainly ask you to give to the Court your views upon the points made by the doctors on the other side. He will probably say : "Now, doctor, you heard Mr. A say he thought this was a case of so-and-so; what do you say about that?" Then is your opportunity to explain why you differ, and to endeavour to do so in a way that will convince the Court that your reasons are sound. By doing this you have incidentally made it difficult for the Counsel who has to cross-examine you, because you have dealt in advance with most of his material; and if he still persists, the judge gets restive and says to him : "The doctor has already explained that; what's the good of merely putting it to him over again."

Now, may I just try to give you a short summary of my suggestions?

Approach the case with an open mind. Your examination should be complete, not limited (except in obvious cases) to the part affected or injured, but generally of the systems and organs; it may later prove to be as important to say that such and such symptoms were absent, as that some others were present.

Investigate carefully all the objective symptoms, and if the man complains of some that you do not then see—for example, sickness or passing blood—try to get a chance of seeing them; satisfy yourself as best you can about the subjective ones; make and keep careful records, and date them, and make as sure as you can that you have got the facts right.

When you make your report or give your proof, let it be as intelligible as possible to the counsel who is to have it; give the dates of your examinations; what you

observed on the several occasions (if more than one), and then your conclusions and the reason for them. Ascertain what are the issues or points in the case, and show the hearing of the medical evidence upon them.

Attend, if possible, at a consultation with counsel, and tell him what are the debatable features, and the probable criticisms or attacks to be expected from the other side.

When the case comes on, be there, stay there, and listen to the opening and the evidence, and jot down for counsel any tips or comments that occur to you.

Diagnose the judge, and see what treatment he needs; then give it to him in the witness-box. For example, clear his mind of some fallacy you may have seen him absorb.

When in the witness-box speak plainly and not too fast, and as much as you can *towards* the judge. It is a good thing as a rule to adjust your pace to the judge's note if he is taking one. Watch his pen; keep cool; do not let counsel make you lose your temper, do not argue with him; do not answer questions without being sure you understand them; and always remember that the judge regards you as there to assist the Court in arriving at the true view, and to give your opinions and to make your criticisms honestly and impartially. Try to convey to the judge a clear and definite impression of what your decision would be; he wants you to help him to arrive at a right conclusion.

A Case of Vertigo.

By Robert Cummins, M.D., F.R.C.P.I.
Cork.

In presenting some notes on a case of vertigo, it may be that such a title is wrong—that vertigo should be classed as a symptom and not as a disease. Nevertheless, even when approached as a symptom, vertigo can be most obscure, and the actual pathological lesion responsible for the condition may be extremely difficult to determine. Even if the vertigo responds to treatment, as in the case to be referred to, I am still left doubtful as to what the exact nature of the pathological changes were, which produced the symptom. While the general cause is clear, the particular local factor remains elusive—and this is the most unscientific position in which to be placed.

As the causes of vertigo may be manifold, it is as well to recapitulate a few general points with which everyone is familiar, to form a basis of approach to the subject.

Equilibrium is said to be controlled from the cerebellum. Afferent impulses are carried to this centre from—

1. The semi-circular canals and auditory apparatus.
2. From the eyes.
3. From cutaneous sensation.
4. From muscles and joints.

observed on the several occasions (if more than one), and then your conclusions and the reason for them. Ascertain what are the issues or points in the case, and show the hearing of the medical evidence upon them.

Attend, if possible, at a consultation with counsel, and tell him what are the debatable features, and the probable criticisms or attacks to be expected from the other side.

When the case comes on, be there, stay there, and listen to the opening and the evidence, and jot down for counsel any tips or comments that occur to you.

Diagnose the judge, and see what treatment he needs; then give it to him in the witness-box. For example, clear his mind of some fallacy you may have seen him absorb.

When in the witness-box speak plainly and not too fast, and as much as you can *towards* the judge. It is a good thing as a rule to adjust your pace to the judge's note if he is taking one. Watch his pen; keep cool; do not let counsel make you lose your temper, do not argue with him; do not answer questions without being sure you understand them; and always remember that the judge regards you as there to assist the Court in arriving at the true view, and to give your opinions and to make your criticisms honestly and impartially. Try to convey to the judge a clear and definite impression of what your decision would be; he wants you to help him to arrive at a right conclusion.

A Case of Vertigo.

By Robert Cummins, M.D., F.R.C.P.I.
Cork.

In presenting some notes on a case of vertigo, it may be that such a title is wrong—that vertigo should be classed as a symptom and not as a disease. Nevertheless, even when approached as a symptom, vertigo can be most obscure, and the actual pathological lesion responsible for the condition may be extremely difficult to determine. Even if the vertigo responds to treatment, as in the case to be referred to, I am still left doubtful as to what the exact nature of the pathological changes were, which produced the symptom. While the general cause is clear, the particular local factor remains elusive—and this is the most unscientific position in which to be placed.

As the causes of vertigo may be manifold, it is as well to recapitulate a few general points with which everyone is familiar, to form a basis of approach to the subject.

Equilibrium is said to be controlled from the cerebellum. Afferent impulses are carried to this centre from—

1. The semi-circular canals and auditory apparatus.
2. From the eyes.
3. From cutaneous sensation.
4. From muscles and joints.

Interference causing vertigo may be central, originating in the neighbourhood of the cerebellum—or through failure of any one or other, or all of these afferent channels.

As an elementary example, a man may suffer from vertigo on walking on felt or grass after a period of walking on hard pavement, owing to failure of readjustment or cutaneous afferent impulse from the soles of his feet.

Or again, I once suffered from a violent attack of vertigo when I suddenly turned from a mountain face that I was climbing and contemplated the void beneath. My occular afferent impulses, tuned to near vision, completely failed to adjust themselves to the vastly expanded distances. The overwhelming suddenness and violence of the seizure made me literally cringe against the mountain slope, with my eyes closed, while the whole invisible world seemed to whirl in chaos. These are special circumstances where the occular afferent channels are at fault. The experience gave me a genuine and lasting sympathy with anyone who complained of severe vertigo occurring in everyday life, in what might be termed normal circumstances, through no fault of their own.

Generally the examination of this symptom of vertigo usually consists in investigating these afferent channels. In practice the vertigo may often be directly associable with the eyes or ears, and the patient can be directed to a specialist, but in other cases the investigation extends itself, and it may become necessary to explore any general conditions of ill-health which might be thought to interfere with these afferent channels. This inclusion of general conditions of ill-health, unfortunately, both enlarges and obscures the field of investigation enormously, and may lead us through devious paths of fruitless speculation, into the quagmire of empiric treatment. This course is to be deplored; it has at times been my misfortune to follow it, and in fact I approach a case complaining of vertigo with some feelings of trepidation.

In April, three years ago, I received a letter from a relative in Dublin, asking me to treat him for severe attacks, commencing at Christmas. As treatment was to be by post, and my knowledge of his constitution was to be the basis of treatment, I declined the responsibility. He was an electrical and mechanical engineer and architect. I suggested that if there was a fault in the dynamo of my motor-car, I would not expect a Dublin garage to correct it by post, and I gave him the names of several Dublin physicians, and advised him to consult one of them. He replied that he did not believe in the Dublin physicians, that he had no opinion of them. I heard nothing further directly of the matter until I called to see him while passing through Dublin in September. I had heard through other sources that the vertigo had become very serious, and I anticipated trouble. This unfortunately proved to be the case, and my visit degenerated into a holiday consultation. His age was 59 years. He described his attacks. He stated that they commenced quite suddenly, when he was in the street or open. They came with such fulminating violence that he fell down or crumpled up, on the ground, wherever he happened to be situated, on the pavement, in the road, in the middle of traffic.

He never went out without his housekeeper or a friend—even to his office, three

hundred yards away. He dreaded road-crossings. Attacks were less frequent when he was attended. He never had a severe attack indoors. He never vomited. The attacks passed off quickly after about a quarter of an hour. They were more frequent in the morning.

He never had any warning or aura, never fell particularly to one side or the other, was conscious of no sequential order in attacks, no localizing sensations, just appalling giddiness. "I think I shall have to give up my work," he said, "as I am sure my brain is going."

This was the position, and something had to be done. Though he was a relative, I had the very highest regard for him, and his expert knowledge on various subjects made him a most useful member of the community.

"I am afraid my brain is going" sounded pretty bad. I took up the book he had been reading for pleasure, as one would a novel. The title, "Theories of the Differential Calculus," rather reassured me, and I told him he need have no fear of his brain. He told me that a month after he had written me, the attacks became so bad that he went for a fortnight's holiday to his brother, a doctor in England.

He said it was a delightful holiday, because he had met the principal representative of Messrs. Lietz, opticians, at a hydropathic institution, and they were able to discuss some advanced optical problems of mutual interest. (There was evidently nothing the matter with his higher mental functions.) But his brother's careful examination and various treatments had been ineffectual.

The only one that had given him temporary relief was very large doses of bread soda, producing looseness of the bowel; the day after a dose the attacks were less frequent. This temporary alleviation had disappeared on his return to Dublin.

A relative told me that on one occasion while walking up Kildare Street with him, a bus passed rather noisily. She was conscious of two arms flung round her, and she was dragged to the ground in a mixed heap. After five minutes they were able to proceed cautiously, but she had to give him vigorous support. This indicates the severity of his vertigo. These are all the relevant facts regarding the nature of the attacks that I could gather.

The only points that might have some bearing from his medical history were: Thirty years previously he had suffered from yellow fever in Trinidad, when a sub-lieutenant in the Navy; he was discharged after the illness owing to the discovery of colour blindness, which prevented his reading the signals: this proved only to be temporary, but he was never reinstated. He stated that his eyesight now and ever since was perfectly satisfactory. He used distance and reading glasses combined. He thought that he had always been made giddy a little more easily since this illness, but it had never given him any inconvenience whatsoever for thirty years.

One other illness he had had, which was quite unconnected. He had been experimenting to make a perfect electric battery with liquid gases. A cylinder of chlorine had exploded, and he was found unconscious and badly gassed half an hour after. He quite recovered, and gave up the battery idea.

GENERAL EXAMINATION.—He had never had syphilis. *Nervous System:* Nothing

abnormal; no headaches. *Sensation:* Heat and cold touch and pain normal. *Reflexes:* Normal; Rhomberg's sign absent. *Cardio-Vascular:* Heart sounds normal. He stated that his brother had told him that his blood-pressure by examination was neither high nor low for his age. Tactile impression confirmed this. *Renal:* Again his brother reported it normal. He had not lost weight; his general appearance was healthy.

Auditory: His hearing was perfect. The ear-drums had been examined without result.

Nose, throat, and respiratory system: No catarrh of any sort. He was a moderate pipe-smoker.

Alimentary system: Since the attack of yellow fever, he always had a slight tendency to looseness of the bowel. It never inconvenienced him.

Mouth: The tongue showed slight furrowings. There were eight teeth remaining; these had the colour and appearance one would expect in a man over fifty years. They were grey tinged, dull, lustreless, but firmly set. A slight line was present along the gum margin, but no visible pus could be milked up. In fact, the most dangerous and yet the most difficult type of teeth to deal with, because they remain efficient for mastication, and cause no pain or obvious symptom. Painless low-grade inflammatory reaction had taken place around all the roots, making them firmer. Extensive bacterial absorption into the circulation takes place and it simply depends on the individual's vigour whether he can neutralize it in whole or in part, and for how long. Such teeth are seldom condemned either by doctor or dentist.

This is all the information I could obtain; doubtless there was much more that a more astute observer would have discovered, and with the assistance of a specialist more definite localization of the fault could have been determined.

The problem was that I was leaving Dublin in the morning. An opinion and advice had to be given. I had the advantage of understanding his temperament. He was a master of mechanical devices of all sorts and an expert metal worker, and was versatile in his attainments; for example, he had been called down to the Bog of Allen the previous summer after the Shannon Scheme experts had spent fruitless days trying to make the electric turf-cutters work, and in half an hour he put them in order. He had an extremely exact mathematical mind, he was obstinate and argumentative, and he was ever contemptuous of faulty reason. He would require a very precise and reasoned explanation if he was to be induced to follow any course of which he did not approve.

With these points in view I explained to him as exactly as lay in my power the mechanism of the semi-circular canals, and explained that his giddy attacks were due to sudden waves of altered pressure occurring in the endolymph, carrying abnormal impressions of position to the brain through the nerve connections. The almost automatic ingenuity of this part of nature's method of maintaining equilibrium quite fascinated his type of mind, as had been hoped, and decidedly impressed him. I continued, that in my opinion the interference with the mechanism of his equilibrium was caused by bacterial poisons absorbed from around his teeth. No other deviation of health had been observed by anyone; that while it could not be

guaranteed that the attacks would improve on removal of the teeth, there was a reasonable prospect of this. On the other hand, if they were left, he would certainly get steadily worse. I suggested getting in touch with a Dublin dentist and doctor at once.

Further discussion was, of course, necessary, but he finally submitted to this course. I saw a doctor the next morning; the teeth were removed in two days. The progressive attacks of eight months standing modified at once, and progressively, in both frequency and in severity. In a month they caused no inconvenience. In three months they had ceased. In the three years that have since passed he has had no attack, and has developed a tremendous increase of energy, frequently working up to 2 a.m. after a full day.

There are several particulars in this case that require explanation.

To the lay mind and superficial reasoning, the whole sequence of events is mercifully clear, but to us and on closer analysis this appears to be far from the case.

Uninformed opinion does not concern itself with details; the teeth were removed, the attacks ceased, that is enough. But if bacterial absorption did initiate the attacks, how, I ask, did it do it?

We presume that bacteria or their toxins enter the circulation more or less continuously, if a septic focus is present. Why, then, did they only produce attacks intermittently? Why more frequently in the mornings? Why were the attacks less frequent if the victim was reassured by the presence of a companion? Were the sound-waves impinging on the ear-drums (as in the motor-bus incident) a factor? Were the afferent channels from the eyes in any way at fault? Severe attacks always occurred in the open, where space relations were more complicated and moving objects confused the pictures he registered. What exactly was the pathological lesion? One presumes that there must have been one.

Why—and this is a question of general medical significance—why should one man carry his septic teeth to the grave without noticeable inconvenience, another develop arthritis, another go mad, another develop bronchitis or asthma, or achlorhydria and pernicious anæmia, or duodenal ulcer or diabetes, or premature myocardial degeneration? Did they in this case initiate labyrinthine disturbances of some sort?

This case, in fact, can be taken as a starting-point for an investigation of the peculiar and amazingly intricate interplay which takes place between the human host, and the bacterial enemy when it has established a lodgment in a chronic septic focus.

I would suggest that what follows is something towards an answer to the questions raised, a clinical explanation only, and limited to some extent by lack of specialist knowledge. I suggest that for a variable period of years, an individual can deal with a chronic suppurative focus. Continuous or intermittent invasion of his circulation by bacteria and their toxins takes place all the time, his immunizing apparatus neutralizes and destroys these invasions, and thereby his resistance is stimulated, to an even higher level than normal, to his own particular focal bacteria.

Autovaccination, to coin a term, maintains, and even elevates, his immunity. Look for a moment on the other side of the picture. The bacteria have made a lodgment, insignificant, it is true, on that man's periphery. They have a low virulence, or they would not continue to be able to feed precariously on the living gum margin, to which they cling with such gelatinous tenacity. Slowly, very slowly, they extend their almost imperceptible activities. They pierce the periodontal membrane, extend below the gum margin and invade the maxillary bones, slowly and tentatively. Persistently and inexorably their virulence augments, the immunizing apparatus of the host is stimulated more and more severely, until it reaches the crucial point. Autovaccination, from being a defence, has become an actual menace—the menace of overdose. The stage is set for the inevitable catastrophe. What form will it take? Will it be a sudden or a slow breaking down of immunity? Will it be partial or complete? More usually it is gradual, incomplete, slow, with all the intricate and inadequately understood individual variations of clinical manifestation often entirely unappreciated, and to all appearances quite unconnected with the distant septic focus; but sufficient to confuse and mislead even the most astute physician. The only break that may occur in this sequence is, that in a wave of unexpected common sense, the victim may cease from his tinkering and patchings, and have his septic focus eradicated completely. If this is done, autovaccination in excess ceases, the distant clinical manifestation unexpectedly disappears, and a real immunity is fairly rapidly re-established.

It is at this crucial point when the immunity maintained against a chronic inflammatory focus is on the verge of breaking, that medical consultation is most often sought, and sought too often in vain. A proper appreciation of the different factors involved can enable inestimable service to be rendered to the patient at this stage. A man can walk on the edge of a volcano for a very long period without falling in, or he can fall in at once. That is the position. Individual variations obscure the issue. Very often there is a long period during which the individual can be rescued from the precarious position he has reached by removel of the septic focus which is sapping his vitality. It should be realized that there is nothing so fallacious as to attempt to judge a septic focus by its size. A single septic tooth, for example, has illimitable potentialities for evil, and a population of bacteria living under and around it, bigger by far than the population of London, and more implacable as enemies than even the Huns under Attila. It must be borne in mind that dental foci become almost a certainty after the age of forty years in this country.

These are general observations, a few out of many that could be made, but they suffice in this particular case. I submit that this man had reached this stage of ebb. His immunizing response was on the verge of completely breaking, he had reached the volcano's edge. The tide of bacterial invasion was turning against him. What part of his defences were the first to give way? It was the weakest link, that which had already been injured in the attack of yellow fever many years before, namely, the afferent channels conveying impressions from the eyes. When in the open spaces with moving objects constantly passing, these were apt to fail, due to local

inhibition of function through auto-intoxication. In a small room or office he was still able to nurse his stability, and maintain his equilibrium. How long this would have continued it is impossible to say. The treatment was clear, when an appreciable cause was found. The proof was made evident by the result of treatment. I do not for a moment consider that in this case the semi-circular canals or the labyrinth were involved, though that impression was conveyed deliberately to the patient.

The most important inference that can be drawn from a study of this case is that if the septic focus had been removed a year before the attacks of vertigo had commenced, it is probable that he would never have suffered from vertigo at all. If this inference is admitted, it becomes a fact of profound significance, where prophylactic consultation is sought. In such cases, oral streptococcic foci should be searched for systematically, as a routine, and eliminated ruthlessly, when permission can be obtained. Do not consider that it is implied that every sufferer from dental sepsis will suffer from vertigo in a year or so, if his focus is not eradicated. Every sufferer from dental caries has not impaired occular afferent channels, as in this case. It depends on individual variation whether a particular part is affected when immunity fails, or whether a simple general failure of energy and vitality occurs, attributable in part to endocrine inhibition. These are general questions into which we cannot enter; suffice it if we simply emphasize a well recognized principle of therapy: "*A septic focus is a danger focus.*"

Notes on a Case of Methyl Chloride Poisoning

By Foster Coates, B.A., M.D., D.P.H.,
Royal Victoria Hospital, Belfast

I wish to record this case for two reasons:

1. To draw attention to the possibility of poisoning by this gas, which in recent years has become increasingly popular for use as a refrigerant.
2. To indicate the symptoms which may result from the effects of such poisoning, as it is quite possible that many mild cases may be overlooked, or ascribed to other causes, especially as its toxic properties are not generally recognized.

Notes of Case.

Male, aged 34, mechanic. Previous health good. No history of nephritis.

On the 29th August, 1932, while repairing pipes in a refrigerating plant, he was exposed to the fumes of this gas. He stated that some of the liquid gas had been spilled out of a cylinder on the floor. He felt heavy all afternoon, and about 8 p.m. commenced to vomit; the vomiting continued till he was admitted to hospital on 1st September (three days later). He also suffered from diarrhœa and suppression of urine.

On admission he was in a semi-comatose condition, with a thickly furred tongue, and had muscular twitchings and hiccough. The pulse-rate was 74. Peripheral arteries not thickened. Blood-pressure 100/70. The blood urea was 233 mg.

inhibition of function through auto-intoxication. In a small room or office he was still able to nurse his stability, and maintain his equilibrium. How long this would have continued it is impossible to say. The treatment was clear, when an appreciable cause was found. The proof was made evident by the result of treatment. I do not for a moment consider that in this case the semi-circular canals or the labyrinth were involved, though that impression was conveyed deliberately to the patient.

The most important inference that can be drawn from a study of this case is that if the septic focus had been removed a year before the attacks of vertigo had commenced, it is probable that he would never have suffered from vertigo at all. If this inference is admitted, it becomes a fact of profound significance, where prophylactic consultation is sought. In such cases, oral streptococcic foci should be searched for systematically, as a routine, and eliminated ruthlessly, when permission can be obtained. Do not consider that it is implied that every sufferer from dental sepsis will suffer from vertigo in a year or so, if his focus is not eradicated. Every sufferer from dental caries has not impaired occular afferent channels, as in this case. It depends on individual variation whether a particular part is affected when immunity fails, or whether a simple general failure of energy and vitality occurs, attributable in part to endocrine inhibition. These are general questions into which we cannot enter; suffice it if we simply emphasize a well recognized principle of therapy: "*A septic focus is a danger focus.*"

Notes on a Case of Methyl Chloride Poisoning

By Foster Coates, B.A., M.D., D.P.H.,
Royal Victoria Hospital, Belfast

I wish to record this case for two reasons:

1. To draw attention to the possibility of poisoning by this gas, which in recent years has become increasingly popular for use as a refrigerant.
2. To indicate the symptoms which may result from the effects of such poisoning, as it is quite possible that many mild cases may be overlooked, or ascribed to other causes, especially as its toxic properties are not generally recognized.

Notes of Case.

Male, aged 34, mechanic. Previous health good. No history of nephritis.

On the 29th August, 1932, while repairing pipes in a refrigerating plant, he was exposed to the fumes of this gas. He stated that some of the liquid gas had been spilled out of a cylinder on the floor. He felt heavy all afternoon, and about 8 p.m. commenced to vomit; the vomiting continued till he was admitted to hospital on 1st September (three days later). He also suffered from diarrhœa and suppression of urine.

On admission he was in a semi-comatose condition, with a thickly furred tongue, and had muscular twitchings and hiccough. The pulse-rate was 74. Peripheral arteries not thickened. Blood-pressure 100/70. The blood urea was 233 mg.

per 100 c.c. The urine was very scanty, acid, and contained a large amount of albumin.

He appeared to be a typical case of uræmia.

Lumbar puncture was performed about twelve hours after his admission, and 30 c.c. of fluid were removed. The pressure of the fluid was definitely raised. The cell-content was normal. Globulin 0.05 per cent. The urea in the fluid was 211 mg. per 100 c.c.

Following the puncture his condition improved rapidly, the twitchings ceased, more urine was secreted, and he became fully conscious.

On the 2nd September he passed 18 oz. urine. Albumin and blood present.

On the 3rd September he passed 44 oz. urine. Albumin present.

On the 4th September he passed 85 oz. urine. Albumin—a trace.

On the 5th September he passed 55 oz. urine. Albumin free. On this date his blood urea had fallen to 65 mg., and on the 8th to 25 mg.

He was discharged from hospital on the 12th September with no albumin in the urine and apparently quite well. He has had no further trouble, and has since enjoyed good health.

On consulting a number of text-books, I could find no reference to methyl chloride as a cause of toxic nephritis, but as it was an unusual case I kept a copy of the notes.

In the "British Medical Journal" of 24th March, 1934, Dr. Arthur P. Gorham of Bristol published an interesting paper entitled "Medical Aspects of Methyl Chloride." In this paper he described a case which he had seen, and also reviewed the literature on the subject.

Referring to the increasing use of methyl chloride as a refrigerant, Dr. Gorham stated that one firm among several manufacturers of these refrigerating plants had already supplied over seven thousand installations in this country.

Methyl chloride was discovered by Peligot and Dumas in 1835, and has the chemical formula CH_3Cl. It is colourless both in the liquid and gaseous states, and possesses only a very faint chloroform-like odour. It is non-irritating to the eyes and respiratory tract, so that a person may be exposed to the fumes without realizing the danger.

Advantages of methyl chloride as a refrigerant: It is non-corrosive to the metals used in refrigerating plants, is only moderately inflammable, and does not form an explosive mixture with air under ordinary conditions. Also it does not injure food, flowers, or textiles which may be exposed to its action by leakage.

The toxic effects are produced as a rule by unnoticed leaks taking place in enclosed and badly ventilated places.

The gas is slowly excreted, so that the effects of small amounts may become cumulative and cause symptoms only after some days.

In recent years nearly one hundred cases have been reported from abroad. In Chicago twenty-one cases were reported, with ten deaths.

Dr. Gorham gave the following account of the symptoms and sequelæ as collected from various records :—

"The onset is one of progressive apathy and drowsiness going on to stupor, with nausea, vomit, and abdominal pains. Muscular tremors may be present, and may be followed by tonic convulsions with marked cyanosis.

"Renal symptoms: Anuria lasting twenty-four to forty-eight hours is usual in the more severe cases, and albuminuria occurs in about fifty per cent. The urine is always acid, and acetone is usually present.

"The blood-pressure is lowered.

"Sequelæ have been noted chiefly affecting the nervous system—ataxia, insomnia, vertigo, and impairment of vision; these may persist for some months."

Post-mortem examinations were performed on some of the fatal American cases. The main findings consisted of petechial hæmorrhages in the pleura, epicardium, and endocardium, also congestion of the lungs and kidneys and early fatty change in the liver.

In conclusion, I might say that I should be very interested to hear of any similar cases which might come to the notice of any member of our Society.

Epochs in the History of Obstetrics

By H. L. H. GREER, M.B., F.R.C.S.EDIN.,
from the Royal Maternity Hospital, Belfast

HIPPOCRATES, the great Greek physician, who was born about 460 B.C. on the island of Cos, was the originator of obstetrics as an art. His father was one of the priest-physicians attached to the Temple of Healing situated on this island; the boy grew up in an atmosphere of effort to heal the sick, and under this influence it was natural that he too should, in his turn, become a physician. Endowed with nobility of character, wisdom, and outstanding ability, Hippocrates soon became the acknowledged leader of Greek medicine, and has remained a model for generations of physicians ever since.

His writings are the oldest documents we possess relative to the practice of medicine in Europe, and they are remarkable for their conciseness and their wide range of thought. He advocated, and put into practice, direct observation of the sick and of the course of disease, rather than philosophic speculation about the nature of disease. In his aphorisms he dealt, amongst other things, with pregnancy and its abnormalities, and with the course of labour. He had a sound knowledge of the gross anatomy of the pelvis, recognized the dangers, both to mother and child, of abnormal presentations of the child in labour, discussed the treatment of hæmorrhage before and after labour, and the occurrence and extreme danger of erysipelas of the womb.

He raised the ethical standard of the profession by formulating an oath which all pupil physicians were required to take. This Hippocratic oath remains to this day as the standard of ethics of the medical profession. I commend it to the attention of those of you on the threshold of your career as being still as good a guide to conduct now as it was twenty-five centuries ago. It reads as follows:

"The onset is one of progressive apathy and drowsiness going on to stupor, with nausea, vomit, and abdominal pains. Muscular tremors may be present, and may be followed by tonic convulsions with marked cyanosis.

"Renal symptoms: Anuria lasting twenty-four to forty-eight hours is usual in the more severe cases, and albuminuria occurs in about fifty per cent. The urine is always acid, and acetone is usually present.

"The blood-pressure is lowered.

"Sequelæ have been noted chiefly affecting the nervous system—ataxia, insomnia, vertigo, and impairment of vision; these may persist for some months."

Post-mortem examinations were performed on some of the fatal American cases. The main findings consisted of petechial hæmorrhages in the pleura, epicardium, and endocardium, also congestion of the lungs and kidneys and early fatty change in the liver.

In conclusion, I might say that I should be very interested to hear of any similar cases which might come to the notice of any member of our Society.

Epochs in the History of Obstetrics

By H. L. H. GREER, M.B., F.R.C.S.EDIN.,
from the Royal Maternity Hospital, Belfast

HIPPOCRATES, the great Greek physician, who was born about 460 B.C. on the island of Cos, was the originator of obstetrics as an art. His father was one of the priest-physicians attached to the Temple of Healing situated on this island; the boy grew up in an atmosphere of effort to heal the sick, and under this influence it was natural that he too should, in his turn, become a physician. Endowed with nobility of character, wisdom, and outstanding ability, Hippocrates soon became the acknowledged leader of Greek medicine, and has remained a model for generations of physicians ever since.

His writings are the oldest documents we possess relative to the practice of medicine in Europe, and they are remarkable for their conciseness and their wide range of thought. He advocated, and put into practice, direct observation of the sick and of the course of disease, rather than philosophic speculation about the nature of disease. In his aphorisms he dealt, amongst other things, with pregnancy and its abnormalities, and with the course of labour. He had a sound knowledge of the gross anatomy of the pelvis, recognized the dangers, both to mother and child, of abnormal presentations of the child in labour, discussed the treatment of hæmorrhage before and after labour, and the occurrence and extreme danger of erysipelas of the womb.

He raised the ethical standard of the profession by formulating an oath which all pupil physicians were required to take. This Hippocratic oath remains to this day as the standard of ethics of the medical profession. I commend it to the attention of those of you on the threshold of your career as being still as good a guide to conduct now as it was twenty-five centuries ago. It reads as follows:

"I swear by Apollo the physician, and Æsculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this Oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatsoever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to procure abortion. With purity and with holiness I will pass my life and practise my Art. Into whatsoever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption. Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this Oath unviolated, may it be granted to me to enjoy life, and the practice of the art, respected by all men, in all time. But should I trespass and violate this Oath, may the reverse be my lot."

In the time of Hippocrates, midwives were recognized. In addition to looking after the woman in labour, they treated diseases of women, and even advised on the health of those about to marry. Their knowledge of midwifery was scanty, and their methods of assisting labour rough and ready — e.g., kneading the abdomen or dropping the woman from a height so that she struck the bed forcibly. In difficult cases the physician was called in to assist in delivery. The teachings of Hippocrates led to great improvement in the practice of midwifery and remained unsurpassed for more than six centuries.

In the second century after Christ, Soranus produced a work on Midwifery and Diseases of Women, based on Hippocratic teaching. He discouraged forceful methods of hastening labour, and various practices based, not on knowledge, but on superstition; but his greatest claim to fame was the introduction of podalic version—i.e., turning the child in cases of obstructed labour and delivering it feet first. This was a great advance on the method hitherto in force of either employing instruments to destroy the child and removing it piecemeal, or leaving the mother to die undelivered.

With the works and practice of Soranus, ancient midwifery reached its zenith. Thereafter the Roman Empire declined and Greek medicine deteriorated. The teachings of Hippocrates, Soranus, and other Greek physicians were forgotten, though preserved in manuscripts in some of the monasteries. Christianity held sway, but the priesthood did not share the interest of its Founder in the healing art, and rational medicine was replaced by superstition. Disease was regarded as possession

by devils, or the punishment of sin. For fourteen centuries Western Europe wallowed in an abyss of ignorance and barbarism as regards hygiene and the treatment of the sick, and women in childbirth. All knowledge of midwifery was lost, the physician of the Middle Ages did not practise midwifery, leaving the unfortunate woman in labour to the care of the handy-woman who was recruited from the most depraved and ignorant classes. The operation of Cæsarean section—i.e., removing the child by opening the abdomen, was practised when the woman died undelivered, if it was thought that the child was still alive; the operation being usually done either by the barber or the executioner. It was seldom done on a living woman, as no adequate means of controlling hæmorrhage or closing the abdomen were known. It is said to have been carried out on a living woman in the fifteenth century by a hog-gelder.

Until the sixteenth century, midwifery remained in the hands of ignorant and drunken old handy-women of the type of Dickens's Sairey Gamp, and the prejudice against men taking any part in delivery was very strong. In 1522 Dr. Wertt of Hamburg put on woman's clothing in order to attend a confinement. He was discovered, and as a punishment was burned to death. Seven years later there arrived in Paris from the country a young barber's apprentice of 19 who was destined to bring about in his lifetime more advances in surgery and midwifery than the previous fourteen centuries had seen. This was Ambrose Paré, who in 1529 began his surgical training as a dresser in the Hôtel Dieu.

Max Nordau describes the hospital:—

"In one bed of moderate width lay four, five, or six sick persons beside each other, the feet of one to the head of another: children beside grey-haired old men: indeed, incredible but true, men and women intermingled together. In the same bed lay individuals affected with infectious diseases beside others only slightly unwell: on the same couch, body against body, a woman groaned in the pangs of labour, a nursing infant writhed in convulsions, a typhus patient burned in the delirium of fever, a consumptive coughed his hollow cough, and a victim of some disease of the skin tore with furious nails his infernally itching integument. The whole building swarmed with the most horrible vermin, and the air of a morning was so vile in the sick wards that the attendants did not venture to enter them without a sponge saturated with vinegar held before their faces."

A stout heart and boundless enthusiasm must have been necessary to complete one's medical training in such appalling surroundings. Paré remained at the Hôtel Dieu for three years, and then became an army surgeon. At that time it was customary to treat wounds on the battlefield by cauterizing them with boiling oil—a barbarously painful method commonly followed by violent sepsis.

Disliking the method on account of its cruelty, Paré, during his first campaign, took an early opportunity, the supply of boiling oil having given out, to apply a milder dressing made of yolks of eggs, oil of roses, and turpentine, to the wounds. His anxiety as to the result of his experiment kept him awake that night. He rose early, visited the wounded, and to his delight found that those who had been dressed with the milder application had rested well and that their wounds were

free from inflammation or swelling, whereas those treated with boiling oil were feverish, with great pain and swelling about their wounds. Paré determined then and there to forgo boiling oil as a treatment for wounds. This was his first break with tradition, but by no means the last. He became a skilful operator, and amongst other innovations introduced the ligature for tying arteries. His essentially gentle and modest character is exemplified by his comment after the recovery of an officer from a dangerous gunshot wound: "I dressed his wounds, and God healed him."

Some time later, the evil case of the unfortunate child-bearing woman roused the interest of his compassionate nature. The only means then known for delivery of the child when the natural powers failed were either the killing of the child and its removal piecemeal, or Cæsarean section. Paré rediscovered and described fully the operation of podalic version, which consisted in introducting the hand into the uterus, grasping one or both feet, turning the child, and extracting it feet first. The operation was a great advance on existing methods, and saved many lives. One of his assistants, to whom he had taught the method, afterwards saved the life of Paré's own daughter by applying it. During his lifetime a school for midwives was originated at the Hôtel Dieu.

Paré's teachings led to great improvement in the standard of midwifery practice, and it might fairly be said that during his lifetime the obstetric art emerged from its long period of neglect and again reached the level attained among the ancients. The public conscience was beginning to awake, but there was a long uphill fight to be waged before the forces of reaction and ancient prejudice were to be overthrown. The fight largely resolved itself into one between the physicians, interested in improving midwifery, and the handy-women, anxious to retain their hold on this branch of practice to the exclusion of the doctors. The strongest asset of the midwives was the amazing prudery of the times. When physicians first began to be called in to difficult labours they were forced to effect delivery "under the sheet," i.e., one end of the sheet was tied round the patient's body and the other end round the physician's neck, so that the latter could carry out his manipulations blindly under the sheet but could not see underneath it.

In 1663 an incident occurred which greatly strengthened the position of the physicians. La Valliére, mistress of Louis XIV, was about to be confined of her first child. Louis called in Jules Clement, an eminent surgeon of Paris, to attend her, and his concern for the patient, who was delicate and slightly lame, caused him to observe from behind a curtain all that passed. He was greatly pleased with the skill and attention displayed by Clement, who was employed in the lady's subsequent confinements, and later attended members of the royal families both of France and Spain and many ladies of the Court.

We read that Paré, who was a Huguenot, survived the massacre of St. Bartholomew in 1571, because he was a friend of Catherine de Medici, who had instigated the massacre. Many other Huguenots escaped and settled in the British Isles, as we in Ulster have especial cause to remember with gratitude. Amongst them was another Huguenot physician, William Chamberlen, who settled in Southampton. He was the founder of a remarkable family, nine of his descendants

becoming doctors, the practice of medicine being carried on without a break for five generations, covering a period of nearly two centuries, and furnishing physicians to James I, Charles I, Charles II, James II, and William, to their respective Queens, and to Queen Anne. His two sons, Peter the elder and Peter the younger, followed their father's profession, and were the inventors of the midwifery forceps, afterwards described by McClintock, Master of the Rotunda Hospital in 1854-61, as "this noble instrument which has done more to abridge human suffering, to save human life, than any other instrument in the whole range of surgical appliances." To their lasting discredit they kept the forceps as a family secret, contrary to all the ethics of their profession. By its aid, each in his turn built up a large and lucrative practice. As a family they were one and all of marked ability, but self-seeking and unscrupulous.

In 1693 Hugh Chamberlen, grandson of one of the inventors, sold the forceps to a Dutch physician, Roonhuysin, who, in alliance with two other Dutch physicians, kept the forceps more or less secret, only imparting a knowledge of the instrument and its uses to such of their pupils as could pay them a large additional fee for the knowledge. Eventually a knowledge of the instrument leaked out amongst the profession, who were not slow to recognize its value. Undoubtedly, the forceps proved worthy of the eulogy which McClintock passed on it, and has been the means of saving the lives of countless mothers and infants. Like every other powerful remedial agent used in medicine, its use without conscience, skill, and judgment is fraught with grave danger. To impress this point on your memory, recollect the story of the old Scottish practitioner, Thomas Anderson, who, when he and his son, Dr. Henry Anderson, were starting out on a long round of some fifty or sixty miles, with the possibility of Henry being left in attendance on a midwifery case, asked: "What's that ye're pittin' in the gig, laddie?"

"It's the forceps."

"Did ye say your prayers this morning, laddie?"

"Aye; why?"

"Why! my man. Because it's nae guid praying 'Lead us not into temptation' if ye tak' forceps wi' ye tae a midwifery case."

In spite of the undoubtedly improved results in treatment of the parturient woman and her infant brought about by the re-introduction of version by Paré and the invention of the midwifery forceps, one perennial scourge remained to take an enormous toll of the lives of lying-in women. I refer to childbed fever, or puerperal sepsis. It is probably as old as the human race. Hippocrates described the disease most accurately, with its characteristic chills of onset, insomnia, suppression of lochia, fever, delirium, and later development of diarrhœa and general peritonitis, coma, and death. At the period we speak of it raged in every lying-in hospital as a perennial epidemic, causing the death of ten to twenty out of every hundred women who entered them.

In 1773 Charles White, Professor of Obstetrics in Manchester, wrote a treatise on "The Management of Pregnant and Lying-in Women," and on the cure and prevention of the disorders to which they were liable. He advocated personal

cleanliness, ventilation, isolation, posture, and disinfection, and stressed the contagiousness of general sepsis and the frequency with which it followed the practice of certain men. He recorded not a single death in his long and large obstetrical practice. His pupil, Kirkland, had equally happy results. Robert Collins, Master of the Rotunda Hospital from 1826 to 1833, introduced White's methods, and saw his mortality from puerperal sepsis fall to the lowest percentage—from 1829 until the end of his Mastership in 1833 not a single woman died of puerperal fever.

Unfortunately, within half a century, the successful methods of White and his followers gradually fell out of use, to the discredit of the British School of Midwifery.

In the United States Oliver Wendell Holmes read his treatise on puerperal infections before the Boston Medical Society in 1843. He stated that puerperal infection was a contagious disease, and that, in its severer forms, at least, the disease could be directly traced to contagion introduced by the nurse or doctor. He was bitterly attacked by Professor Meigs, who held the Chair of Obstetrics in Philadelphia, and by Professor Hodge of Pennsylvania University. Holmes's theory of the transmission of the disease through the agency of the attendant's hands was virulently opposed by Meigs, who pointed out that cases of infection had occurred in the practice of the great Dr. Simpson of Edinburgh. Holmes began his reply by saying: "I take no offence, and attempt no retort. No man can quarrel with me over the counterpane that covers a mother with her newborn infant at her breast." He went on to show that Simpson's cases of puerperal fever had followed his participation in post-mortems done on two cases of the disease which occurred in another doctor's practice. About the same time, and quite unaware of Holmes's paper, the problem of puerperal fever was being successfully tackled in Vienna by Semmelweiss, who, like Holmes, was encountering bitter opposition. Ludwig Ignaz Philipp Semmelweiss, fourth son of a prosperous shopkeeper, was born in Budapest in 1818. Whilst a law student at Vienna University he attended a post-mortem and decided to study medicine, which he did under Skoda and Rokitansky. He qualified in 1844, and within the same year received the degree of Master of Midwifery. He applied for and obtained the position of assistant in the Lying-in Hospital.

He was appalled by the death-rate from puerperal sepsis—75 deaths from sepsis out of 239 deliveries, and determined to find the cause. In 1847 his friend, Kolletschka, assistant to Rokitansky, died of a dissection wound. At the post-mortem Semmelweiss was struck by the similarity of the pathological appearances to those seen in cases dead from puerperal fever. He noted in Section I of the Hospital, where medical students fresh from the post-mortem room, and with unwashed hands, delivered the patients, the death-rate was five times greater than in Section 2, where the patients were delivered by midwives, who did not attend post-mortems. Semmelweiss saw the solution of the problem, and re-introduced the principles of cleanliness and disinfection of the hands by chloride of lime, in vogue in England seventy years before, and in Vienna forty years before Semmelweiss, during the régimé of Professor Boer, who had introduced the method from England.

Semmelweiss hereafter had the gratification of seeing his mortality fall to one per cent. Like many another pioneer, his theories and innovation made him many enemies, and he was forced to leave the Vienna Hospital. He returned to Budapest, where in 1855 he became Professor of Obstetrics at the University. In 1865 he died of an infection from a dissection wound.

The work of White, Holmes, and Semmelweiss had demonstrated how to prevent the onset of puerperal fever, but had not elucidated the ultimate cause of the disease. In the domain of general surgery a similar problem awaited solution—the cause of suppuration in accidental and operation wounds, and the sequelæ : hospital gangrene, erysipelas, and blood-poisoning. These diseases were responsible for the appalling mortality in all hospitals. The solution of the problem was the work of two men, Louis Pasteur and Joseph Lister, and from the point of view of surgery and midwifery was undoubtedly the most important discovery ever made. It alone made modern surgery possible. Louis Pasteur was a French chemist and biologist who, when investigating the process of fermentation, discovered that it was due to the action of minute living organisms, only visible with the aid of a microscope.

Joseph Lister, the son of a Quaker wine merchant, qualified in London University in 1852, at the age of 25. Later he studied surgery in Edinburgh under Syme, and in 1860 he became Professor of Surgery in Glasgow University. In 1865 his colleague, Dr. Thomas Anderson, Professor of Chemistry, drew his attention to Pasteur's work. His interest was especially captured by the following points proved by Pasteur :—

Putrefaction is a species of fermentation. It is caused by the growth of micro-organisms and does not occur independently of their presence. The micro-organisms that produce fermentation and putrefaction are carried by the air on the dust that floats in it. They also occur on and in solid and liquid substances. These micro-organisms can be destroyed by heat and other agencies.

Lister's acute mind saw the practical application of Pasteur's work, and he set out to test whether by preventing the development of organisms in wounds he could prevent putrefaction or suppuration. As heat was not applicable for destruction of organisms in the tissues, he searched for a chemical substance which would kill them, and finally selected carbolic acid. Thus was evolved what came to be known as the antiseptic principle. Lister's results were nothing short of miraculous. His operation wounds and compound fractures healed by first intention, and suppuration, hospital gangrene, and erysipelas disappeared from his wards. His conclusions were at first scoffed at by his fellow-surgeons, and his results belittled, but gradually, after a gallant uphill fight, and with the assistance of his pupils who, as junior surgeons, penetrated into other schools and spread the light, the cause of antiseptic surgery was won, and he had the satisfaction of seeing his work acclaimed throughout the world, and the dawn of a new era in surgery. Lister was the first medical man to be raised to the peerage. A medallion in the north transept of Westminster Abbey commemorates the greatest surgeon the world has known.

Some twenty years prior to the discovery of the means of eliminating infection, another discovery, only second in importance to Lister's, was made. Without it the

full benefit of the antiseptic principle in operative midwifery and in widening the field of operative surgery could not have been reaped. I refer to the discovery of chloroform by Simpson. James Y. Simpson was born at Bathgate in 1811, the eighth child of poor parents, who lived in a four-roomed cottage. His mother is said to have been of exceptional ability. Dr. Bashford records that at the age of 14 Jamie went to Edinburgh, where he won a bursary of ten pounds a year. With two friends he shared a room at three shillings a week. At the age of 19 he obtained the L.R.C.S., and at 21 the M.D. He was elected Professor of Midwifery in the University of Edinburgh at the age of 29. Seven years later, in 1847, he discovered the anæsthetic properties of chloroform. Before testing it in labour he got some of his guests at dinner to inhale chloroform vapour from a tumbler. One by one they were rendered insensible and quietly slid under the table. He soon tried it in labour, and in his report of its action in this first case he wrote : "The lady to whom it was first exhibited during parturition had been previously delivered in the country by perforation of the head of the infant, after a labour of three days' duration. In this, her second confinement, pains supervened a fortnight before the full time. Three hours and a half after they commenced, and ere the first stage of labour was complete, I placed her under the influence of chloroform. The child was expelled in about twenty-five minutes after the inhalation was begun. The squall of the child did not, as usual, rouse her; and some minutes elapsed after the child was removed by the nurse into another room before the patient awoke. She then turned round and observed to me that she had enjoyed a very comfortable sleep, and indeed required it, as she was so tired, but could now be more able for the work before her."

Simpson at once published a report of his successful use of chloroform in labour. Contrary to his expectations, he was subjected to a storm of abuse and criticism, especially from the clergy and his own profession. He was denounced from every pulpit in Scotland as one guilty of sacrilege. The clergy quoted the Biblical curse (Gen. iii, 16) as their authority : "Unto the woman He said, I will greatly multiply thy sorrow and thy conception : in sorrow thou shalt bring forth children." The word "sorrow" was interpreted as synonomous with "pain," which was therefore regarded as ordained in childbirth, and any effort to prevent it "was contrary to religion and the express command of Scripture." So strongly rooted in human nature is the instinct of opposition to anything new, that even members of his own profession opposed the relief of the pain of labour as being neither necessary nor desirable, as the pain was physiological. Simpson, being what his countrymen would describe as "a bonny fechter," joined issue with his critics at once in a paper entitled "Answers to the Religious Objection Against the Employment of Anæsthetic Agents in Midwifery and Surgery." It was a masterpiece of logic, and displayed quite as good a knowledge of the Scriptures as the clergy, and a much more skilful use of them. He fairly turned their own weapons against them, and showed that the first surgical operation ever recorded was carried out under anæsthesia. He wrote :

"Besides, those who urge, on a kind of religious ground, that an artificial or anæsthetic state of unconsciousness should not be induced, merely to save frail

humanity from misery and torture of bodily pain, forget that we have the greatest of all examples before us for following out this very principle of practice. I allude to that most singular description of the preliminaries and details of the first surgical operation ever performed on man, which is contained in Genesis ii, 21, and which reads: 'And the Lord caused a deep sleep to fall upon Adam, and he slept: and He took one of his ribs, and closed up the flesh instead thereof.' In this remarkable verse the whole process of a surgical operation is briefly described. But the passage is principally striking as affording evidence of our Creator Himself using means of saving poor human nature from unnecessary endurance of physical pain."

Thus were silenced the Scottish clergy. That it did not take long to convince the medical profession of the benefits of chloroform is evident, when Simpson was able to report that within two years it had been administered to nearly fifty thousand persons, either during labour or during surgical operations. In April, 1853, Queen Victoria accepted chloroform during the delivery of her seventh child, Leopold, and again at her next confinement in 1857.

Simpson was knighted afterwards, and legend has it that Sir Walter Scott wrote suggesting as a suitable coat of arms "a wee naked bairn," and underneath the motto "Does ye're mither know ye're oot."

The coming of antisepsis and anæsthesia made possible major surgery and operative midwifery, as we know them to-day, as, by controlling infection and lessening shock, they enabled existing procedures to be carried out with safety and success, and paved the way for the coming of other more elaborate and extensive surgical procedures which, without them, would have been impossible.

Since then the most notable advance, as regards midwifery, has been the inauguration and development, during the early years of the present century, of ante-natal care of the expectant mother. The name of the late Dr. Ballantyne, of the Edinburgh Royal Maternity and Simpson Memorial Hospital, will always be honourably held in remembrance as the pioneer of the movement. That it has, when completely and conscientiously carried out, already resulted in lowering maternal and infantile mortality, is unquestioned.

The Power of the Mother's Imagination over the Foetus

Examined by James Augustus Blundel, M.D. Published 1779.

THE popularity of exhibitions of human freaks of nature appears to have returned, if one may judge from the number of these unfortunate people to be seen in the "side-shows" of the circus and the seaside promenade. Many of these are claimed by their showmen lecturers as being the result of a fright sustained by the mother during the period of gestation. For example, the father of the "Lion-faced Lady" is said to have been a lion trainer, and that her mother, when pregnant, had witnessed his death by the lions attacking and mauling him. The "Crocodile Man"

humanity from misery and torture of bodily pain, forget that we have the greatest of all examples before us for following out this very principle of practice. I allude to that most singular description of the preliminaries and details of the first surgical operation ever performed on man, which is contained in Genesis ii, 21, and which reads: 'And the Lord caused a deep sleep to fall upon Adam, and he slept: and He took one of his ribs, and closed up the flesh instead thereof.' In this remarkable verse the whole process of a surgical operation is briefly described. But the passage is principally striking as affording evidence of our Creator Himself using means of saving poor human nature from unnecessary endurance of physical pain."

Thus were silenced the Scottish clergy. That it did not take long to convince the medical profession of the benefits of chloroform is evident, when Simpson was able to report that within two years it had been administered to nearly fifty thousand persons, either during labour or during surgical operations. In April, 1853, Queen Victoria accepted chloroform during the delivery of her seventh child, Leopold, and again at her next confinement in 1857.

Simpson was knighted afterwards, and legend has it that Sir Walter Scott wrote suggesting as a suitable coat of arms "a wee naked bairn," and underneath the motto "Does ye're mither know ye're oot."

The coming of antisepsis and anæsthesia made possible major surgery and operative midwifery, as we know them to-day, as, by controlling infection and lessening shock, they enabled existing procedures to be carried out with safety and success, and paved the way for the coming of other more elaborate and extensive surgical procedures which, without them, would have been impossible.

Since then the most notable advance, as regards midwifery, has been the inauguration and development, during the early years of the present century, of ante-natal care of the expectant mother. The name of the late Dr. Ballantyne, of the Edinburgh Royal Maternity and Simpson Memorial Hospital, will always be honourably held in remembrance as the pioneer of the movement. That it has, when completely and conscientiously carried out, already resulted in lowering maternal and infantile mortality, is unquestioned.

The Power of the Mother's Imagination over the Foetus

Examined by James Augustus Blundel, M.D. Published 1779.

THE popularity of exhibitions of human freaks of nature appears to have returned, if one may judge from the number of these unfortunate people to be seen in the "side-shows" of the circus and the seaside promenade. Many of these are claimed by their showmen lecturers as being the result of a fright sustained by the mother during the period of gestation. For example, the father of the "Lion-faced Lady" is said to have been a lion trainer, and that her mother, when pregnant, had witnessed his death by the lions attacking and mauling him. The "Crocodile Man"

claims that his mother was frightened by crocodiles in India when she was pregnant. The "Bear Lady" and the "Leopard Woman" give similar histories. The theory that the fœtus can be influenced by the mind of the mother is a very old one, and held almost universal belief as late as the eighteenth century, if we can believe the statements given in a book "De Morbis Cutaneis," written by Dr. Daniel Turner, and published at the time. Dr. James Augustus Blundel, in another book, criticises Turner's views and casts grave doubts on their truthfulness. He does, however, acknowledge that "the child may receive some hurt by means of the mother . . . and that whatever is detrimental to her is directly or indirectly prejudicial to the other." The following are brief extract's from Dr. Blundel's book :—

"The fœtus suffers not only the Distempers of the Parents, but also by several Accidents, as great Falls, Bruises, and Blows the Mother receives, as well as by the Irregularity of her Diet, and by her Actions; by immoderate Dancing, Running, Jumping, Riding, Excess of Laughter, frequent and violent Sneezing, and all other Agitations of the Body.

"Frightful and Ugly Objects, which are shocking even to Men of Courage, are to be carefully removed from the sight of pregnant Women, as being apt to disturb their Minds, and to fill them with Horror, Fear, and Apprehension.

"Whether the strong Attention of the Mother's Mind to a determinate Object can cause a determinate, or a specifick Impression upon the Body of the Child, without any Force, or Violence from Abroad?

"Whether in the Fit of Imagination, Clurapsy, or the Application of the Mother's Hand to any particular Place of her Body, though accidental, and not premeditated, can work sympathetically upon the like Part of the Body of the Fœtus, and be of any dangerous Consequence?

"Most People are for the Affirmative of these two Questions. They believe that this Imagination of a pregnant Woman is able to imprint upon the Child this Representation of the Object which the Mother has in View; as for Instance, that the strong Desire of Peaches or Cherries not being satisfied does cause the Colour and Shape of a Peach or of a Cherry upon the Fœtus; and the mere Longing for Mussels is sufficient to transubstantiate the true and original Head of the Child into a Shell-fish.

"The Motion of the Hand is also a Circumstance which is very seldom, or never, omitted in giving an Account of monstrous Births, that Gesticulation, being thought to be essential, and of great virtue and Efficacy; as if Imagination made use of it, for a Signal to her Dragoons to take free Quarters nowhere else but in the Place which she points at.

"Malebranche, a high Imaginationist, has made a notable Discovery in that *Terra incognita,* which is not to be slighted; for he's very positive, that the Exercise of the Hand, being managed in a prudent Way, may, in Part, be a sort of Preservative against the Worst of these Accidents, or, like a Damm to turn aside and divert the violent streams of the turbulent Spirits to a safer part in the Child's Body, where they'll have full Liberty of Prancing without any great inconvenience.

"But these views are so full of Absurdities, that I'm inclined to take them for Vulgar Errors, which have insensibly crept into the World, and are now generally received, without any Examination, though they may be contrary to Experience, Reason, and Anatomy."

Specific cases of monsters are then discussed in this interesting old book. But before referring to these, its author draws attention to the fact that "many Women are disturbed, during their pregnancy, by strange Desires, odd Passions, and Frights, and yet experience shows that the children come into this World well shaped, and without the least Token of this Mother's Fancy."

A case is then cited : "A Gentlewoman of very good Credit, who had an aversion against Cats, has assured me, that one Evening, being ready to go to Bed, a large Cat rushed unexpectedly into her Chamber through the Casement, and flew directly to her body, from which, with some Difficulty, it was removed by the Servants : And yet, notwithstanding this great Fright, she was in two or three months Time, safely delivered of a beautiful Son, who had not the least show of smellers or claws, nor of any Thing resembling that Animal."

Dr. Blundel goes on : "I have seen a young man, who had the Integuments, immediately above the Sternum, so thin, that the Blood-Vessels were, in a Manner, perfectly bare, and, by their several Turning and Complications, did represent a Bunch of Grapes. His Mother being then alive, I desired him to inquire, if she had longed for that Fruit, or whether she could give a reason for such an extraordinary Conformation; and I was answered in the Negative."

"I remember," he continues, "to have been sent for to a Female Infant, who had, in Fifteen or Twenty different Places of her Body, large spots which by their shape and Colour appeared like painted Black Cherries. If they were prest downwards with the Finger they would give way, but return immediately to their former state; which made me judge, that they were nothing else but a Dilatation of the Blood Vessels. I was not mistaken, for in due time the Skin being grown thicker and the Vessels having acquired a greater strength, the Marks are now more solid, and seem to be like strawberries, having a Mixture of Red and White Strokes, somewhat raised above the skin. The Mother assured me that she never had any Disorder during her Pregnancy, nor any Desire of Black or Red Cherries."

The author of this interesting little book then proceeds to discuss the question of the interpretation of deformities based on "subsequent Imagination," the Credulity of Midwives, False Stories, and Accidents.

"Stories of strange malformation are accepted through Credulous People who never examine nor confront the Witnesses, nor see for themselves the Reality of the Marks or Deformities."

"Some cases," he states, "are often the Effects of Impudence, and of the most villainous Barbarity.

"Cruel Parents have no Pity nor Mercy on the innocent Babes; cutting, and slicing, and disfiguring of them with the greatest Inhumanity, to move thereby the Charity and Benevolence of others, and live a lazy and indolent Life.

"To be persuaded how much we ought to be jealous of these People, 'tis enough

to read the Treatise Ambrose Paré has left us, of the Frauds of Begging in his Time; and to consider the Case related by Hildanus.

"A Child, about 18 Months old (says he), was shewn at Paris in 1593 for Money; his head appeared to be of a prodigious Bigness; but at last it was discovered that the Swelling was artificial, and that his parents had made a small Hole in the Skin, thro' which, by the help of a Pipe, they filled the Part with Wind to a great Extension; they were hanged for it. If this woman had not been detected in her Roguery, what a noble Figure had she made in History?"

"A great many of the stories regarding the etiology of monsters are so rediculus," says Dr. Blundel, "as to carry their own Condemnation." For example, he tells the following story: "A Woman in Sicily, observing a Lobster taken up by a Fisherman, and being moved by an earnest Longing for it, brought forth together with the Birth, a Lobster altogether like what she had seen and longed for.

"Such also is the Case mentioned by John Swammerdam in his Book, *Uteri muliebris Fabrica*. A certain Woman of Utrecht, being with Child, was frightened with the Sight of a Negro, and apprehended to be delivered of a perfect Black; but at last recollecting herself, she made Use of a second Imagination to prevent the Danger from the first; for she washed herself from Head to Foot with Hot Water, to clear the Child from Blackness. The Time of her Delivery being come, the child was born with all his teeth, and appeared perfectly white, except those Places the Hot Water did not reach in the Body of the Mother, as the Interstices of the Fingers and Toes, which still retained some sign of Blackness.

"A Child was born in Normandy, with Horns upon his Head, and cloven Feet, and that he proved afterwards to be a Man of extraordinary Sense and Judgment; the Occasion of that Misfortune was, that his Father having represented a Satyr upon the Stage, had Knowledge of his Wife in that ridiculous Dress."

"One would think," Dr. Blundel comments, "that those storymongers have nothing in View, but to try the Credulity of good People, or to redicule, and disgrace human Nature, and affront the Wisdom of our Maker.

"Stories of Imagination are very seldom impartially represented. Some People's Fancy often strives to go beyond the Mother's Imagination and to supply, with great Prodigality, what's wanting to compleat and finish the Wonder, *Plus vident, quam quod vident.*"

Dr. Blundel gives many more examples of monsters with similar supposed etiological factors, and then discusses the whole question. He begins: "Conception, by the Providence of God, is independent on the Mother's Will and Pleasure. How many virtuous Women are desirous to have Children, and yet their Vows prove unsuccessful? Whilst some others not only conceive, contrary to their Wishes, but go their full Time, in spite of several Preparations which they are so wicked to take designedly to destroy the Fœtus.

" 'Tis absolutely out of the Mother's Power to choose a Boy or a Girl, to have one or two children at a Birth, to cause the Infant to be fair or black, big or small, weak or strong, and to give it her Features, or the Resemblance of the Father.

"If it be granted that the Mother, by the strength of her Imagination, cannot promote, nor prevent Conception, how can any body believe without reflecting upon the Wisdom of God, that it is left to her to disfigure the Child, and to spoil the regular Work of Nature?

"If the Mother, by the Strength of her Fancy cannot make any Mark or Signature on her Body, if she cannot change the Figure, Situation, Quantity, and Number of her Limbs : In short, if she cannot make a determinate Alteration in her own Body, by a determinate Imagination, Why should we believe that she is able to do it in the Child?"

It is interesting to read these old discussions, but have the laity progressed much farther in their outlook on the effects of material impressions on the fœtus? Medical men see the absurdity of the whole matter, yet in spite of the so-called "better education" of the masses, such discussions persist even to this day.

—R. H. H.

BRITISH MEDICAL ASSOCIATION

ANNUAL MEETING IN BELFAST, 1937

THE acceptance by the Central Council of the British Medical Association to hold the 105th annual meeting of the Association in Belfast in 1937, is a matter of great satisfaction to the medical profession of Northern Ireland; but it is also a matter which entails great responsibilities to each individual member, for the coming to Belfast of the great body of members of the British Medical Association—general practitioners, consultants, surgeons, and leaders of medico-political matters, involves a vast amount of preparation to make the meeting a success. Arrangements must be made for an assembly of about two thousand delegates to discuss the most recent methods of diagnosis and treatment, to consider the work of the previous year and all matters of interest to the welfare of the profession as a whole. There must also be made arrangements for the delegates, with their wives and families, to see something of the natural beauty of our Ulster scenery; to see the antiquities of our country; to learn of our history, and of the great industries which have placed Northern Ireland in the proud position which she occupies to-day.

All these matters require most careful thought, and the responsibility of carrying them out rests not only on the heads of the various scientific sections which will be formed, but on the assistance of each individual medical man in Ulster to help with the social side of the meeting.

The preliminary stages in these preparations have been made. A public meeting of medical men and of representatives of important public bodies has been held under the chairmanship of the Right Hon. the Lord Mayor of Belfast, Sir Crawford McCullagh. A General Committee has been formed, and Executive Committees will be elected to work out the necessary details. At this preliminary meeting Professor P. T. Crymble proposed that Professor R. J. Johnstone be nominated President-

"If it be granted that the Mother, by the strength of her Imagination, cannot promote, nor prevent Conception, how can any body believe without reflecting upon the Wisdom of God, that it is left to her to disfigure the Child, and to spoil the regular Work of Nature?

"If the Mother, by the Strength of her Fancy cannot make any Mark or Signature on her Body, if she cannot change the Figure, Situation, Quantity, and Number of her Limbs : In short, if she cannot make a determinate Alteration in her own Body, by a determinate Imagination, Why should we believe that she is able to do it in the Child?"

It is interesting to read these old discussions, but have the laity progressed much farther in their outlook on the effects of material impressions on the fœtus? Medical men see the absurdity of the whole matter, yet in spite of the so-called "better education" of the masses, such discussions persist even to this day.

—R. H. H.

BRITISH MEDICAL ASSOCIATION

ANNUAL MEETING IN BELFAST, 1937

THE acceptance by the Central Council of the British Medical Association to hold the 105th annual meeting of the Association in Belfast in 1937, is a matter of great satisfaction to the medical profession of Northern Ireland; but it is also a matter which entails great responsibilities to each individual member, for the coming to Belfast of the great body of members of the British Medical Association—general practitioners, consultants, surgeons, and leaders of medico-political matters, involves a vast amount of preparation to make the meeting a success. Arrangements must be made for an assembly of about two thousand delegates to discuss the most recent methods of diagnosis and treatment, to consider the work of the previous year and all matters of interest to the welfare of the profession as a whole. There must also be made arrangements for the delegates, with their wives and families, to see something of the natural beauty of our Ulster scenery; to see the antiquities of our country; to learn of our history, and of the great industries which have placed Northern Ireland in the proud position which she occupies to-day.

All these matters require most careful thought, and the responsibility of carrying them out rests not only on the heads of the various scientific sections which will be formed, but on the assistance of each individual medical man in Ulster to help with the social side of the meeting.

The preliminary stages in these preparations have been made. A public meeting of medical men and of representatives of important public bodies has been held under the chairmanship of the Right Hon. the Lord Mayor of Belfast, Sir Crawford McCullagh. A General Committee has been formed, and Executive Committees will be elected to work out the necessary details. At this preliminary meeting Professor P. T. Crymble proposed that Professor R. J. Johnstone be nominated President-

elect of the British Medical Association, 1937-8. He said we wanted a man active in practice who had experience in every branch of the medical profession; a man who had the confidence not only of the medical profession, but of all the public bodies of Belfast. Professor Johnstone, he said, had all these requirements, and would make a distinguished and able President to represent not only the medical profession of Northern Ireland, but a worthy representative of the people of Ulster as a whole.

Dr. J. C. Loughridge seconded the proposal, which was carried by acclamation.

It is given to few people to be so well equipped for the important position of President of the British Medical Association as Professor Johnstone. He is, first of all, a true son of Ulster, and a graduate of our own university. He has been a teacher in more than one of the departments of the Medical Faculty, and at present he is a member of the staff of the Royal Victoria Hospital; he occupies with distinction the chair of Gynæcology at Queen's; is our representative on the General Medical Council; and is one of our representatives in the Northern Parliament. He is thus a man of wide experience in the practice of medicine and surgery, as a teacher of medical students, and in administration of matters vital to the welfare of our profession. We can leave the guidance of the British Medical Association, 1937, safely in his hands, as a President worthy to follow the long list of distinguished men who have occupied that position in the past.

Professor Johnstone is to be ably supported by Dr. F. M. B. Allen as honorary secretary with Dr. W. R. M. Strain as assistant honorary secretary, and Mr. W. Fullerton as honorary treasurer. The importance of having energetic secretaries and a capable treasurer cannot be over-estimated, and in these appointments Professor Johnstone is to be congratulated, for all three have the necessary requirements for their responsible positions.

Four Vice-Presidents have been appointed : Lord Craigavon, Lord Londonderry, Sir Thomas Dixon, and Mr. F. W. Ogilvie.

The chairmen and conveners for the working committees have also been appointed. These are as follows :—

MUSEUM COMMITTEE.

Chairman: Professor Young. *Conveners:* Dr. G. P. McCullagh and Dr. W. A. Page.

RECEPTION ROOMS COMMITTEE.

Chairman: Mr. Howard Stevenson. *Convener:* Mr. Woodside.

ENTERTAINMENTS AND AMUSEMENTS COMMITTEE.

Chairman: Dr. S. B. Boyd Campbell. *Convener:* Dr. Ivan H. McCaw, with the following organizers of the sub-committees :—

Garden Parties, Mr. J. R. Wheeler; *Golf,* Dr. Foster Coates; *Music and Theatres,* Dr. Alexander Dempsey; *Dances,* Dr. A. Lennon; *Excursions,* Mr. Ian Fraser; *Visits to Hospitals,* Dr. R. S. Allison; *Visits to Industries,* Dr. Jack Crawford.

TRANSPORT COMMITTEE.

Chairman: Dr. G. G. Lyttle. *Conveners:* Mr. Melville McClure and Mr. Ingram (Thos. Cook & Sons).

PRINTING AND PUBLISHING COMMITTEE.

Chairman: Dr. Robert Marshall. *Convener:* Dr. H. H. Stewart.

DINNER AND LUNCH COMMITTEE.

Chairman: Dr. R. M. Beath. *Convener:* Dr. Hardy Greer.

HOTELS AND LODGINGS COMMITTEE.

Chairman: Dr. F. P. Montgomery. *Convener:* Dr. T. A. Kean.

POST-GRADUATE COURSE FOR GENERAL PRACTITIONERS

A FEW years ago post-graduate classes in general medicine and surgery were inaugurated by Queen's University, Belfast. These classes were confined to panel practitioners nominated by the Ministry of Labour (N.I.), and were attended with considerable success. This year it is thought that a wider sphere of usefulness might be given these classes, by opening a limited number of places to any general practitioners to wish to attend, and arrangements have been made with this object in view.

The classes will begin on Monday, 16th, and end on Saturday, 28th September, 1935, and they will be conducted by the visiting staffs of the Royal Victoria and the Mater Infirmorum Hospitals, and the teaching staff of Queen's University, Belfast. The morning sessions, from 9.30 till 12 noon, will be confined to clinical study in the wards and out-patients of the hospitals. The afternoon sessions, from 2 till 5 p.m., will be devoted to demonstrations and lectures on the more theoretical aspects of medicine and surgery, to problems of public health, to pathology, bacteriology, and biochemistry, and will be held in the Institute of Pathology, Grosvenor Road, Belfast.

Anyone interested in these classes may obtain further information from Dr. R. H. Hunter, organizing secretary, or Professor W. J. Wilson, Dean of the Medical Faculty, Queen's University, Belfast. The fee for the fortnight's course will be £5. 5s., payable in advance.

LONDONDERRY MEDICAL SOCIETY

THE fifth meeting of the session 1934-5 was held in the City and County Infirmary, at 8.15 p.m. on Friday, 29th March. The lecturer on this occasion was Mr. C. H. G. Macafee, who chose as his subject: "The Prevention of Puerperal Sepsis." There was a good attendance of members, and as the subject was one of such vital interest to a great majority of those present who were actively engaged in midwifery practice, it provoked a very lively discussion.

The April meeting had to be postponed, as the visiting lecturer, Dr. A. H. Davidson of the Rotunda Hospital, Dublin, found he was unable to come on the date arranged.

J. A. L. JOHNSTON, *Hon. Secretary.*

19 Clarendon Street, Londonderry.

PRINTING AND PUBLISHING COMMITTEE.

Chairman: Dr. Robert Marshall. *Convener:* Dr. H. H. Stewart.

DINNER AND LUNCH COMMITTEE.

Chairman: Dr. R. M. Beath. *Convener:* Dr. Hardy Greer.

HOTELS AND LODGINGS COMMITTEE.

Chairman: Dr. F. P. Montgomery. *Convener:* Dr. T. A. Kean.

POST-GRADUATE COURSE FOR GENERAL PRACTITIONERS

A FEW years ago post-graduate classes in general medicine and surgery were inaugurated by Queen's University, Belfast. These classes were confined to panel practitioners nominated by the Ministry of Labour (N.I.), and were attended with considerable success. This year it is thought that a wider sphere of usefulness might be given these classes, by opening a limited number of places to any general practitioners to wish to attend, and arrangements have been made with this object in view.

The classes will begin on Monday, 16th, and end on Saturday, 28th September, 1935, and they will be conducted by the visiting staffs of the Royal Victoria and the Mater Infirmorum Hospitals, and the teaching staff of Queen's University, Belfast. The morning sessions, from 9.30 till 12 noon, will be confined to clinical study in the wards and out-patients of the hospitals. The afternoon sessions, from 2 till 5 p.m., will be devoted to demonstrations and lectures on the more theoretical aspects of medicine and surgery, to problems of public health, to pathology, bacteriology, and biochemistry, and will be held in the Institute of Pathology, Grosvenor Road, Belfast.

Anyone interested in these classes may obtain further information from Dr. R. H. Hunter, organizing secretary, or Professor W. J. Wilson, Dean of the Medical Faculty, Queen's University, Belfast. The fee for the fortnight's course will be £5. 5s., payable in advance.

LONDONDERRY MEDICAL SOCIETY

THE fifth meeting of the session 1934-5 was held in the City and County Infirmary, at 8.15 p.m. on Friday, 29th March. The lecturer on this occasion was Mr. C. H. G. Macafee, who chose as his subject: "The Prevention of Puerperal Sepsis." There was a good attendance of members, and as the subject was one of such vital interest to a great majority of those present who were actively engaged in midwifery practice, it provoked a very lively discussion.

The April meeting had to be postponed, as the visiting lecturer, Dr. A. H. Davidson of the Rotunda Hospital, Dublin, found he was unable to come on the date arranged.

J. A. L. JOHNSTON, *Hon. Secretary.*

19 Clarendon Street, Londonderry.

PRINTING AND PUBLISHING COMMITTEE.

Chairman: Dr. Robert Marshall. *Convener:* Dr. H. H. Stewart.

DINNER AND LUNCH COMMITTEE.

Chairman: Dr. R. M. Beath. *Convener:* Dr. Hardy Greer.

HOTELS AND LODGINGS COMMITTEE.

Chairman: Dr. F. P. Montgomery. *Convener:* Dr. T. A. Kean.

POST-GRADUATE COURSE FOR GENERAL PRACTITIONERS

A FEW years ago post-graduate classes in general medicine and surgery were inaugurated by Queen's University, Belfast. These classes were confined to panel practitioners nominated by the Ministry of Labour (N.I.), and were attended with considerable success. This year it is thought that a wider sphere of usefulness might be given these classes, by opening a limited number of places to any general practitioners to wish to attend, and arrangements have been made with this object in view.

The classes will begin on Monday, 16th, and end on Saturday, 28th September, 1935, and they will be conducted by the visiting staffs of the Royal Victoria and the Mater Infirmorum Hospitals, and the teaching staff of Queen's University, Belfast. The morning sessions, from 9.30 till 12 noon, will be confined to clinical study in the wards and out-patients of the hospitals. The afternoon sessions, from 2 till 5 p.m., will be devoted to demonstrations and lectures on the more theoretical aspects of medicine and surgery, to problems of public health, to pathology, bacteriology, and biochemistry, and will be held in the Institute of Pathology, Grosvenor Road, Belfast.

Anyone interested in these classes may obtain further information from Dr. R. H. Hunter, organizing secretary, or Professor W. J. Wilson, Dean of the Medical Faculty, Queen's University, Belfast. The fee for the fortnight's course will be £5. 5s., payable in advance.

LONDONDERRY MEDICAL SOCIETY

THE fifth meeting of the session 1934-5 was held in the City and County Infirmary, at 8.15 p.m. on Friday, 29th March. The lecturer on this occasion was Mr. C. H. G. Macafee, who chose as his subject: "The Prevention of Puerperal Sepsis." There was a good attendance of members, and as the subject was one of such vital interest to a great majority of those present who were actively engaged in midwifery practice, it provoked a very lively discussion.

The April meeting had to be postponed, as the visiting lecturer, Dr. A. H. Davidson of the Rotunda Hospital, Dublin, found he was unable to come on the date arranged.

J. A. L. JOHNSTON, *Hon. Secretary.*

19 Clarendon Street, Londonderry.

BRITISH MEDICAL ASSOCIATION—BELFAST DIVISION

THE fourth meeting of the session, on 28th March, 1935, took the form of a combined meeting with the Pharmaceutical Society. This was addressed by Dr. Tait, assistant secretary of the Pharmaceutical Society in Scotland, who took as his subject the 1934 British Pharmaceutical Codex.

The annual meeting was held on 16th May. Dr. S. B. Boyd Campbell was elected chairman for the coming session, Dr. S. P. Rea vice-chairman. The representatives and deputy representatives to the annual representative meeting were re-elected. The Chief Tuberculosis Officers for Belfast, County Down, and Country Antrim were elected to the Committee, as were the chairmen and secretaries of the Local Practitioners Committees of Belfast, County Down, and County Antrim. A number of other new names were also added to the Committee.

J. C. C. CRAWFORD, *Hon. Secretary.*

360 Lisburn Road, Belfast.

BRITISH MEDICAL ASSOCIATION—NORTH-EAST ULSTER DIVISION

THE fourth annual dinner of the Division was held in the Northern Counties Hotel, Portrush, on Thursday, 28th March. The chairman, Dr. R. Allison, presided, and there were about eighty members and guests presents. After the loyal toast, the "British Medical Association" was proposed by Mr. Godfrey Boyle, and Dr. W. Porter replied. The toast of "The Guests" was proposed by Dr. D. Boylan in a racy speech, and Dr. J. McLaughlin, Derry, Mr. R. O'Neill, and Mr. J. Baxter of the legal profession replied. The toast of "The Chairman" was given by Dr. W. F. Evans. Dr. Sloan Bolton proposed the health of "The Musical Guests," and Mr. Hugh Carson, Mr. A. J. W. Christie, and Mr. W. McCulloch replied. The dinner was one of the most enjoyable held by the Division.

At the meeting on Monday, 29th April, in the Cottage Hospital, Coleraine, the following medical films were shown :—(*a*) Resuscitation of the Newborn, by Dame Louise McIlroy, and (*b*) Orthopædic Exercises. It was decided to hold the annual golf meeting at Castlerock. Matron and her staff entertained the members to tea.

The annual meeting of the Division was held in the Café, Coleraine, on Monday, 27th May. The following office-bearers were elected by 1935-6 :—Chairman : Dr. J. C. M. Martin, Portrush; Vice-Chairman, Dr. G. Bateman, Coleraine; Representative to Annual Meeting : Dr. Huey, F.R.C.S., Bushmills; Representative to Northern Ireland Branch : Dr. Huey, F.R.C.S., Bushmills; Hon. Secretary and Treasurer : Dr. J. M. Hunter, Portrush; Assistant Secretary : Dr. Sloan Bolton, Portrush.

Dr. T. Adams and Dr. J. Johnston were appointed to prepare a case for the dispensary doctors, following the resolution of the Tyrone Division, and to represent the Division at Council regarding this matter.

Dr. J. W. Heney, Belfast, then read a most instructive paper on "Modern Methods in Anæsthesia." He dealt in detail with premedication, and pointed out the desirability of making induction as easy as possible for the patient. He drew attention to the serious results which often followed severe psychic shock.

A vote of thanks was passed to Dr. Heney for his very interesting paper, and several members asked questions at the end of the meeting. Dr. J. S. McGlade kindly provided tea before the meeting. The usual silver collection for medical charities was taken.

J. M. HUNTER, *Hon. Secretary.*

36 Eglinton Terrace, Portrush, Co. Antrim.

BRITISH MEDICAL ASSOCIATION—TYRONE DIVISION

AT the annual general meeting held in the Tyrone County Hospital, Omagh, on Thursday, the 28th March, at 4.30 p.m., there were twelve members present.

The following officers for the year 1935-6 were unanimously elected :—Chairman : Dr. B. Lagan; Vice-Chairman : Dr. J. Chambers; Hon. Secretary : Dr. J. R. Martin; Hon. Treasurer : Dr. G. A. M. Gillespie; Representative on Branch Council : Dr. W. Lyle; Representative on Representative Body : Dr. W. Lyle; Deputy Representative on Representative Body : Dr. G. F. V. Leary, J.P.; Executive Committee : Dr. D. F. Murnaghan, Dr. R. J. Spence, Dr. A. H. T. Warnock, together with the above.

Matter concerning fees for certifying persons of unsound mind, and fees for difficult midwifery cases, and the salaries of newly appointed dispensary medical officers, was discussed. The following points were raised :—

1. **Lunacy Fees.**—Previous to the passing of the Medical Treatment Act (22 and 23 George V) by the Northern Parliament in 1932, any dispensary doctor called upon to examine an alleged lunatic was summoned to the police station, where he examined and gave evidence before two magistrates as to the mental condition of the alleged lunatic, and received a fee of at least £1. 1s. (in special cases more, up to a maximum of £2) whether he certified the alleged lunatic or not, and whilst acting he ran no personal risk, as he had complete protection by the police.

Under Section XII of the above-mentioned Act, the dispensary doctor is compelled to visit and examine the alleged lunatic at this person's own house or elsewhere in the dispensary district without any police or other protection, and to furnish a certificate as to his or her state of mind.

The doctor may have to travel twenty miles or more to do so, and, presumably, if he does not find the alleged lunatic at home, he must search for him, or return again and again till he finds him, and when so doing the doctor is afforded no protection by the police and thus runs very grave risks.

One of our members has been held up by a loaded rifle presented at him by a lunatic, and only escaped with his life by the exercise of a little tact and a large amount of luck; on another occasion he was attacked by a lunatic with a full soda-water bottle, and again by another lunatic without any weapons, so that the risk now incurred is by no means negligible.

Again, under Section LV of this Act, the examining doctor, if a dispensary doctor, will be paid a fee of 10s. 6d. for all his risk and trouble, only if the "person has been admitted as a rate-aided patient into a public mental hospital." If the doctor is not a dispensary medical

officer he gets £1. 1s., but in each case only if he certifies the patient as lunatic. This is entirely contrary to public policy, as it is an inducement to reckless or unscrupulous doctors to certify doubtful cases, and is a manifest injustice to dispensary doctors, who only get half the fee paid to other doctors without any travelling or other expenses.

2. **Difficult Midwifery Cases.**—There is a fee of £2. 2s. payable by the County Council to any doctor requisitioned by a qualified midwife to attend any difficult case, either in England or Northern Ireland. Up to the passing of Local Government Act of 14th November, 1934, this was paid without question to a dispensary doctor, unless a visiting ticket was also presented to him, but, since the passing of this Act, all claims by dispensary doctors for these fees must be forwarded to the appropriate Board of Guardians for a ruling as to the eligibility of the patient for medical relief, although it is clearly laid down in the dispensary rules and regulations that a dispensary medical officer is not bound to attend any person unless a ticket has been presented to him.

Boards of Guardians, being as a rule bent on economy when this can be effected by cutting a doctor's remuneration, will naturally decide that many people who had previously never thought of seeking medical relief are eligible for it; and the Strabane Board of Guardians has so ruled in the case of a woman on the panel, and therefore clearly ineligible.

Dispensary medical officers will be within their rights in refusing to attend on a midwife's requisition in cases where no ticket has been presented, and the lives of a mother and child may thus be sacrificed in direct consequence of this unfair discrimination against them.

3. The settlement made between the representatives of Poor Law medical officers and the Ministry of Labour was that the Poor Law medical officers' capitation rate for attendance on panel patients should be 1s. 6d. less than the standard rate to compensate in full for the diminution in his Poor Law work which was expected to result from the introduction of Medical Benefit; another proposal previously made to reduce salaries was definitely abandoned. For some reason not easy to account for, Poor Law work in most districts is not lessened—in some it has actually appreciably increased. Yet, in spite of this settlement, in almost all cases where new appointments have been made, the Guardians, with the approval of the Ministry of Home Affairs, have substantially reduced the standard salaries previously fixed by agreement between the different Boards of Guardians and the representatives of the Poor Law medical officers, which standard rates had the approval of the old Local Government Board or the present Ministry of Home Affairs—another gross injustice to Poor Law medical officers, and one which would not have been sanctioned by the Local Government Board.

J. R. MARTIN, *Hon. Secretary.*

Holmedene, Clogher, Co. Tyrone.

Nial O'Glacan of Donegal

By SAMUEL SIMMS, M.D., B.SC., D.P.H., M.R.C.P.

AMONG the few physicians of the seventeenth century whose names have been preserved from the stream of oblivion, is Nial O'Glacan of Donegal. Forgotten to-day, in his time he was one of the most distinguished members of the medical profession in Spain, France, and Italy, where for many years he had a long and distinguished career. Born in Donegal in the latter half of the sixteenth century, it is probable that he received the rudiments of his medical education from one of the families of hereditary physicians which at that time were attached to the Irish chieftains.

officer he gets £1. 1s., but in each case only if he certifies the patient as lunatic. This is entirely contrary to public policy, as it is an inducement to reckless or unscrupulous doctors to certify doubtful cases, and is a manifest injustice to dispensary doctors, who only get half the fee paid to other doctors without any travelling or other expenses.

2. **Difficult Midwifery Cases.**—There is a fee of £2. 2s. payable by the County Council to any doctor requisitioned by a qualified midwife to attend any difficult case, either in England or Northern Ireland. Up to the passing of Local Government Act of 14th November, 1934, this was paid without question to a dispensary doctor, unless a visiting ticket was also presented to him, but, since the passing of this Act, all claims by dispensary doctors for these fees must be forwarded to the appropriate Board of Guardians for a ruling as to the eligibility of the patient for medical relief, although it is clearly laid down in the dispensary rules and regulations that a dispensary medical officer is not bound to attend any person unless a ticket has been presented to him.

Boards of Guardians, being as a rule bent on economy when this can be effected by cutting a doctor's remuneration, will naturally decide that many people who had previously never thought of seeking medical relief are eligible for it; and the Strabane Board of Guardians has so ruled in the case of a woman on the panel, and therefore clearly ineligible.

Dispensary medical officers will be within their rights in refusing to attend on a midwife's requisition in cases where no ticket has been presented, and the lives of a mother and child may thus be sacrificed in direct consequence of this unfair discrimination against them.

3. The settlement made between the representatives of Poor Law medical officers and the Ministry of Labour was that the Poor Law medical officers' capitation rate for attendance on panel patients should be 1s. 6d. less than the standard rate to compensate in full for the diminution in his Poor Law work which was expected to result from the introduction of Medical Benefit; another proposal previously made to reduce salaries was definitely abandoned. For some reason not easy to account for, Poor Law work in most districts is not lessened—in some it has actually appreciably increased. Yet, in spite of this settlement, in almost all cases where new appointments have been made, the Guardians, with the approval of the Ministry of Home Affairs, have substantially reduced the standard salaries previously fixed by agreement between the different Boards of Guardians and the representatives of the Poor Law medical officers, which standard rates had the approval of the old Local Government Board or the present Ministry of Home Affairs—another gross injustice to Poor Law medical officers, and one which would not have been sanctioned by the Local Government Board.

J. R. MARTIN, *Hon. Secretary.*

Holmedene, Clogher, Co. Tyrone.

Nial O'Glacan of Donegal

By SAMUEL SIMMS, M.D., B.SC., D.P.H., M.R.C.P.

AMONG the few physicians of the seventeenth century whose names have been preserved from the stream of oblivion, is Nial O'Glacan of Donegal. Forgotten to-day, in his time he was one of the most distinguished members of the medical profession in Spain, France, and Italy, where for many years he had a long and distinguished career. Born in Donegal in the latter half of the sixteenth century, it is probable that he received the rudiments of his medical education from one of the families of hereditary physicians which at that time were attached to the Irish chieftains.

In the province of Ulster the hereditary physicians of the O'Donnell family were the MacDuinntsleibhes (later MacDunleavy and Donlevy), and several of their names are mentioned in the annals of the fourteenth, fifteenth, and sixteenth centuries. The family had originally resided in County Down, but were driven out by the Norman chieftain de Courcy. We owe to several members of this family some of the finest Irish medical manuscripts in existence. There is a manuscript in the British Museum (Harley 546) at the end of which is written : "Here ends Gualteru's book of the doses of medicines. Cormac MacDuinntsleibhe has put this summary into Irish for Dermot MacDonall O'Line, and to him and his sons may so profitable a commentary render good service. On the fourth day of the Kalends of April this lecture was finished at Cloyne in the year 1459."

The assumption, then, that O'Glacan was trained by a member of this family, in his native county, may be regarded as probably correct.

The training largely consisted in learning the aphorisms and other works of Hippocrates and certain works of Galen. This fact was mentioned by Campion in his History written in 1571, and also by O'Glacan himself in the preface of his treatise on the Plague. Early in life he left Ireland, and settled in Spain as early as 1602. This latter fact is inferred from his statement that he treated the great Hugh O'Donnell, Lord of Tirconnell, with a special poultice for a "venereo bubo" in the royal palace of the King of Spain. It is known that Hugh O'Donnell died at Simancas on 10th September, 1602, after an illness of fourteen days. For many years he travelled about the cities of Spain. In 1621 he was at Salamanca, and in 1622 Valentia, where he remained for two years. In these latter years he was engaged in treating the plague in special hospitals, and was, no doubt, highly paid for his services. Bubonic plague at that time swept Europe with terrific force, invading Spain, France, England, and Italy. Thus in 1630, eighty thousand people perished in Milan, and over five hundred thousand in the Venetian Republic, while in 1665 London lost sixty-nine thousand of its inhabitants. "The physicians delegated to treat the plague wore a strange prophylactic garb, consisting of a long red or black gown of smooth material, often of Morocco or Cordovan leather, with leather gauntlets, leather masks having glass-covered openings for the eyes, and a long beak or snout, filled with antiseptics or fumigants, for the nose. In his hand the pest-doctor carried a wand to feel the pulse." He was held in considerable estimation for his dangerous services. In 1627 O'Glacan was in France, and in 1628 he was appointed physician to the Pest Hospital of Toulouse. In the following year he published the *Tractatus de Peste,* an interesting commentary on the treatment of plague.

Some years later he was appointed Professor of Medicine in the University of Toulouse and Physician to the King of France. In 1646 he proceeded to Bologna, where he became the leading Professor of Medicine in the University, and published a system of medicine, *Cursus Medicus,* Bononiæ, 1655, two volumes. The date of his death is unknown, and no further details of his life are available. The system of medicine is an extensive quarto containing three parts in two volumes. The first

part deals with Physiology, or a general prolegomena to medicine as taught in the early seventeenth century. This part numbers some 436 pages. The second part deals with Pathology, or the causes and general symptoms of disease. This part, containing the theories of the time, is not so interesting, and numbers 372 pages. The third and last part deals with clinical medicine, especially the signs of disease, on crises, the pulse and the urine, great stress being laid on the examination of the two latter (as vividly portrayed in some of the canvases of Jan Steen, Franz Van Mieris, and Gabriel Metsu). The third part is the most extensive, and contains 876 pages. It is probable that only a small edition of this large work was printed, as the only copy in the country is the one in the British Museum. No other copies are to be found in the medical libraries of Great Britain. Much more interesting than the above work is O'Glacan's little treatise on Plague, the *Tractatus de Peste,* Tolosæ, 1629. I have illustrated this article with a reproduction of the actual size of the title page from my own copy. The volume is a small 12mo, containing 16 + 258 pages, and is divided into twenty chapters, with an appendix. This little volume is even rarer than his major work; the only other copy of which I am aware is to be found in the British Museum. The interest of this work consists in the many personal observations scattered through the text, and incidentally the treatise shows a very extensive knowledge of the dread disease.

We do not expect to find correct ideas on the etiology of plague, but on all other points that were a matter of observation only, there is a wealth of valuable and interesting material, and even some three or four reports of post-mortem examinations. Although the symptomatology of plague is protean, still in a few concise and accurate phrases the symptom-complex of the disease is clearly presented. Thus in chapter three: "The signs of plague are numerous . . . at one time headache and sleeplessness is troublesome, at another time heavy sleep, thirst, restlessness, vomiting, diarrhœa, loss of appetite, or again hunger, livid colour of the skin, or yellow. A prominent facies, an anxious expression, sudden lassitude, weakness of the limbs, and pain in the joints. High and continued fever, delirium, depression of spirits, rashes on the skin, buboes, tumours, syncope, a sense and feeling of weakness, and other signs which denote a great putridity of the humours."

Although humoral pathology is now replaced by bacteriology, the above description includes most of the leading symptoms of plague. In addition, wherever possible, there is a constant reference to the authority of Hippocrates and Galen, whose opinions are regarded as final. The fourth chapter deal with Prognosis, and states that "Plague, like other acute diseases, is of doubtful and dubious prognosis. The following signs were frequently observed by me, that stout and well-nourished patients with looseness of the bowels, vomiting, with or without a bubo, rarely happened to be restored to health." There is a considerable number of personal observations scattered throughout the work.

The headings of the chapters are interesting, as those on Purgatives, Clisters, Remedies of the Author, Remedies for the Poor, Buboes, Morbillis (Skin Rashes), Headache, Coma, Vomiting, and the Fumigation of Houses and Garments.

Under Phlebotomy we learn that it is especially for the sanguineous, bilious, and other robust persons, for the depressed individual and nurses rarely, and never for pregnant women. Also that blood-letting is useful in high fever, but always with prudence. Purgatives and clisters are recommended in certain cases. The most valuable sideline in the treatise is the notes on three post-mortems in Chapter 8, and another in Chapter 15. In this last the petechial hæmorrhages covering the surface of the lung are described, as also the great swelling of the spleen, and that it was four pounds in weight. These observations entitle O'Glacan to be claimed as an early pioneer in pathological anatomy, the father of Pathology being generally regarded as Morgagni (1682-1771). Modern readers might be interested in one of O'Glacan's prescriptions. It is as follows: R. Mithraditii et Confectionis de Hyacintho āā, one ounce; Rad. Tormentillæ, 2 drachms; Boli Armeni et Coralli rubri prep. āā, 1 drachm; Diamargaritanis frigidi et Diatriasantali āā, 1 drachm. Sacchari Candi, 3 drachms. Conservæ acetosæ, 2 ounces. Camphoræ, 20 grs. Syrupi de succo limonum, quod sufficit. *Signa.*—Make a mixture after the manner of an opiate, and take one drachm by itself, or with a convenient liquor, as often as necessary.

In an age of polypharmacy the above was an agreeable mixture, but there were some others not so palatable, such as *"unum vidimus uno aut altero suæ urinæ haustu curatum."* There are many other points of interest in this little volume, but lack of space forbids me to mention them. Those interested in historical medicine will find plenty of original material for study in the lives of Irish physicians.

CELLULAR LATEX MATTRESSES

WITH so many County Infirmaries being converted into modern hospitals, any matter referring to their furnishings is of special interest to the medical profession, and the experiences of other hospitals are of value. For this reason we should like to draw the attention of our readers to the cellular latex type of mattress.

All mattresses supplied to Leeds Corporation during this year are of this type, and the Leeds Maternity Hospital has also decided to have these when replacing the mattresses now in use.

The cellular latex mattresses have been approved by the Medical Supplies Department after lengthy tests, and orders for them are being placed by H.M. Office of Works for the Ministry of Pensions, the Admiralty, and the Royal Air Force.

These mattresses are being adopted throughout the country because of their comfort and their hygienic merit. Owing to their construction, the texture of the material is constantly ventilated, for the cells of the latex "breathe," thus creating conditions which are of immense value in the care of the sick and the bed-ridden.

Under Phlebotomy we learn that it is especially for the sanguineous, bilious, and other robust persons, for the depressed individual and nurses rarely, and never for pregnant women. Also that blood-letting is useful in high fever, but always with prudence. Purgatives and clisters are recommended in certain cases. The most valuable sideline in the treatise is the notes on three post-mortems in Chapter 8, and another in Chapter 15. In this last the petechial hæmorrhages covering the surface of the lung are described, as also the great swelling of the spleen, and that it was four pounds in weight. These observations entitle O'Glacan to be claimed as an early pioneer in pathological anatomy, the father of Pathology being generally regarded as Morgagni (1682-1771). Modern readers might be interested in one of O'Glacan's prescriptions. It is as follows: R. Mithraditii et Confectionis de Hyacintho āā, one ounce; Rad. Tormentillæ, 2 drachms; Boli Armeni et Coralli rubri prep. āā, 1 drachm; Diamargaritanis frigidi et Diatriasantali āā, 1 drachm. Sacchari Candi, 3 drachms. Conservæ acetosæ, 2 ounces. Camphoræ, 20 grs. Syrupi de succo limonum, quod sufficit. *Signa.*—Make a mixture after the manner of an opiate, and take one drachm by itself, or with a convenient liquor, as often as necessary.

In an age of polypharmacy the above was an agreeable mixture, but there were some others not so palatable, such as *"unum vidimus uno aut altero suæ urinæ haustu curatum."* There are many other points of interest in this little volume, but lack of space forbids me to mention them. Those interested in historical medicine will find plenty of original material for study in the lives of Irish physicians.

CELLULAR LATEX MATTRESSES

WITH so many County Infirmaries being converted into modern hospitals, any matter referring to their furnishings is of special interest to the medical profession, and the experiences of other hospitals are of value. For this reason we should like to draw the attention of our readers to the cellular latex type of mattress.

All mattresses supplied to Leeds Corporation during this year are of this type, and the Leeds Maternity Hospital has also decided to have these when replacing the mattresses now in use.

The cellular latex mattresses have been approved by the Medical Supplies Department after lengthy tests, and orders for them are being placed by H.M. Office of Works for the Ministry of Pensions, the Admiralty, and the Royal Air Force.

These mattresses are being adopted throughout the country because of their comfort and their hygienic merit. Owing to their construction, the texture of the material is constantly ventilated, for the cells of the latex "breathe," thus creating conditions which are of immense value in the care of the sick and the bed-ridden.

REVIEWS

A HANDBOOK OF MIDWIFERY. By Sir Comyus Berkeley, M.A., M.C., M.D., F.R.C.P., F.R.C.S. 1935. Ninth Edition. London. Pp. 634; figs. 76. Price 8s. net.

This new edition is the result of a conscientious revision by the author with the aim of simplifying and improving the method of presentation and bringing the material thoroughly up to date. The nature and extent of the alterations can be gauged from the fact that the whole of the book has had to be reset.

The ninth edition runs a little longer than the last, owing to the unavoidable expansion of certain sections necessitated by recent tendencies in the teaching of the subject, but the book remains of convenient size.

It is a pity that exigencies of space did not permit of a fuller account being given on infant feeding. This is an aspect of obstetrical practice which is becoming of great importance; and the young physician entering practice without a knowledge of this subject is handicapped to a great degree.

As a small book to read before the trying days of the examination, this book should be of great value to the student.

POCKET MONOGRAPHS ON PRACTICAL MEDICINE: INSOMNIA, by E. Miller, M.A., D.P.M.; OPHTHALMOLOGY IN GENERAL PRACTICE, by O. G. Morgan. 1935. London: John Bale, Sons & Danielsson, Ltd. Price 2s. 6d. each net.

This series of small but essentially practical monographs is of value to the busy practitioner who finds little time for the study of the many advances which are being made in medicine. They are written by recognized specialists of the subjects discussed, and only personal experiences in treatment and diagnosis are given.

It is unfortunate that the publishers did not see their way to increase the space allowed for each subject, and some of the volumes suffer from over-condensation. The last two volumes to be added to the series suffer in this way, and little attempt has been made to sift the older and tried methods from the newer and less-known.

Of these two volumes, that on insomnia would appear to be the more useful. It contains in small compass a vast amount of information on disturbances of sleep, from the point of view of anxiety-states, psychoses, alcoholism, and drug addiction. The section on treatment should be useful, particularly that devoted to the use of hypnotics; it contains a short but well-balanced account of the widely discussed group of the barbiturates.

The volume on ophthalmology is too short to be of service to any but a junior student who is about to begin the study of ophthalmology at a hospital clinic.

POCKET MEDICAL DICTIONARY. Lois Oakes and T. B. Davie. 1935. Edinburgh: E. & S. Livingstone. Pp. 366. Price 3s.

This extraordinarily useful little book, first published in 1933, has already passed into a second edition. This is conclusive proof of its worth and popularity. It is specially written for the use of students in the first few years in hospital, and it contains many items which should be of value to them. The edition has been kept up to date by the inclusion of many new words, while the subject matter of the appendices has been enlarged by the addition of sections dealing with the testing of urine, the treatment of common poisons, the examination of fæces, and blood examinations. Special attention has been given to the dosage of the various drugs mentioned, these having been revised according to the latest edition of the British Pharmacopœia. This little dictionary should be in the hands of every medical student commencing his hospital work, and its use as a companion will save him from many a mistake.

REVIEWS

A HANDBOOK OF MIDWIFERY. By Sir Comyus Berkeley, M.A., M.C., M.D., F.R.C.P., F.R.C.S. 1935. Ninth Edition. London. Pp. 634; figs. 76. Price 8s. net.

This new edition is the result of a conscientious revision by the author with the aim of simplifying and improving the method of presentation and bringing the material thoroughly up to date. The nature and extent of the alterations can be gauged from the fact that the whole of the book has had to be reset.

The ninth edition runs a little longer than the last, owing to the unavoidable expansion of certain sections necessitated by recent tendencies in the teaching of the subject, but the book remains of convenient size.

It is a pity that exigencies of space did not permit of a fuller account being given on infant feeding. This is an aspect of obstetrical practice which is becoming of great importance; and the young physician entering practice without a knowledge of this subject is handicapped to a great degree.

As a small book to read before the trying days of the examination, this book should be of great value to the student.

POCKET MONOGRAPHS ON PRACTICAL MEDICINE: INSOMNIA, by E. Miller, M.A., D.P.M.; OPHTHALMOLOGY IN GENERAL PRACTICE, by O. G. Morgan. 1935. London: John Bale, Sons & Danielsson, Ltd. Price 2s. 6d. each net.

This series of small but essentially practical monographs is of value to the busy practitioner who finds little time for the study of the many advances which are being made in medicine. They are written by recognized specialists of the subjects discussed, and only personal experiences in treatment and diagnosis are given.

It is unfortunate that the publishers did not see their way to increase the space allowed for each subject, and some of the volumes suffer from over-condensation. The last two volumes to be added to the series suffer in this way, and little attempt has been made to sift the older and tried methods from the newer and less-known.

Of these two volumes, that on insomnia would appear to be the more useful. It contains in small compass a vast amount of information on disturbances of sleep, from the point of view of anxiety-states, psychoses, alcoholism, and drug addiction. The section on treatment should be useful, particularly that devoted to the use of hypnotics; it contains a short but well-balanced account of the widely discussed group of the barbiturates.

The volume on ophthalmology is too short to be of service to any but a junior student who is about to begin the study of ophthalmology at a hospital clinic.

POCKET MEDICAL DICTIONARY. Lois Oakes and T. B. Davie. 1935. Edinburgh: E. & S. Livingstone. Pp. 366. Price 3s.

This extraordinarily useful little book, first published in 1933, has already passed into a second edition. This is conclusive proof of its worth and popularity. It is specially written for the use of students in the first few years in hospital, and it contains many items which should be of value to them. The edition has been kept up to date by the inclusion of many new words, while the subject matter of the appendices has been enlarged by the addition of sections dealing with the testing of urine, the treatment of common poisons, the examination of fæces, and blood examinations. Special attention has been given to the dosage of the various drugs mentioned, these having been revised according to the latest edition of the British Pharmacopœia. This little dictionary should be in the hands of every medical student commencing his hospital work, and its use as a companion will save him from many a mistake.

REVIEWS

A HANDBOOK OF MIDWIFERY. By Sir Comyus Berkeley, M.A., M.C., M.D., F.R.C.P., F.R.C.S. 1935. Ninth Edition. London. Pp. 634; figs. 76. Price 8s. net.

This new edition is the result of a conscientious revision by the author with the aim of simplifying and improving the method of presentation and bringing the material thoroughly up to date. The nature and extent of the alterations can be gauged from the fact that the whole of the book has had to be reset.

The ninth edition runs a little longer than the last, owing to the unavoidable expansion of certain sections necessitated by recent tendencies in the teaching of the subject, but the book remains of convenient size.

It is a pity that exigencies of space did not permit of a fuller account being given on infant feeding. This is an aspect of obstetrical practice which is becoming of great importance; and the young physician entering practice without a knowledge of this subject is handicapped to a great degree.

As a small book to read before the trying days of the examination, this book should be of great value to the student.

POCKET MONOGRAPHS ON PRACTICAL MEDICINE: INSOMNIA, by E. Miller, M.A., D.P.M.; OPHTHALMOLOGY IN GENERAL PRACTICE, by O. G. Morgan. 1935. London: John Bale, Sons & Danielsson, Ltd. Price 2s. 6d. each net.

This series of small but essentially practical monographs is of value to the busy practitioner who finds little time for the study of the many advances which are being made in medicine. They are written by recognized specialists of the subjects discussed, and only personal experiences in treatment and diagnosis are given.

It is unfortunate that the publishers did not see their way to increase the space allowed for each subject, and some of the volumes suffer from over-condensation. The last two volumes to be added to the series suffer in this way, and little attempt has been made to sift the older and tried methods from the newer and less-known.

Of these two volumes, that on insomnia would appear to be the more useful. It contains in small compass a vast amount of information on disturbances of sleep, from the point of view of anxiety-states, psychoses, alcoholism, and drug addiction. The section on treatment should be useful, particularly that devoted to the use of hypnotics; it contains a short but well-balanced account of the widely discussed group of the barbiturates.

The volume on ophthalmology is too short to be of service to any but a junior student who is about to begin the study of ophthalmology at a hospital clinic.

POCKET MEDICAL DICTIONARY. Lois Oakes and T. B. Davie. 1935. Edinburgh: E. & S. Livingstone. Pp. 366. Price 3s.

This extraordinarily useful little book, first published in 1933, has already passed into a second edition. This is conclusive proof of its worth and popularity. It is specially written for the use of students in the first few years in hospital, and it contains many items which should be of value to them. The edition has been kept up to date by the inclusion of many new words, while the subject matter of the appendices has been enlarged by the addition of sections dealing with the testing of urine, the treatment of common poisons, the examination of fæces, and blood examinations. Special attention has been given to the dosage of the various drugs mentioned, these having been revised according to the latest edition of the British Pharmacopœia. This little dictionary should be in the hands of every medical student commencing his hospital work, and its use as a companion will save him from many a mistake.