test. The writer has also found it necessary to make fresh preparations of placental tissue at frequent intervals as the stock material cannot always be relied upon. The placental tissue is obviously one of the most important factors in the test and the greatest source of error. Hence the necessity for exercising the utmost care during the steps in its preparation. The dialysers used in the test are those specially prepared by Schleicher and Schüll and labelled No. 579A, the size most suitable for ordinary use being 16 by 50 mm. These dialysers are allowed to soak in distilled water containing toluol for some days and then tested as to their capability of separating peptones and amino-acids from colloidal substances. For this purpose a preparation of peptone is required, that used by Abderhalden being the "seiden" peptone. The writer has used a peptone solution made from "Darby's fluid meat." Five cubic centimetres of a 0·1 per cent. solution of "seiden" peptone are placed in a dialyser tube and surrounded by 20 c.c. of distilled water contained in a special glass vessel, all the materials being previously sterilised. The vessel is then placed in an incubator for sixteen to twenty-four hours, and then 10 c.c. of the dialysate tested with 0·2 c.c. of a 1 per cent. solution of ninhydrin. A dialysing tube giving a moderate blue colour is accepted as reliable, those giving either a very strong reaction or a negative result being discarded. After passing this test they are carefully washed in distilled water for some weeks and tested in the same way with serum albumen or egg albumen, only those giving a negative ninhydrin test being used. The dialysers can be used repeatedly, provided they are subjected to careful washing after each test and stored in sterile distilled water containing toluol as a preservative. The glass vessels used for the test are provided with a narrow neck and are easily sterilised. They should be of such a size that when the dialyser is in place there is a space of $\frac{1}{2}$ cm. between the dialyser and the vessel-wall. For the test the glass vessel contains 20 c.c. of sterile distilled water covered with a layer of toluol. The serum for the test is obtained in the same way as described for the polarimeter test, and must be quite fresh, as the slightest hæmolysis in the serum is sufficient to produce an erroneous result. The removal of 10 to 15 c.c. of the patient's blood from the median basilic vein when carried out with the usual precautions and the transference of the blood directly into a sterile centrifuge tube generally avoids these sources of error. Since the blood-serum may contain dialysable substances in the form of amino-acids after meals, it is always advisable to remove the blood on an empty stomach. The writer has also found it preferable to take the blood in the evening, as the dialysable substances tend to be reduced in amount when the body is fatigued. The ninhydrin reagent (triketohydrindene hydrate) is now manufactured and sold in 0·1 grm. tubes, in the form of a yellowish-coloured salt, which is readily soluble in water giving a colourless solution. The solution used in the dialysation test is made up to a strength of 1 per cent. This compound reacts with any amino compound, where the amino group is in the α position to the carboxyl group, and the resulting condensation compound possesses a violet colour. The ninhydrin solution should be kept in the dark and properly sealed, as the reagent rapidly deteriorates, and, further, it is advisable not to keep the solution longer than one week.

Method of Applying the Dialysation Test.

A series such as the following is made up in carrying out the test for the diagnosis of pregnancy :

(1) Serum of patient (1·5 c.c.).

(2) Serum of non-pregnant woman (1·5 c.c.)

(3) Heated placental tissue (about 1 grm.).

(4) Heated placental tissue + 1·5 c.c. serum of patient.

(5) Heated placental tissue + 1·5 c.c. serum of non-pregnant patient.

(6) Heated placental tissue + 1·5 c.c. serum of patient heated to 60° C. for thirty minutes.

In the actual test 1·5 c.c. of serum is placed in a properly tested dialyser together with a small quantity of the placental tissue, and the dialyser surrounded by 20 c.c. of sterile distilled water, toluol being added to both. The whole series of tests as given above are placed in an incubator at 37° C., and allowed to remain for sixteen to twenty-four hours. At the end of this time they are taken out and the dialysates examined separately with the ninhydrin reagent. During the earlier stages of this work the biuret test was used to demonstrate the presence of peptones in the dialysate, but since the introduction of the much more delicate reagent of Ruhemann known as ninhydrin the former test has been discarded. To carry out the biuret test a solution, possessing only a faint blue colour, made up from a 30 per cent. solution of sodium hydrate and a very dilute solution of copper sulphate is used. The solution is placed in a reagent glass, and the addition of the dialysate produces a blue ring at the junction of the fluid. Test No. 4, however, should always give a reddish-violet colour indicating a positive reaction.

The ninhydrin test, on the other hand, owing to its extreme delicacy, requires a much more careful manipulation, and, further, is full of pitfalls. Ninhydrin or triketohydrindene hydrate when heated with peptones and amino-acids forms condensation compounds which possess an intense blue colour.

The sensitiveness of this reagent depends upon the concentration of the reacting substances present, and will show the presence of the amino-acid glycine in 1 part in 65,000 of water and 1 part of the other amino-acids in 15 to 25,000 of water. Further, every protein and protein-containing material will on dialysis give this test—*e. g.* fresh milk, saliva, urine, blood-plasma, lymph, sweat, fresh and

boiled egg-white, fresh and cooked meat, although containing no biuret-yielding bodies. From this list of substances alone it will be clear that all proteins must be purified by dialysis before use. Further, the materials used in the test must not be handled with the fingers, and pipettes must not be placed in the mouth, owing to the danger of contamination with the sweat and saliva respectively. Since hæmoglobin is a diffusible protein when free it follows that hæmolysed serum cannot be used for the diagnosis of pregnancy.

The solution is made up in distilled water to the strength of 1 per cent., and it is advisable to use moderately fresh solutions, as the reagent does not keep well. To carry out the test 10 c.c. of the dialysate are placed in a clean sterile boiling tube, care being taken to avoid contamination with toluol, and 0·2 c.c. of ninhydrin solution added. The mixture is then boiled for one minute, a boiling stick being inserted to prevent frothing. A positive result is indicated when the solution assumes a blue colour. Carried out in this way the dialysation method gives results which always confirm the optical tests, and provided attention is paid to the details of technique, the test is of value in the diagnosis of pregnancy. Alone, however, the test cannot be said to be of absolute value, as there are still fallacies over which we have no control. As shown above, the sensitiveness of the reagent depends upon the concentration of the reacting substances. Now, if we assume that one unit of substance is required to give the blue colour, the dialysate from the serum of pregnant women must contain one unit or above to give a positive test. In the crucial test we are using two materials, namely, serum and placental tissue. The serum alone may only contain 0·5 unit, and so give a negative reaction when dialysed alone, and similarly the placental tissue may yield 0·5 unit. When, however, the two are mixed together one unit of dialysable substance is obtained without any actual ferment changes taking place, and a positive test results. Again, a serum which has been obtained after a meal will contain an increase of diffusible substances, as much possibly as 0·9 unit, and this, when mixed with the placental tissue, will also give a positive test. Such results have been met with, and a number of experiments have been made in an attempt to eliminate this error. To a certain extent this possible source of error is overcome by inactivation of the serum, as in experiment (6) in the series given above. All that can be said at present is that certain definite rules must be laid down before applying the test. In the first place, the patient must have abstained from food at least four hours previously, and the blood contains less of these diffusible substances giving the ninhydrin reaction. The placental tissues also requires careful preparation, and particularly long-continued dialysis before use.

The sensitiveness of the ninhydrin reaction depends upon the concentration of the dialysate, and also of the reagent itself. The dialysate from all the tests, therefore, requires boiling for exactly one minute, and the same gas flame must be used so that evaporation is constant in all. The best method of checking this is to use specially graduated test-tubes for the ninhydrin test, and the amount of fluid left in each tube after boiling should be compared.

The Value of the Tests in the Diagnosis of Pregnancy, and of Various Pathological Conditions.

Having proved that the blood of pregnant women or of recently delivered women contains a ferment specific for placental tissue, and also eliminated to a large extent the possible sources of error in the tests for demonstrating this ferment, the test should prove of value in clinical medicine.

In order to test the correctness of the methods used the sera of fifty cases of women who were known to be pregnant were investigated by the writer. Of these twenty women were either in the last three months of pregnancy or had recently been delivered. In every case the optical test and the dialysation test proved to be positive. The remaining thirty women were in the earlier months of pregnancy, ranging from the eighth week to the fourth month, and all gave a positive reaction with the dialysis test. The optical test was only applied to ten of these cases and was positive on every occasion.

In thirty non-pregnant women the reaction was always negative to both the dialysis and optical methods. These patients comprised women suffering from a variety of diseases, including eight with malignant disease and fourteen with syphilis. The sera of thirty males suffering from various diseases were also tested by both methods and on no occasion was a positive reaction found. A large number of these men suffered from syphilis in its various manifestations.

The test has therefore been applied to 110 cases, in some instances on more than one occasion, and in every instance has proved to be correct.

Not only have these sera been used for the diagnosis of pregnancy, but a number have been tested for malignant disease and tuberculosis by the same test. In eight cases the sera of cancerous patients digested cancer-tissue, but did not digest placental tissue. A larger number of cases have since been investigated by Brockman, working in my laboratory, with successful results. The sera of five cases of tuberculosis have also been investigated by means of the dialysation method, using an emulsion of human tubercle bacilli, with positive results in each case. One case of tuberculous salpingitis gave a positive reaction with the tubercle emulsion, and a negative result with placental tissue. The control sera in ten cases gave negative results to tubercle, including one case of hydrosalpinx, which was proved at operation not to be tuberculous. Repeated attempts to apply the test for the diagnosis of syphilis have failed, there

being no evidence of the presence of a specific ferment in the blood-stream capable of digesting the syphilitic tissue.

The satisfactory results obtained by these tests in the demonstration of a specific ferment in the blood of pregnant women led to the application of the test in the diagnosis of pregnancy in special cases. In all, eighteen cases were investigated for this purpose, and were as follows:

Suspected ectopic gestation 3; pelvic and abdominal tumours where it was suspected that the whole or part of the tumour might be the pregnant uterus, 6; suspected chorion-epithelioma, 3; chorea in a woman of twenty-one 1; heart disease with amenorrhœa, 1; nephritis with exacerbation of symptoms and amenorrhœa, 2; late puerperal sepsis, 2.

The optical test was applied in almost every instance, and gave a correct result. There were, however, two failures in the dialysation method, and these occurred in the two cases of inflammatory adnexal disease, where, unfortunately, owing to lack of material, the optical test was not used. A full description of the clinical history of most of these cases has been given by Dr. Williamson in the *Journal of Obstetrics and Gynæcology*, October, 1913.

The tests of Abderhalden have been applied to the diagnosis of pregnancy with favourable results, and the principle upon which they are based has since been extended to the diagnosis of cancer (both carcinoma and sarcoma), tuberculosis, and certain nervous and mental diseases. In connection with the latter some interesting observations have been made upon the proteolytic powers of the serum towards various antigen-like substances, particularly testicular, ovarian, and brain-tissue. The sera of cases of dementia præcox when examined in this way gives very striking results as regards the digestion of the above tissues. The serum of a male patient with dementia præcox will digest testicular tissue, whereas that of a female patient under the same conditions splits up ovarian tissue.

This power of digesting the genital gland-tissues does not apply to cases of epilepsy, hysteria, or manic-depressive insanity. When brain-tissue is used (*i. e.* the cortical tissue of the brain) a positive result occurs in epilepsy, particularly when an attack is approaching, also in severe cases of dementia præcox, and in the majority of cases of general paresis. It would appear from these results that in the Abderhalden tests we have a valuable aid in differential diagnosis in psychiatry, more especially in dementia præcox in its early stages.

The results of the Abderhalden method for the diagnosis of pregnancy, and also some pathological conditions, have so far proved reliable. Many other possibilities of the test are foreshadowed, particularly the diagnosis of infectious diseases as well as of organic diseases in various parts of the body. By this test also we may learn more concerning the inter-relationship of the ductless glands, and the part these organs play in disease.

Conclusions.

(1) The serum of pregnant women contains a specific ferment capable of digesting placental tissue, and this ferment can be detected from the eighth week of pregnancy until ten days after delivery, both by the optical and by the dialysation test.

(2) That both tests should always be applied to the serum from the same case, and that the accuracy of the results depends entirely upon the most scrupulous care in details.

(3) That the tests appear to be of value in diagnosis, more especially in the following conditions:

(*a*) The early diagnosis of pregnancy.

(*b*) The differential diagnosis between fibromyomata and pregnancy.

(*c*) The diagnosis of ectopic gestation.

(*d*) The diagnosis of chorion-epithelioma.

(*e*) The presence of retained placenta.

(4) That there is at present no justification for stating that the serum of pregnant women will digest other than placental tissue.

(5) The tests may be applied to the diagnosis of cancer (carcinoma and sarcoma), tuberculosis, and also in various nervous and mental diseases.

(6) The claims of Abderhalden that the optical and dialysation tests are of value in the diagnosis of pregnancy are established.

A CASE OF SEPARATION OF THE LOWER EPIPHYSIS OF THE TIBIA.

By J. V. Fiddian, M.R.C.S.

MR. D'ARCY POWER has asked me to place on record a case of separation of the lower ephiphysis of the tibia, on account of the comparative rarity of this injury.

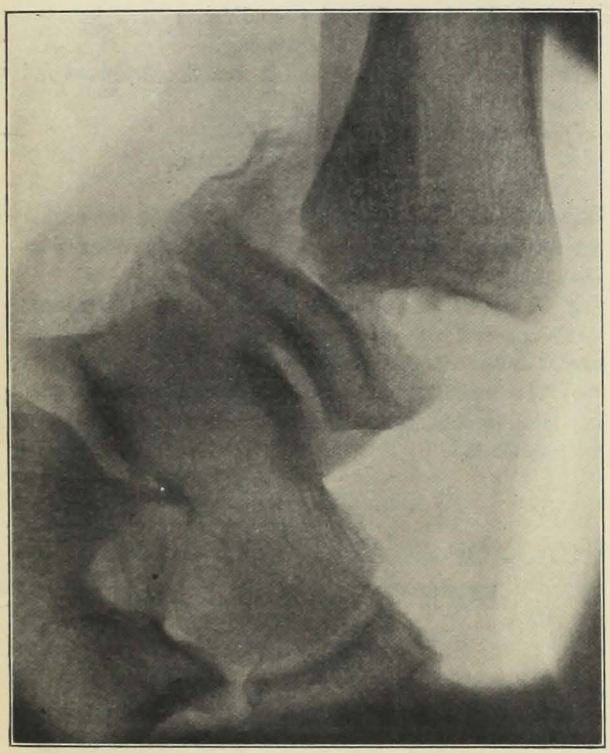
The patient, F. W—, a van-boy, æt. 16, was climbing on to his van when his left foot slipped between the spokes of the wheel, and as the van was in motion at the time his foot was severely twisted.

He was admitted with a deformity that looked at first sight like a dislocation backwards of the foot on the leg. There was very little swelling and no eversion or inversion of the foot. Soft crepitus could be obtained. Passive movement at the ankle-joint was painless within a small range. The accompanying skiagram shows the position of the epiphysis before reduction and also the fact that the lower end of the fibula was fractured. Reduction was accomplished under an anæsthetic and after tenotomy of the tendo-Achillis.

Poland records forty-six cases of separation of the lower epiphysis of the tibia, twenty-three of which had also fracture of the fibula.

The great majority of these cases occurred between the ages of nine and seventeen years, and forty-four out of the forty-six were boys.

According to Poland, the force required to separate this epiphysis is very great, much greater than that required to cause a Pott's fracture. The injury is nearly always caused by indirect violence. The prognosis, with careful treatment, according to the same author, is good, firm union with free



SKIAGRAM TAKEN BEFORE REDUCTION.

movement of the foot being the rule. Arrest of growth is uncommon, but is nevertheless recorded in a few instances, and in these the great feature has been marked inversion of the foot owing to the continued growth of the fibula without corresponding growth of the tibia.

Mr. Power's case was discharged to Swanley after three and a half weeks, and at that time there was firm union and free passive movement, though active movement was still weak, presumably owing to the tenotomy of the tendo-Achillis. The notch caused by the separation of the divided ends of the tendon had almost completely disappeared.

BODY-SNATCHERS—AND AFTER.

A PLEA FOR ANATOMY.

PART I.

By ALEXANDER MACPHAIL, M.B., C.M., F.R.F.P.&S.G.,
Lecturer on Anatomy.

WOULD any sensible man entrust the cure of his precious chronometer to the hands of a workman who had never before, even in his 'prentice days, probed beneath the face of a watch, or handled its delicate and complex mechanism?

Yet, for many centuries, our fellow-men were content to entrust the cure of their own much more precious interiors to the hands of medical men, whom they persistently debarred, by all the laws of Church and State, from gaining any but the most superficial knowledge of the infinitely more delicate and complex mechanism of the human body.

Indeed, antipathies die hard, and even in our own day there are men, otherwise sensible, who question still the righteousness of the study of human anatomy, and who do all within their power to hamper its progress. It is partly to show that the claims of human anatomy must for ever be heard, and its need served, that certain dark pages in its history are here re-written.

Now the watchmaker and the medical man have this in common, that they are called on daily to deal with patients, inorganic and organic respectively, whose disorders are often but little apparent on the surface, and whose only hope of cure demands an accurate and first-hand knowledge of all their inmost parts. But there is a great difference between them when we come to consider their training: the watch-doctors have always enjoyed the fullest liberty to learn their job; from their earliest 'prentice years they have free access to the whole intricate anatomy of their inanimate patients. The man-doctors, on the other hand, have had to glean the vastly more important knowledge of the enormously more intricate anatomy of *their* patients very gradually, often surreptitiously, through many centuries when the slow progress of the science was hampered, ever and anon, by restraints begotten of superstition and unthinking prejudice.

Even in this our own enlightened day their opportunities of becoming familiar with its fundamental facts are limited to some few months in their 'prentice years. Think of it! while the doctor of to-day can trace his long and noble pedigree straight back, through nearly twenty-four centuries, to Hippocrates, the great father of us all, yet it is only some eighty years since the laws of this land recognised the need of any adequate provision for the medical student to acquire that first-hand knowledge of anatomy, which is indeed the only real foundation of the whole art and craft of medicine.

What, then, took the place of the "subjects" which the statutes of all civilised countries now provide, more or less satisfactorily, for their medical schools? Apes and dogs and pigs, in the hands of Hippocrates, Aristotle and others, in the earliest centuries B.C.; an occasional criminal (and sometimes, 'tis said, a *living* one!) in the hands of the bold innovators of Alexandria, Herophilus and Erasistratus, in 250 B.C.; and apes and the like again, for the most part, in the hands of Galen in the second century A.D. Evidently Galen used these animals to some purpose, for his observations seem to have amply satisfied the non-progressive science which Medicine remained for many centuries thereafter.

It was not till the renaissance of learning in Italy that any great advance was made in the science of anatomy, but in the midst of that glorious age Vesalius, the Father of Modern Anatomy, risked his life—and lost it—in his zeal to utilise every opportunity of probing to their utmost the hidden secrets of the human frame. Up to this time, and, indeed, for some centuries afterwards, the only chance any zealous anatomist of our own country had of seeing the dissection of a human body was to journey abroad to some such school as the "far-fam'd Padua."

As late as the beginning of the eighteenth century the then Professor of Anatomy in the University of Edinburgh confessed to having seen the dissection of a human body only once in two or three years! And yet the worthy men of the Town Council of Edinburgh deserve all credit for having been the pioneer authority in this country to make any provision at all for the teaching of anatomy. As early as 1505 they passed an Act granting the surgeons "the body of one malefactor" annually "to make an anatomie of"—with the cautious addendum, "efter he be deid"!

The latter end of the eighteenth century saw a great wave of anatomical and surgical enthusiasm sweep over this country from end to end, with great workers like Knox and Liston in the north and Hunter and Astley-Cooper in the south, towering on its crest. Students began to troop in hundreds to their rooms, clamouring to be taught, and yet the law of the land allowed them nothing more than such occasional bodies as the gallows of the country might provide.

Little wonder that so urgent a demand for bodies led, before long, to clandestine sources of supply! There soon appeared on the scene a Cinderella among the professions—the new craft of body-snatching. We must do these men who practised it fair justice; in literature these knights of the shovel and sack are always heralded as "*professional* body-snatchers." We must do them this further and real justice, too, that, revolting to the best feelings as their doings undoubtedly were, they nevertheless played an invaluable part in that rapid progress of anatomical study which has proved of such lasting benefit to suffering humanity. The new army of professional "body-snatchers," "grabs," "resurrection men," or "sack-'em-up gentlemen," as they were variously called, grew rapidly in numbers, and could at one time be counted by the hundreds in the London district alone. Many hundreds more lay scattered in ominous groups at every centre of medical teaching in the British Isles; nor lacked they combination, for it needed but the signal of distress to fly on the battlements of Edinburgh for a heavy-laden coach to creep out of the heart of London at dusk on a long journey over the Great North Road; it needed but a cry for help to rise from the riverside University of Glasgow for a heavy-laden sloop to slip out of Dublin Harbour under cover of night, with her hull full of strangely silent passengers.

It was a dangerous game, but some who played it made much profit out of it, and not only lived happily ever after, but developed so great a pride in their "profession" as to nourish the fond hope that its badge, the grimy earth-stained sack, might fall, like the mantle of Elijah, on to the shoulders of the sons of their loins; thus hoped Jerry Cruncher, sen., in the *Tale of Two Cities:*

"*Father,*" said young Jerry, as they walked along, taking care to keep at arm's length and to have the stool well between them, "*What's a resurrection man?*"

Mr. Cruncher came to a stop on the pavement before he answered: "*How should* I *know?*"

"*I thought you knowed everything, Father,*" said the artless boy.

"'*Hem! Well!*" returned Mr. Cruncher, going on again and lifting off his hat to give his spikes fair play—"*he's a tradesman.*"

"*What's his goods, Father?*" asked the brisk young Jerry.

"*His goods,*" said Mr. Cruncher, after turning it over in his mind, "*is a branch of scientific goods.*"

"*Persons' bodies, a'int it, Father?*" asked the lively boy.

"*I believe it's something o' that sort,*" said Mr. Cruncher.

"*Oh, Father, I should so like to be a Resurrection Man when I'm grow'd up!*"

Mr. Cruncher was soothed, but shook his head in a dubious and moral way. "*It depen's upon how you develop your talents. Be careful to develop your talents and never to say no more than you can help to nobody, and there's no telling at the present time what you may not come to be fit for.*" As young Jerry, thus encouraged, went on a few yards in advance . . . Mr. Cruncher added to himself: "*Jerry, you honest Tradesman, there's hopes wot that boy will yet be a blessing to you and a recompense to you for his mother!*"

Remaining with the body-snatcher for a little, as met with in fiction, we return grateful thanks to Dickens and Stevenson for the two notable tales in which the gruesome occupation and something of the domestic life and trials of these men are so faithfully described. The nocturnal trade of Jerry Cruncher, with his poor shame-faced praying wife

and loyal little blackguard of a son, is used with immortal skill to unravel the plot of the *Tale of Two Cities*; the description of his midnight journey to the distant cemetery of St. Pancras, and his mysterious operations there, show how keenly the imagination of Dickens had been fired by what he had read or heard of the doings of the "resurrection-men." Stevenson's tale of the "Body-Snatcher" is also full of circumstantial detail, telling of a raid on the lonely graveyard of a country village near Edinburgh, and in this case, as will appear later, the fertile brain of that Prince of story-tellers had evidently been stimulated by the gruesome facts of an actual recorded occurrence.

Poets, too, have tuned their lyre to sing the grave doings of these men; but the verse is for the most part poor, and the moralising feeble. The immortal Tom Hood, however, did not let them escape the shafts of his merry punning wit:

"'Twas in the middle of the night
To sleep young William tried;
When Mary's ghost came stealing in
And stood at his bedside.

"Oh, William, dear! Oh, William, dear!
My rest eternal ceases;
Alas! my everlasting *peace*
Is broken into pieces.

"I thought the last of all my cares
Would end with my last minute,
But when I went to my last home
I didn't stay long *in it*.

"The body-snatchers, they have come
And made a snatch at me.
It's very hard them kind of men
Won't let a *body* be.

"You thought that I was buried deep
Quite decent like and chary;
But from her grave in Mary-bone
They've come and *bon'd* your Mary!

"The arm that us'd to take your arm
Is took to Dr. Vyse,
And both my *legs* are gone to *walk*
The Hospital at Guys.

"I vow'd that you should have my hand,
But Fate gave no denial;
You'll find it there at Dr. Bell's
In spirits and a phial.

"As for my feet—my little feet
You used to call so pretty—
There's one, I know, in Bedford Row,—
The other's in the *City*.

"I can't tell where my head is gone,
But Dr. Carpue can;
As for my trunk, it's all pack'd up
To go by Pickford's van.

"I wish you'd go to Mr. P.
And save me such a ride;
I don't half like the outside *place*
They've took for my inside.

"The cock it crows—I must be gone;
My William, we must part;
But I'll be your's in death, altho'
Sir Astley has my heart.

"Don't go to weep upon my grave
And think that there I be:
They haven't left an atom there
Of my anatomie." *

This international guild of ghoulish workmen was composed for the most part, as can well be imagined, by disreputable or lazy characters who had failed to secure a decent livelihood in any honest trade; but in so large a battalion of workers there were sure to be many, drawn from higher grades of Society, who were ever ready to take a sporting chance of increasing their income "out of office hours," as in the case of our friend, Mr. Jerry Cruncher, the bank-porter, and others, too, who followed the trade mostly on account of the exciting adventures it offered. All, no doubt, were attracted most of all by the high pay, for sums varying from four guineas (the usual charge for a body) to the huge figure of £500 (known to have been paid by John Hunter for the body of Murphy, the Irish Giant), were far beyond the wages to be earned in any ordinary employment.

Most of them have gone their way unrecorded and unknown, *ignoti longa nocte, carent quia vate sacro*—or, in other words, lacking the company of a recording Boswell—but much of the actual *personnel* of two groups of them has been preserved for us by cultured men who knew them well. The one, a motley Edinburgh band, is fully described by Leighton in the *Court of Cacus*; the other, a notorious London gang, absorbs a whole chapter of Bransby Cooper's voluminous Life of his distinguished uncle, Sir Astley Cooper.

The Edinburgh group, strange as it may appear, were fond of a joke and took their gruesome trade light-heartedly enough. The very nick-names given to them by the students betokened their willingness to work away in spite of good-natured chaff. Their leader was called "Merry-Andrew," and the others were named—more appropriately—"Spune," which means a spoon of sorts, "Moudiewart," which means grave-mould, and "Screw"—so dextrous was this last in the art of raising bodies. Many good stories are told, in that somewhat rare book, of these men.

The London group is unfortunately unredeemed by any gleam of humour. A very exact record of their mode of life and work is preserved in the remarkable diary written by one of their number, which was presented to the Library of the Royal College of Surgeons by Sir Thomas Longmore, and since published in book form, with much interesting comment, by Mr. James Blake Batley, Librarian of the College. Some of these were men of good education and of considerable ability, but it is very evident that dissolute

* "Mary's Ghost," in *Hood's Whims and Oddities.*

habits had brought them low, and all through the pages of the *Diary* runs the almost daily entry that one or another or all of the party got drunk, or, as he somewhat naïvely spells it, "intoxsicated." It was all the same whether they had fared well or ill, as the following entries show: "*Monday, 27th:* At 2 in the morning got up; got 4, took them to Bartholomew's. Tom and Bill got drunk." "*Wednesday, 11th:* Went to the Big Gates to look out; at night the party went to the above place and again miss'd; all got drunk." "*Monday 24th:* Bill, Jack and Tom and Ben with Nat Ure getting drunk, oblige to come home in a coach."

It is therefore not surprising that, when they roamed abroad in the dark early hours of the morning, they occasionally proved to be "off their game," as witness such entries as: "Could not get horse out of stable"; "Jack all most buried"; "Butler horse and cart taken"; "Coming back with ladder Bill got taken unto the Watch House." We read, however, that the unlucky Bill got clear all right the next day, and by night was once again down on the old trail by St. Bartholomew's Churchyard.

However, in their sober intervals they would appear to have been not without compensations for the trying nature of their work; in one entry the party figures as having foresworn the nightly prowl for the pleasures of the Dance, and visits to the Play or to the Fight are recorded several times.

There were frequent quarrels among them, mostly on the score of the division of profits, and the harmony of this particular band would be disturbed for a time by its fission into several jealously competing cliques, plotting to spoil each other's pitch—sometimes by stealing, sometimes by so mutilating the harvest of the night as to render the bodies useless for the schools, and even, at the worst, by turning informers and actually landing their erstwhile colleagues in the hands of the police.

The "terms" of the "profession" were strictly "cash on delivery" plus two substantial payments in the way of a retaining fee—one at the beginning and one at the end of the School terms. In one page of the *Diary* it is recorded that "goods" to the number of "15 large and 1 small" were secured in St. Pancras Cemetery in one night, and two more the next day, and all taken to St. Bartholomew's. Surely the demonstrators of operative surgery must have gone about wearing a less anxious look in these golden days! Ben Crouch, the leader of the gang, declared, in his evidence before the Committee of the House of Commons, that he had handled as many as twenty-four bodies in four nights. Another of the gang, having by an ingenious ruse gained entry into the vaults of a chapel, in one night secured a haul of teeth for which alone he was paid the sum of £60.

There is little wonder that drink ran free and that quarrels were rife among this evil camaraderie, or even that, in spite of large sums so easily earned, we find the diarist, at the end of a blank night, thus cursing their ill-luck—"which was a very bad thing for us, for we wanted some money to pay our debts to several persons who were importunate."

On the other hand, it is all the more extraordinary to find two of the gang coming through the sea of dissolution pictured in the *Diary* with something laid aside for the proverbial rainy day: Ben Crouch, their leader, with the money he had made built a large hotel at Margate, and another of them, Jack Harnett, at his death left nearly £6000 to his family!

The writer of the *Diary*, Naples, the son of a respectable stationer and bookbinder, who had himself seen active service on one of His Majesty's ships of war, shows great caution from beginning to end, never mentioning the word cemetery, corpse, body or hospital. The graveyard he calls the "*Crib*," the contents of the rifled coffins he calls either simply "1 *large*" or "2 *large and* 1 *small*," as the case may be, sometimes with the letters "*M*" or "*F*" to designate the sex, and sometimes with a hint of rude diagnostic power, such as "1 *Large Yellow Jaundice*"; more succinctly still the body is sometimes referred to as "*The Thing*," or simply as "*It*."

Though the word "Hospital" is never used in describing their destination, the oft-recurring names of Bartholomew, Guy's, St. Thomas's, leave no doubt on this point. It would appear, from the large number of bodies that are recorded as being taken to St. Bartholomew's, as well as by the frequent note of their removal thence next day to other schools, that somewhere within the precincts of this ancient institution some obscure but capacious out-house had been placed more or less officially at the disposal of these indispensable general providers, to be used by them as a professional clearing-house. The very last entry in the *Diary*, in fact, reads thus: "Saturday, 5th December, 1812: Remained at Bartholom^{w} all day packing up for Edinboro. Sent 12 to the Wharf for the above place."

Many famous names figure in the debit side in the rude invoices in which the *Diary* abounds—Charles Bell, Astley Cooper, John Taunton, Abernethy, Stanley, and Dr. Carpue.

This was no work for weaklings, and the body-snatchers as a rule were big, powerful men, capable of great physical endurance, and necessarily endowed with considerable pluck and daring. Merrylees, the leader of the Edinburgh gang, is described as "a man of gigantic height," and Ben Crouch, the most noted of the London group, as "a tall, powerful, athletic man (with coarse features, marked with the small pox), and well known as a prize-fighter." Their work had always to be done in the early hours of the morning, often at great speed and often under the most disagreeable conditions of weather and surroundings. They required much sharpness of wit to avoid detection and untimely interference at the hands of the alarmed friends of the dead or from the arm of the law; but in this last regard there can be no doubt that "The Law" was somewhat given to

winking at a practice which its pillars fully realised was not wholly bad, if not actually wholly *good*, in light of its ultimate application. There seems no doubt that the arm of the Law could have stifled this profession in its infancy, or, at any rate, could have suppressed its sturdy adolescence, had it been inclined to rigorously police the happy hunting-grounds of the "sack-'em-up gentlemen."

These men had also to face and overcome the natural repugnance and the common superstition with which the bodies of the dead used to be regarded. Many amusing tales are told of the trying ordeals they sometimes had to go through, trials through the discovery of demented relatives mourning by the grave, trials by the sudden tread of four-footed intruders nosing their quiet way in search of fresh pasture between the tomb-stones, trials through the sudden flash of lightning and crack of thunder, and trials of many a more innocent origin, all calculated to strike terror to the already over-strung nerves of the novice.

In the *Diary of a Late Physician* Warren gives a graphic description of a raid on a country churchyard with the object of securing a pathological specimen of unique interest, in which the enterprising doctors engaged the services of a noted body-snatcher, and saw their dangerous expedition nearly wrecked through a few natural but unlooked-for incidents working up the brain of this highly superstitious expert into a state of panic.

Many stories are told of expeditions nipped in the bud or foiled on the eve of fruition through the superstitious fears of the participants. One concerns two body-snatchers who, caught in a rain-storm when driving back with their prize to a city in the north, sought the shelter of a roadside inn. Leaving the body safe, as they thought, in the sack in the bottom of the cart in the stable-yard, they regaled themselves in the warm parlour. They lingered long enough to give some loafers in the yard time to whet their curiosity as to the contents of the cart. There was no uproar when those stood revealed, for the nature of the business was only too well known, and these honest hostlers and their friends took no steps to interfere with the probable destination of the corpse, till a bright idea struck one of the crowd who was due that night to tramp the long weary miles back to the city; inducing the others to help him to take the quiet occupant out of the sack in he got himself, and was more or less comfortably fixed up by his confederates; in due course the body-snatchers emerged from the inn and drove briskly off, with the precious burden propped up between them on the seat of the cart. But all did not go well. Both men, without saying anything for a while, were beginning to feel uneasy, till, finally, one could keep silence no longer. "Man, Sandy," said he, "it's a queer thing the corpse feels warm, and is like to be getting warmer a' the time." Forthwith came a sepulchral voice from the depths of the sack: "If you had been where I have been these seven nights past you would be getting warm too!" The terrified tradesmen waited to hear no more; leaping from the cart in horror they left the well-satisfied "corpse" to direct the horse at his own sweet will to the particular road-end where he wished to alight!

On another somewhat similar story, also from the North, R. L. Stevenson no doubt based his tale of "The Body-Snatcher." The wife of a farmer in a small village near Edinburgh died and was decently buried in a lonely little kirk-yard on the moor. Some days afterwards, on going to visit the grave, he was horrified to find the body of his wife lying by the roadside, covered only by her dishevelled shroud. His suspicions that this had been the work of body-snatchers were quite right, but he probably never knew the real story of how she came to be there, though in the course of time it became widely current among the students. The burial in the lonely graveyard had not escaped the Intelligence Department of the Medical School—be sure they kept a sharp eye on all such doings in these days!—and three students set out by themselves in a gig one dark night on an adventure of body-snatching. They drove up as near to the grave as they might and then stole cautiously towards it on foot. They were amateurs at the work, but success attended their efforts till they found that the necessary sack had been left behind in the gig. As dawn was beginning to break, one of them volunteered to hasten their return by hoisting the body on to his back by means of the shroud, and all hurried back to the gig. The burden-bearer, lagging last and clinging firmly to the shroud, had, however, a less secure hold of the corpse than he thought; for, gradually slipping downwards through the shroud, the feet of the poor woman at length reached the ground and rebounded thence a time or two in step with the hurrying feet of the bearer. The sudden conviction of life at his heels fired his strained nerves to frenzy, and "uttering a roar," says the chronicler, he threw his burden off and crying to his friends "By G—, she's alive," rushed for the gig, jumped in with his companions, and all drove off in terror. There seems little doubt that this story, given as authentic in Leighton's *Court of Cacus*, gave origin in Stevenson's fertile brain to the still more weird conclusion of his well-known tale.

"*Cherchez la femme*" is an oft-quoted aphorism in history, and a passing reference may be made to the part played by women in the story of the body-snatchers. To the credit of the sex it has to be said that no record is to be found of women at any time plying this trade independently of men. But there is, unfortunately, no doubt that the wives of Burke and Hare, who, coming later in history, were the direct successors of the body-snatchers, were actually the willing accomplices of these villains in the dreadful murders which they committed in Edinburgh. Nor is there any doubt that the wives of the regular body-snatchers were, for the most part, quite aware of the loathsome trade of their spouses. In London, at any rate,

where the clay soil, accumulating on boots and clothes, made these unfit to be seen by day, the devoted wife must sooner or later have been let into the secret. It may be remembered that Jerry Cruncher's clay-soiled boots are among the "properties" faithfully adhered to by Charles Dickens. The women, however, were not all so ashamed of their man's trade as was Mrs. Cruncher; on the contrary, they sallied forth and gave a helping hand in it. Clad in deep mourning they would scout the graveyards, marking the position of the spring-guns and such-like precautions devised by alarmed relatives to foil the nightly depredations. Similarly clad, they would sneak to the bedsides of the dying in the workhouses, professing kinship and claiming the corpse. In his confession, Bishop, one of the body-snatchers who turned murderer, describes the part played by the wife of Williams, who was his accomplice in three dreadful crimes. After describing how they packed the body of their victim into a trunk, he says: "I told Shields (a porter) he was to carry that trunk to St. Thomas's Hospital. He asked if there was a woman in the house who could walk alongside of him so that people might not take any notice. Williams called his wife up and asked her to walk with Shields and to carry the hat-box we gave her to carry. There was nothing in it, but it was tied up as if there were. We then put the box with the body on Shields' head, and went to the hospital, Shields and Mrs. Williams walking on one side of the street and I and Williams on the other." What a gruesome procession was this for the wayfarers of the Strand to feast their curiosity on, had they suspected the nature of the contents of the box moving slowly onwards through the crowded street.

In my student days in Glasgow we used to remark that if ever there was a street row of anything more than normal dimensions timid folk on the fringe of the crowd could always be heard to say, "Oh! it is the students!" with an inflection in the tone of voice which manifestly implied the corollary, "May the Lord help us!" I suppose there was this germ of truth at the bottom of the remark that it *is* really part of the student's temperament when there is a row going on anywhere to join in it if at all possible.

Surely the medical students of the period now under review might be relied on to join fervently in a fray wherein success meant so much to their teachers and themselves. Here was a ploy calling for considerable physical strength and offering great scope for the genius of artful dodging—well calculated to give full vent to the pent-up energy and strategy which spend themselves, in modern times, in the Hospital Cup-Ties! Little wonder, then, if the older representatives of the species must bear the soft impeachment that they, too, were often to be found swelling the ranks of the body-snatchers! Though never in actual league with any of the gangs of "professionals," they learned their methods, and soon became apt undergraduates of the craft.

Probably the palm in this regard must be awarded to Liston, the famous surgeon, who, in his student days in Edinburgh, performed prodigious feats of daring and strength in pursuit of this calling. The City Watch discovered him one night, with a party of medicals, busy at work. The watch were armed with guns, and did not stint to use them, but Liston, nothing daunted, laid hold of two large adults, that moment disinterred, and carrying one under each arm made good his escape.

Lonsdale, who records this and several other heroic incidents in his *Life of Robert Knox*, pays this tribute to Liston as a body-snatcher: "He was a Napier in action, bold, dexterous, aye ready and in the van of danger, and single-handed equal to any three of the regular staff of workmen."

That his contemporaries "across the water" did not lag behind in daring is shown in the evidence given before the Committee of the House of Commons by Professor Macarteney, of Trinity College, Dublin, wherein he stated that "the resurrection men go provided with firearms, and are frequently accompanied by several students armed in the same manner."

The dangers involved might well be counted on to make the work attractive to the students, but these sometimes led to tragic results. MacGregor, in his *History of Burke and Hare, and of the Resurrectionist Times*, records such in the case of a raid on a Glasgow churchyard. Three students arriving there in search of a body found the graveyard plentifully sprinkled with trapguns, and had not gone far before one of their number, stumbling over a gun, was instantly killed. When his companions saw that he was dead they were horrified, but the fear of discovery led them to adopt an extraordinary method of taking away the body of their unfortunate friend. They placed the dead man on his feet, propping his body against the cemetery wall, while each tied a leg to one of theirs, and, taking the corpse by the arms, passed slowly along the dimly lit street to their lodgings, shouting and singing as if they were three roysterers returning from a carouse!

With regard to the part played by the London students, Bransby Cooper states, "The hospital students would occasionally join the depredators in their nightly exploits. They were, however, most frequently kept apart from the more important operations, being employed either in looking out or some subordinate occupation, never, so far as I know, being allowed to engage themselves actively in the proceedings at the grave."

One can well imagine some hefty "forward" of a hundred years ago "turn in his grave" at this impeachment of his "activity," questioning its veracity by some more or less classical ejaculation! It certainly will not appear likely to anyone knowing the breed, that, with such sporting adventures afield, with lanthorns, trap-guns, blunderbusses, pistols in the air, the Hospital student of that time always played

so subordinate a part as Mr. Bransby Cooper would have one believe! In support of this doubt, one need only look across the narrow street which separates the Abernethian Room of St. Bartholomew's Hospital from the grave-yard of St. Sepulchre's and contemplate the imposing Watch Tower there: the solid architecture and commodious apartments of the Tower (erected in 1791) certainly suggest that their nearest neighbours at any rate did not repose the same simple trust in the young Abernethians of that far-off day!

One group more completes the ranks of this medley army, namely, the sextons and keepers of grave-yards and vaults. These, if not actively in league with the body-snatchers, were often easily "squared," either at once by the offer of drink or by the promise of a share in the profits. Quickly and quietly as the body-snatchers worked, it is impossible to imagine them successfully removing such large numbers of bodies as are recorded, in one night, without the security and protection gained by the connivance of these officials. Indeed, it is well known that some of the most noted Resurrectionists graduated as respectable sextons and watchmen.

Now as to the methods employed: these no doubt varied in different parts of the country, but none have been so minutely described as those of the most notorious of the London gangs, partly in the *Diary* already referred to and partly by some of their employers, to whom, when the game was up, they afterwards made full confession.

First came the systematic vigil by cemetery gates, day by day, in little groups of two or three; the "*look-out*" they called it; sometimes an isolated member of the gang would fall in with a funeral and cautiously stalk it to its lair. "*Thursday 22nd*," enters one succinct diarist, "*followed a black from Tower Hill, came home and met at White Horse: the party, except Butler, went to Lambeth.*" Sometimes the Resurrectionists were saved these preliminary anxieties by being sent by their well-informed employers to some distant town, frequently more than a hundred miles away, to secure some specially desirable prize—some unique pathological or post-operative subject of whose death they had been advised. Bills which have been preserved by Sir Astley Cooper's biographer show that on such occasions the minions "did themselves well," charging £3 12*s.* for "Coach for two there and back," 6*s.* for "tips to Guards and Coachmen," and £1 14*s.* for "Expenses," in addition to their *professional* fee. But the "other side of the shilling" is shown in another of Sir Astley's bills—"Paid Mr. —— half the expenses for bailing Vaughan from Yarmouth £41 7*s.* Paid Vaughan's wife 6*s.*, ditto, Vaughan for twenty-six weeks' confinement at 10*s.* per week, £13." Poor Vaughan had evidently lagged behind and been made to suffer for the sins of the rest of the party, but it would be some additional compensation to him when he was duly returned to the bosom of his family and to the counting-house of his confederates, to draw his overdue share of the £57 14*s.* which Sir Astley had had to pay the three villains who got away safely with the subjects. The four subjects thus secured accordingly cost that distinguished anatomist the good round sum of £86!

The hour selected by these grim birds of prey for their ghoulish enterprise varied, of course, with the time of year and their carefully fore-gained knowledge of the times and phases of the moon as well as of the times and habits of the police and watchers; hours ranging from 11 p.m. to 3 a.m. are mentioned in the *Diary*.

So, too, the *impedimenta* of the expedition varied with the extent of the harvest they anticipated. For two or three "large" and "small" a corresponding number of large, coarse canvas sacks were sufficient, and in addition to shovels, a hefty crowbar and ropes. Bradawls were usually included in the outfit, too, to extract, possibly, a marketable quantity of teeth from subjects whose condition was otherwise too disappointing for words! The body-snatchers were known, as has been seen, to be strong, powerful men, and by these simple means were able to get their prizes quickly removed to a place of safety.

But when a larger "haul" was in the wind, or when a greater distance had to be travelled than a man could carry the laden sack on his back or head, a light cart and horse were added to the sinister procession.

Arrived at the grave-side, their mode of proceeding to work varied, of course, with the nature of the soil and the interval that had elapsed since the burial of their quarry. If the grave was recent and their aim to secure a single subject, they quickly dug a narrow shaft, wide and deep enough to give one of their number easy access to the exposed end of the coffin; breaking open the lid, the "man down below" then inserted the crowbar and levered up the whole lid with its superincumbent weight of undisturbed soil, freed the body from the shroud, slipped a rope round the neck or armpits and gave the word to "haul away."

Scrupulous care was usually taken to leave the shroud in the emptied coffin, and this was accounted for by the curious fact that, while, in the eye of the law, the procuring of the body was simply a *misdemeanour* and therefore punishable only by lighter terms of imprisonment, the removal of a single shred of the shroud, on the other hand, constituted a theft of property, which, if proved against them, laid them open to the much heavier scale of punishment awarded for a *felony*.

The really ingenious *praxis* thus devised by them was a great saving of time both in digging out and in filling in, and made it an easy matter to leave the surface of the grave showing little or no trace of the speedy resurrection that had been carried out. The entire proceedings, in the hands of an expert and under favourable conditions, were said to have occupied less than a quarter of an hour. But where the earth over the coffin was more solid, or where several

coffins had been buried in one grave (as was often done in the case of pauper burials) there was often nothing for it but to dig the whole coffin clear. In such cases, too, they were credited, especially when dealing with gravelly soil, with a special way of working their spades so as to throw the earth out of the grave with a minimum of noise.

Simple as these operations may seem they required considerable practice as well as the resolute preliminary victory over all the natural feelings of revulsion and superstition.

Gradually these methods became so well known as to lead to equally ingenious counter-moves on the part of the *anti*-body-snatchers, who, not content with keeping up for hours a weary watch in the wet and cold, blunderbuss in hand, by the fresh graveside, or, not content with the greater comfort and snug fireside gained by building substantial watch-towers on cemetery-walls, with spring-guns spread among the graves to keep them on the alert to any goings-on outside, sought by various other means to foil their foes of the prey.

Thus, on the freshly made grave odd articles, such as flowers or oyster-shells, would be placed, apparently haphazard but really in carefully noted positions.

But the body-snatchers again would check each move in turn.

If they found their "pitch" populous with watchers, they were content to outweary them, hanging around in the dark, biding their time like vultures watching for the last sign of life to depart. If blunderbusses were anticipated, powder and shot could be met with powder and shot; and many exciting tales are told of resounding "general engagements" of this kind.

They learned to send their wives, clad in deep mourning, to the graveyards at dusk, just as the gates were closing, to draw the teeth of the dangerous trap-guns; they themselves became wise to note the exact position of all extraneous objects and to replace them carefully exactly where they had been deposited.

Driven to desperation by the persistent way in which these minor obstructions were overcome, recourse was at length taken in many cases to more really effective precautions. In the Greyfriars churchyard at Edinburgh grim reminders of these days of panic are still to be seen in the shape of huge cages of strong iron bars mortised securely in the stonework of deep-set graves, and in Mr. Bailey's interesting introduction to the *Diary of a Resurrectionist* there is figured a much-advertised patent wrought-iron coffin, with strong iron clamps fit to withstand the leverage of the most powerful crowbar, the whole so nicely calculated as to strike despair in the heart of the most virile body-snatcher the imagination could picture.

Nevertheless, precautions such as these did little to abate the zeal or diminish the ever-increasing profits of this enterprising "tradesman in scientific goods."

One event, however—and one alone in this stage of his history—was every now and then lying ready to strike dismay in his heart; an event more potent than any of the inventions of man, and that the natural process of decay, which so often foiled his labours just when he hoped they had reached their fruition. There was nothing left for him then but to pack up and get back to bed for the few remaining hours of the night; on one occasion he is known to have satiated his disappointment by the following brief entry in his oft-quoted *Diary*: "Friday 7th Feb. 1812. Met together me and Butler went to Newington. *The Thing Bad*"!

CLINICAL JOTTINGS.

No. XXII.

By Samuel West, M.D.

Loss of Weight in Visceral Cancer.

THE loss of weight in visceral cancer is sometimes astoundingly rapid. Thus I have seen a man of about 12 stone with cancer of the liver lose half his weight in three months, at the rate, that is, of nearly one pound a day. Such rapid emaciation as this is very rare.

Appearances may be deceptive. Thus I remember a woman with cancer of the spleen who was enormously fat for her height and weighed 16 stone at the time of her death. Yet she had lost 4 stone in as many months.

Loss of weight more or less rapid is, of course, characteristic of cancer, yet patients who are ultimately proved to have visceral cancer by post-mortem examination may retain their weight unaltered for months together, or even after having lost weight may, when carefully nursed, regain much that has been lost. This latter is most frequently seen in cancer of the stomach, where, from want of proper assimilation of food, the emaciation of starvation is added to that incidental to the disease. Careful feeding and treatment may remove the former, and so the nutrition is improved and weight increased.

Mouth Toilette in Severe Illness as a Means of Preventing many Complications.

Many of the complications of severe disease are preventable. This is obvious if we consider that they are comparatively rare in hospitals, where the nursing is good, and only common where the conditions are unsatisfactory.

Bed-sores, for example, were not at all uncommon years ago when nursing was less understood. In case of nervous disease, under the then dominant theory of trophic lesions, they were regarded as the almost natural consequence of the lowered vitality of the tissues and as almost unpreventable and incurable. Their frequent occurrence was

often quoted as proof of the existence of trophic nerves—a splendid example of arguing in a circle.

Not only were bed-sores common then, but patients not infrequently died of them.

Now, with proper nursing, bed-sores are hardly ever seen, and if patients are admitted into hospital with them they are readily cured.

The constant attention to prevent and cure them in some cases of course makes heavy demands upon the nurse; but if bed-sores develop it is generally due to want of care. The nurse should be held responsible and blamed as she deserves.

Cystitis is another case in point. This also was once regarded as more or less unavoidable, but we now know that it is generally the result of either neglect of catheterisation or of the ordinary antiseptic precautions.

The group of complications, however, to which I wish specially to refer is that which is the result of want of proper care of the mouth, for this connection is not so generally recognised.

In many cases of grave illness, especially if associated with fever, the tongue is heavily coated. Most of these patients lie on the back and breathe through the mouth, with the result that the mouth and tongue become dry and caked.

The air inspired brings with it germs of many kinds which grow readily under the conditions present.

The fur consists of inspissated epithelium, mucus and saliva, mixed with remains of food, and teems with bacteria. The breath becomes very foul and offensive from the putrefactive decomposition which takes place, so that the condition well deserves the name given to it of sordes or filth.

Sordes has been described as if almost a necessary part of severe fever, yet it is accidental, not essential, and can and ought to be largely prevented and cured by appropriate treatment.

If the air inspired passes over such foul surfaces what more likely than that it should carry infection to the lungs, and set up inflammation there—pneumonia as it is commonly called, though the infecting germ need not be the pneumococcus only. This is especially liable to occur in children where the inflammation is of the patchy multiple broncho-pneumonic type.

Some of the foul products will be swallowed, and may then set up infective irritation, and thus impair appetite, cause vomiting, or excite various troubles both in the stomach and intestines, while the absorption of putrefaction products from the mouth and pharynx as well as from the gastro-intestinal tract may produce toxic symptoms and greatly aggravate the patient's general condition.

Again the infection may spread directly to the various passages which are in connection with the mouth and pharynx. The commonest Eustachian inflammation with otitis media as its consequence is most likely to occur where the pharynx is gravely involved as in scarlet fever and diphtheria, but it is frequent enough in all fevers alike both in children and adults.

The posterior nares may be involved, and from thence the lachrymal duct, or the infection may extend upwards through the cribriform plate to the meninges, and excite acute meningitis, the origin of which it is sometimes so difficult to account for.

If the parotid duct be involved, swelling or even abscess of the parotid gland may result.

The curious association of parotid affections with diseases and operations of the abdomen is probably explained by the fact that in such cases the patients lie on the back, breathe through the mouth, have a very restricted diet and nothing to masticate, so that the mouth is not kept moist and cleansed by the saliva and movements of mastication. When patients are well enough to notice it, much discomfort is produced by this dryness of the mouth, which is not relieved by the mere drinking of water. A dry powdery biscuit given to munch once or twice a day is a great enjoyment, and goes far to remove this complaint.

All these complications may be referred to the condition of the mouth, and can all be easily and largely prevented by systematic mouth toilette.

The mouth should be treated as it is in babies, washed out with a piece of rag or flannel after every feed, or, at any rate, three or four times a day, to get rid of the remains of milk or food, and afterwards rubbed all over with an antiseptic mouth-wash, containing, for instance, glycerine and borax or chlorate of potash.

Simple precautions such as these—that is, mouth cleanliness and disinfection—will go far to obviate many of the complications referred to. In cases of severe illness it is as important to look carefully to the mouth as it is to the back or the bladder.

OBITUARY.

R. E. S. WADDINGTON, M.R.C.S., L.R.C.P.

Entered Hospital, October, 1905. *Left, January*, 1914.
Died, February 26th, 1914.

THE news of Waddington's sudden death came as a great shock to his many friends at the Hospital, where he was so well known and liked. He had been especially prominent in games at the Hospital, having been in the Rugby Football Cup Tie team in 1911, Secretary and Captain of the second Rugby fifteen, and Secretary of the Boxing Club. At the time of his death he was acting as Assistant Medical Officer of Health for the Willesden District. We wish to express our sincere sympathy with his relations in their great loss.

THE CLUBS.

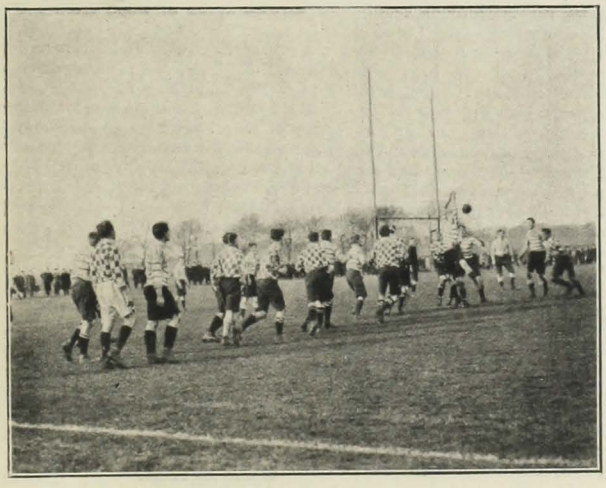
RUGBY FOOTBALL CLUB.

RUGBY FINAL.

ST. BART.'S *v.* LONDON.

The Hospital Rugby Final ended in an easy victory for London by 2 goals, 2 tries (16 points) to *nil*.

This score does not represent the game from the point of view of



territorial advantage, as mainly by the good work of the Bart.'s forwards the game was of a mid-field character. The London backs, however, were so much faster and more experienced than ours that only sterling defence prevented a larger score. Dive, at full-back, made several blunders, which proved costly, but his position behind a slow three-quarter line was unenviable.

The three-quarters as a whole showed no scoring ability, the ball on several occasions travelling across the line without any ground being gained.

The half-backs gave their three-quarters a good service of the ball early in the game, but later went to pieces, Kindersley being slow and easily outplayed by his opponent and Williams unfortunately was completely out of form, being often tackled with the ball. Collectively the forwards were good both in the scrum and in the loose, Mudge and Joyce standing out, the former making some brilliant tackles and showing exceptional speed.

The tackling of the team as a whole was excellent, besides Mudge, Eberli, Williams and Hodson being best. The latter's kicking was also conspicuous, being the only back to kick with any judgment, the rest being erratic, and consequently gave their forwards more work than was necessary.

For the first fifteen minutes Bart.'s pressed the forwards, time after time getting the ball. At length Dive, misfielding a kick, let in the London three-quarters, and good play by Watson and Stewart resulted in Stewart cross-kicking, from which London scored in a good position; the try was converted.

Play continued even for some time, but then Watson, intercepting a wild pass, made a fine run and scored, Wilson just failing to reach him.

Half-time: London, 8; Bart.'s, 0.

From the re-start Bart.'s again pressed, a fine dribble by Fiddian and several good combined forward rushes being noticeable.

From a fine kick by Hopkins the play was transferred to the Bart.'s "25," and from a line-out a London forward got over; this try was not converted. In the last minute of the game another brilliant run by Watson ended in a score behind the posts, a goal resulting.

Final score: London, 16; Bart.'s, 0. The teams were as follows:

ST. BART.'S XV.—H. R. Dive (back); T. Higgins, W. F. Eberli, R. Hodson, W. E. Wilson (three-quarters); C. E. Kindersley, R. H. Williams (halves); J. V. Fiddian, J. B. Mudge, R. L. Kitching, E. J. Bradley, H. C. C. Joyce, J. Pearce, G. F. Juckes, C. W. B. Littlejohn (forwards).

LONDON HOSPITAL.—Hopkins (back); Stewart, Watson, Powell, Batchelor (three-quarters); Morris, Rowlands (halves); Russell, Brown, Hartgill, Atkinson, Molesley, Deighton, Crouch, Dew (forwards).

ASSOCIATION FOOTBALL CLUB.

SEMI-FINAL OF THE INTER-HOSPITAL CUP.

ST. BART.'S HOSPITAL *v.* UNIVERSITY COLLEGE HOSPITAL.

This cup-tie was played at Chiswick on Tuesday, February 24th, and resulted in a win for Bart.'s by 7 goals to *nil*.

As Bart.'s won the toss, U.C.H. kicked off, and for a short while gave the opposing defence a good deal to do. Bart.'s, however, soon rallied from the attack, and Bailey taking the ball up the wing sent in a good centre to MacFarland; he, however, passed it back to Braun, who easily scored.

Shortly after this U.C.H. made a vigorous attempt to equalise, and but for the good display of Mack in goal they certainly would have done so.

Just before half-time Braun made a good attempt to head in a corner kick from Courtis, but the ball went over the bar.

In the second half Bart.'s had most of the game, and our second goal was scored by Bailey off a centre from Courtis. This was very soon followed by two more for Bart.'s by MacFarland.

After this although U.C.H. made one or two good attempts to pull

up, the Bart.'s backs were too strong for them, and they began to show signs of being played out.

Shortly before the end of the game three more goals were added for Bart.'s, the first two by Braun, and the third by MacFarland.

Bart.'s showed very good form in the match, and should do well in the final. Bailey at outside left was excellent.

The following represented Bart.'s:

R. G. Mack (goal); E. G. Dingley, J. W. Stretton (backs); K. D. Atteridge, G. D. Jameson, G. M. Cowper (halves); A. O. Courtis, J. B. MacFarland, L. Braun, R. H. Maingot, T. B. Bailey (forwards).

ST. BART.'S HOSPITAL *v.* THE CASUALS.

This match was played at Winchmore Hill on Saturday, March 14th, and resulted in a win for the Casuals by 3 goals to 2.

Bart.'s kicked off against the wind, which was blowing very strongly down the field, and for the first half the Hospital defence had about as much as it could do to keep the visitors out. After about the first ten minutes of play, Green, the Casuals' centre-forward, got away on his own and scored. Shortly after this the Hospital equalised through Braun, the ball just falling over the goal line.

In the second half the rain came down in torrents, and the wind increased to such an extent that the game became very scrambling. Courtis, however, added another goal for the Hospital, but after this the Casuals rallied, and in spite of the wind made several attacks on the Hospital goal, two of which were successful.

The following represented the Hospital:

R. G. Mack (goal); E. G. Dingley, J. W. Stretton (backs); K. D. Atteridge, L. Blair, G. M. Cowper (halves); A. O. Courtis, J. B. MacFarland, L. Braun, T. Owen, R. H. Maingot (forwards).

HOCKEY.

HOSPITAL CUP.

First Round.

ST. BART.'S *v.* LONDON.

This match was played at Richmond, a draw resulting—two goals each. It was an exceedingly fast game from start to finish.

Territorially we had the worst of the game, but our back division put up a very stubborn defence, Mawer (in goal) and Ackland being in great form.

Our goals were obtained by Sylvester and Stathers.

Re-play.

The re-play resulted in a win by two goals to one. London again had most of the game, and the winning of the match was due almost entirely to our strength in defence, Little, Glenny and Ackland being most conspicuous. Our goals were scored by Sylvester and Stathers, who of the forwards showed most dash.

The following represented the Hospital:

P. U. Mawer (goal); A. H. Little, E. H. Glenny (backs); R. R. Powell, J. G. Ackland, D. R. Thomas (halves); H. J. Bower, W. V. Hughes, G. S. Stathers, C. K. Sylvester, G. Wells-Cole (forwards).

Semi-final.

ST. BART.'S *v.* ST. GEORGE'S.

This match was played at Winchmore Hill, and resulted in an easy win—7 goals to 0. Our forwards combined well, and no doubt would have scored more goals had we been at all pressed. Goals were scored by Stathers (5), Upton, and Glenny.

The team was similar to the above, except that Atkin, Upton and Macfarland took the places of Sylvester, Hughes and Wells-Cole.

Final.

ST. BART.'S *v.* MIDDLESEX HOSPITAL.

This match was played at Richmond, and, after being in the final for many years in succession, we obtained a well-earned victory by 5 goals to 0.

For the first fifteen minutes of the game play was very fast and even; then Stathers obtained the ball just outside the circle, and, beating several men, drew the goalkeeper, and scored with a beautiful push shot. Immediately from the bully-off Upton was given the ball, and took it cleverly up to the circle, when he passed to Steedman, who scored with a brilliant shot. These two goals, scored in quick succession, had the effect of greatly improving our play and of taking the heart out of the Middlesex men. Several excellent combined movements by our forwards, who were well fed by the halves, resulted in another goal being scored by Upton.

The second half saw Middlesex making several strong attacks on their right wing, but Thomas marked the wing man well, and play was soon carried to the Middlesex goal, where Stathers scored with an excellent shot. For the rest of the game play was more even, but superior work in front of goal enabled us to score again through Upton from a splendid centre by Bower.

All the forwards played exceedingly well, Glenny being especially prominent with some excellent runs. Amongst the back division Atkin was the outstanding feature; he played brilliantly all through.

The following represented the Hospital:

P. O. Mawer (goal); A. H. Little, C. S. Atkin (backs); R. R. Powell, J. G. Ackland, D. R. Thomas (halves); H. J. Bower, M. T. W. Steedman, G. S. Stathers, A. R. Upton, E. H. Glenny (forwards).

CORRESPONDENCE.

CENTENARY OF SIR JAMES PAGET.

To the Editor of the 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—When I was attending the service in comemmoration of the centenary of the birth of Sir James Paget at Great Yarmouth a few weeks ago, I remembered that I had a very interesting letter from the late Sir Joseph Hooker about Paget's early life. I enclose a copy of this in the belief that your readers may like to see it. Some may remember the now remote fact that Sir Joseph Hooker was born in 1817 at Halesworth in Suffolk, and that he was surgeon and naturalist on the "Erebus" in the Antarctic Expedition under Sir James Ross 1839–43, and afterwards travelled in almost every part of the world as a botanist. He was president of the Royal Society from 1872–77. Mrs. Marsh and I once visited him at the camp near Sunningdale where he lived after his retirement from the Directorship of the Royal Gardens at Kew in 1875. He had vacated this office, after holding it for ten years, in order that he might have time to arrange his specimens and pursue original research relating to the trees of India. At our visit we found him in his ninety-first year examining under the microscope sections of various kinds of wood from the slopes of the Himalayas and other localities. He was quite charming, tall and spare in figure, dressed in a suit of light-coloured dittos and wearing a brown broad-brimmed hat dignified with picturesque dilapidations. He had a finely modelled head and very effective features, with a most pleasing old-world courtesy and ease of manner in which native amiability and years of travel amongst all sorts and conditions of men, many of them the most cultured and distinguished of the time, had smoothed away all traces of stiffness and formality. In three minutes we felt as if it was a meeting of old familiar friends. Although over ninety, nothing would content him but to show us all round his extensive grounds, and point out his chief valuables and pets amongst trees which he had collected anywhere between Syria or Palestine and the Rocky Mountains, of course excluding the Atlantic. We had a most delightful two hours and came away with his photograph with his signature appended, which together are among our most valued treasures. We saw him last during the Darwin Centenary at Cambridge in 1909, at the age of 92 attending the *soirée* in the Fitzwilliam Museum where he stayed, receiving hosts of congratulations, and as the principal figure of the party till 10 p.m. He showed his sense of humour by remarking, when he was in his official scarlet gown and wearing his numerous medals, and just starting for the meeting "Now I am ready for Madame Tussaud's." There were giants, and most delightful ones, too, in those days.

Yours faithfully,

HOWARD MARSH.

CAMBRIDGE.

"THE CAMP,
"SUNNINGDALE,
"*September 19th*, 1906.

"DEAR MR. MARSH,—I thank you cordially for your charming memoir of my dear old friend Paget; it is so searching and so true.

"I first met him in 1829 when on a visit to my grandfather, who had him up to be introduced to my father. In 1834 I was lodging in Yarmouth and used to rise at 5 a.m. to go botanising with him. He used to sing at the top of his voice as he walked along. 'The Sea, the Open Sea,' was, I think, his favourite air, and he trolled it forth lustily. Later in the day I entomologised with his brother Charles, also a delightful companion.

"The father was a most estimable man, worthy of all you say

of him. He was partner with my grandfather in a brewery not far from the Bank. He died in financial difficulties, and Paget's poverty during his early years was due to his paying up *every shilling* due to his late father's creditors. To this end he delayed his marriage for seven years. This he told his godson, my son Charles Paget, now a practitioner at Cirencester, who had adumbrated a foolishly early marriage.

"The next time I visited Paget was when he occupied a tiny house belonging to the Hospital, which faced into Little Britain; I think this was the street. There he played the flute to Mrs. Paget's piano.

"But I saw most of him as fellow examiner, first for medical officers for the Indian Army, held at the old East India House twice annually, and subsequently for candidates for the Army generally at Chelsea Hospital. There were four of us:

Surgery	Anatomy	Physic	Botany
Paget,	Busk,	Parkes,	myself;

and the effects were revolutionary. Every candidate had to produce his qualification as belonging to one of the three Colleges of Surgeons —London, Edinburgh or Dublin—and the result was the rejection of often more than half the candidates as *being unfit to practise!* The Colleges were furious, and made representations to Government, who ordered us to send in the examination papers, which condemned them at once. Up to this time operative surgery on the dead subject had been taught only by Sir G. Ballingate, in Edinburgh, after whose death the chair was most unwisely abolished. We insisted on every candidate performing a major and a minor operation on the subject. The results were an eye-opener. You can form no conception of the ignorance displayed. I remember asking Paget how such men ever could have operated on a field of battle. He answered that they would read the operation up and learn by experience!

"The effect of our work, and of Paget's in particular, on the examining bodies was very great. Operative surgery was taught, and after a few years a very different set of men came up, improved in every subject. This great work of Paget's occupied him for some fifteen or more years. I served on it for twelve. We always met at Paget's house to discuss our examination papers, and again, sometimes twice, to discuss the answers. The examination took two or three whole days, when the East India Company gave us a splendid lunch daily. At Chelsea we had to repair to the nearest tavern.

"But I fear I weary you with an old man's reminiscences. I am sending 'In Memoriam' to my son at Cirencester.

"With our kind regards to Mrs. Marsh and with hopes of seeing you both again,

"Sincerely yours,
"JOS. W. HOOKER."

THE NEW COVER.

To the Editor of the 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—It is always a somewhat distressing sight to meet an elderly and valued friend tricked out in the extravagant fashions of the day, and when the JOURNAL appeared some months ago with a very inadequate photograph of the New Pathological Buildings on the cover I am convinced that most of your readers, with myself, looked upon it merely as a temporary concession to the claims of modern journalism, and hoped for the time when the old block should be again taken into use.

The continued appearance of the JOURNAL in its new guise has prompted me to suggest that you should revert to the old cover, which has for twenty-one years been familiar to St. Bartholomew's men in all parts of the world. The old picture of the various candidates for the Orthopædic Department painfully making their way to the Henry VIII Gate never gave one the impression conveyed by the modern cover that one was about to open a book of views or a prospectus of the Hospital.

Finally, Sir, if a change of cover is considered necessary, in view of the prominence now given to things anatomical (which must be relatively uninteresting to a large proportion of your great number of subscribers), may I suggest a photograph of the Anatomical Department or a panoramic view of Basle as a suitable indication of the contents one may expect to find in the Hospital JOURNAL.

I am, Sir, yours, etc.,
R. E. BARNSLEY.

March 24th, 1914.

UNIVERSITY OF LONDON.

WESTMINSTER ABBEY SERVICE COMMITTEE.

To the Editor of the 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—I should be glad if in the next issue of your magazine you would insert a notice to the effect that a special service for members of the University of London will take place, as in the past six years, in Westminster Abbey at 6 p.m. on Presentation Day, May 13th; the sermon will be preached by the Lord Bishop of London. Admission to the Abbey will be by ticket only, which can be obtained by any graduate or undergraduate members of the University. Applications for tickets should be addressed to the Secretary of the Westminster Abbey Service Committee, 88, Gower Street, W.C., and a stamped addressed envelope enclosed.

I remain,
Yours faithfully,
J. DUDLEY WHYTE
(*Hon. Secretary*
Westminster Abbey Service Committee).

88, GOWER STREET, W.C.;
February 28th, 1914.

THE GIFT TO MR. TWEEDY.

To the Editor of the 'St. Bartholomew's Hospital Journal.'

ST. BARTHOLOMEW'S HOSPITAL,
LONDON, E.C.
March 23rd, 1914.

DEAR MR. EDITOR,—If you could find space for the enclosed letter in the next issue of the JOURNAL I should be obliged.

Yours very truly,
LANGFORD MOORE.

DEAR MR. LANGFORD MOORE,—In acknowledging the receipt of the very handsome gold watch with which you, on behalf of my colleagues and friends at Bart's., have presented me, I wish to express my sincere thanks for the gift and my appreciation of the kindly thought which prompted it.

The watch will ever be a valuable memento of the many pleasant years I spent at the Hospital and a lasting witness to the many friendships it was my good fortune to make.

Will the Editor of the JOURNAL allow me a small space to say "Thank you" to you all?

With kind regards,
Yours very truly,
SIDNEY C. G. TWEEDY.

March 11th, 1914.

THE BOOKSHELF.

REVIEWS.

RADIUM THERAPEUTICS. By N. S. FINZI. Pp. 112. (Henry Frowde and Hodder & Stoughton.) *6s.* net.

The subject of the therapeutic action of radium and the methods of its application is one that has received an exaggerated amount of attention in the daily press, and the ears of the public have consequently been filled with a great deal of nonsense concerning it. We therefore welcome in the present volume a clear and succinct account of the present position of radium in the treatment of malignant and non-malignant disease.

The subject is necessarily one of which comparatively little is known as yet, but Dr. Finzi writes with the authority of one who has had considerable personal experience of radium and its action. An introductory chapter is devoted to the chemical and physical properties of radium.

MODERN ANÆSTHETICS. By F. W. SILK, M.D. (Edward Arnold.) Pp. 200. *3s. 6d.* net.

This little book should prove of considerable value to the student. The author has succeeded in condensing the main facts very clearly, and he has included all the latest methods of procedure. The early part of the book is devoted to a short history of anæsthetics, to the phenomena of anæsthesia in general and to the preparation of the patient. He then deals with the choice of anæsthetic for the patient, with various details of administration. An account of the various anæsthetics used follows. The chapters on difficulties and their treatment and after-treatment are well chosen and should prove a serviceable guide to the beginner. The last part deals with exceptional operations and local and regional analgesia.

The book is quite a small one, but it is sufficiently large for the requirements of the average student, and it is clearly written.

There are nearly forty illustrations of apparatus, which, however, are not up to the standard of the letter-press.

HUMAN EMBRYOLOGY AND MORPHOLOGY. By ARTHUR KEITH, M.D., F.R.C.S., etc. Third edition. Revised and Enlarged. 8vo, pp. viii + 475. With many illustrations in the Text. (London: Edward Arnold.) Price 12*s.* 6*d.* net.

There must be few departments of biological science in which greater advances have been made during the last few years than in the science of embryology.

The last edition of Professor Keith's well-known manual appeared in 1904. Consequently the amount of new material that the author has had to embody in the new (third) edition is considerable. The book has been increased by nearly one hundred pages and by over one hundred illustrations; but owing to the employment of thinner paper and somewhat closer type the volume is not materially increased in bulk.

We notice a great improvement in the arrangement of the text. In the volume before us the opening chapters are devoted to an account of the early development of the ovum and embryo, whereas in previous editions the book began with a consideration of the development of a well-known part of the body like the face. The present arrangement is more logical, and has been rendered possible owing to the great increase of knowledge during recent years of the earlier stages of human development.

Embryology is a subject that is apt to be neglected by the medical student. In Prof. Keith's manual he will find the most suitable presentment of it from his point of view.

THE JUNIOR STAFF.

The following gentlemen have been nominated as Resident Medical Officers:

Dr. HERRINGHAM	April	R. L. Kitching.
	October	F. G. A. Smyth.
Dr. TOOTH	April	H. L. Cronk.
	October	W. Frank Thompson.
Dr. GARROD	April	G. D. Jameson.
	October	J. F. West.
Dr. CALVERT	April	C. S. Atkin.
	October	(Not appointed.)
Dr. FLETCHER	April	R. G. Lyster.
	October	E. Brunton.
INTERN MIDWIFERY ASSISTANT	April	R. St. L. Brockman.
EXTERN MIDWIFERY ASSISTANT	April	R. Sherman.
	July	P. C. Cole.
OPHTHALMIC HOUSE-SURGEON	April	W. Farrer Thompson.
HOUSE-SURGEON TO EAR, THROAT, AND NOSE DEPARTMENT	April	G. W. Carte.
RESIDENT ANÆSTHETISTS	April	E. A. P. Brock.
		H. J. Bower.

NEW ADDRESSES.

BOWEN, O. H., Highfield, Church Street, Lower Edmonton.
DORAN, A., 6, Palace Mansions, Kensington, W.
GRANT-JOHNSTON, J., The Oaks, Bracknell, Berks.
HEWER, J. L., Innellan, St. Albans.
TATCHELL, P., 29, Barkston Gardens, S.W.

APPOINTMENTS.

HEASMAN, F., M.R.C.P.(Ed.), M.R.C.S., L.R.C.P., appointed Physician to the Royal Victoria and West Hants Hospital, Bournemouth.
KNIGHT, C. V., M.D.(Lond.), M.R.C.S., L.R.C.P., appointed Hon. Surgeon to the Gloucestershire Royal Infirmary and Eye Institution.
PRENTICE, H. R., M.B., M.R.C.P.. appointed Assistant Physician to the Dreadnought Hospital.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments, etc., have been notified at the Admiralty since February 20th, 1914:

Fleet-Surgeon R. C. Munday to the "President," additional, for service at the Admiralty, temporarily, to date April 8th, 1914.

Staff-Surgeon H. W. B. Shewell to the "President," additional, for Senior Medical Officer's course at R.N. Medical School, Greenwich, from April 1st to June 30th, 1914, inclusive.

Staff-Surgeon H. Kellond-Knight to the "Vanguard," to date March 31st, 1914.

BIRTHS.

EDE.—On March 8th, the wife of A. Gordon Ede, M.B., of Wolsey Road, E. Molesey, of a son.

FORD.—On January 31st, at Rushmere, Wimbledon Common, S.W., the wife of Frank C. Ford, M.B., of a daughter.

POOLEY.—On March 21st, at 15, Gladstone Road, Sheffield, the wife of G. H. Pooley, F.R.C.S., of a son.

TURNER.—On March 2nd, at 18, Harley Street, W., the wife of William Aldren Turner, M.D., of a son.

WAY.—On March 6th, at 7, Convent Road, Wynberg, S. Africa, the wife of Leslie Way, of a son.

WINTER.—On March 19th, at John of Gaunt's House, Lincoln, the wife of Edward Stuart Winter, M.R.C.S.(Eng.), of a daughter.

MARRIAGE.

ORMEROD—CATON.—On March 23rd, at the Church of St. Matthew and St. James, Mossley Hill, Liverpool, by the Rev. Canon Hartford, Henry Arderne Ormerod, third son of J. A. Ormerod, M.D., of 25, Upper Wimpole Street, to Mildred Robina, younger daughter of Richard Caton, M.D., of 3, Livingston Drive South, Liverpool.

DEATHS

CLARKE.—On March 28th, at Oakleigh, Eastbourne, William Bruce Clark, M.B.(Oxon.), F.R.C.S., late of 51, Harley Street, and late Senior Surgeon, St. Bartholomew's Hospital, of pneumonia following influenza, aged 64.

WADDINGTON.—On February 26th, 1914, in London, Rupert Edward Shawe Waddington, M.R.C.S., L.R.C.P.(Lond.), Assistant Medical Officer of Health for Willesden.

ACKNOWLEDGMENTS.

The Student, The Nursing Times, The British Journal of Nursing, L'Ospedale Maggiore, The South African Nursing Record, The Hospital, The Medical Review, St. Mary's Hospital Gazette, Long Island Medical Journal, Guy's Hospital Gazette, The Stethoscope, St. Bartholomew's Hospital League News, Middlesex Hospital Journal.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, Smithfield, E.C.*

The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., *at the Hospital.*

All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVERTISEMENT MANAGER, *the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: 1436, Holborn.*

A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price 1s. post free) from MESSRS. ADLARD AND SON, *Bartholomew Close.* MESSRS. ADLARD *have arranged to do the binding, with cut and sprinkled edges, at a cost of 1s. 9d. or carriage paid 2s.—cover included.*

St. Bartholomew's Hospital Journal.

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XXI.—No. 8.] MAY 1ST, 1914. [PRICE SIXPENCE.

CALENDAR.

Fri.,	May	1.—Dr. Herringham and Sir Anthony Bowlby on duty.
Mon.,	,,	4.—Examination for M.B., B.S.(London) begins.
Tues.,	,,	5.—Dr. Tooth and Mr. D'Arcy Power on duty.
Wed.,	,,	6.—Primary F.R.C.S. Examination begins.
Fri.,	,,	8.—Dr. Garrod and Mr. Waring on duty.
Tues.,	,	12.—Dr. Calvert and Mr. McAdam Eccles on duty.
Fri.,	,,	15.—Dr. Morley Fletcher and Mr. Bailey on duty.
Mon.	,,	18.—Examination for Mathews Duncan Medal.
Tues.,	,,	19.—Dr. Herringham and Sir Anthony Bowlby on duty.
Thurs.,	,,	21.—Final F.R.C.S. Examination begins.
Fri.,	,,	22.—Dr. Tooth and Mr. D'Arcy Power on duty.
Tues.,	,,	26.—Dr. Garrod and Mr. Waring on duty.
Wed.,	,,	27.—Examination for Brackenbury Medical Scholarship begins.
Thurs.,	,,	28.—Examination for Brackenbury Surgical Scholarship begins.
Fri.,	,,	29.—Dr. Calvert and Mr. McAdam Eccles on duty. Oxford Easter Term ends.
Sat.,	,,	30.—Sir G. Burrows Prize. Skynner Prize. Oxford Trinity Term begins.
Sun.,	,,	31.—**Whit Sunday.**
Tues.,	June	2.—Dr. Morley Fletcher and Mr. Bailey on duty.
Fri.,	,,	5.—Dr. Herringham and Sir Anthony Bowlby on duty.
Sat.,	,,	6.—Applications for the Lawrence Scholarship to be sent in.

EDITORIAL NOTES.

THERE is no doubt that the prospects for those who are beginning their course of training for the medical profession are exceedingly bright. For several years past the authorities of most of the hospitals in the neighbourhood of London and in the provinces have found it difficult to fill the post of House-Surgeon and House-Physician. Whereas formerly there was good competition for these resident posts, it not uncommonly happens that no candidates whatever apply, even though the salaries have in many cases been largely increased. The dearth of young doctors has not for many years been so acute as at the present time, and local authorities in London and throughout the country are finding the greatest difficulty in filling vacancies. Some of the Borough Councils are now paying as much as £500 a year for medical officers in dispensaries, positions which only a short time ago were easily filled, although the salaries were only half that amount.

The position now is that any young qualified medical man can, immediately on obtaining his diplomas, secure a post worth at least five guineas a week and all found.

The chief reason for this dearth of young medical men is the decreased number of students who for some years past have entered the profession.

The Dean tells us that the average number of students entering to the full curriculum during the decade 1880–1889 was 130 per annum; for 1890–1899 the average was 105 per annum; whereas in the decade 1900–1909 the number of full students fell to an average of 71 per annum, and last October the entry of full students reached the lowest figure on record, namely 53 full students.

Instead of the Insurance Act having worked detrimentally to the medical profession, the contrary has been the result, for in many cases doctors, whose practices were small and insignificant, are now busy with panel patients, and are receiving good fees. With the recent increase in the number of lucrative public appointments and the probability of still further increase in the near future, this dearth of medical men becomes a serious public question.

* * *

An appeal worthy of support comes to us from China, in which country an old Bart.'s man, James Glenny Gibb, M.D., F.R.C.S., distinguished himself so much in the eyes of the Chinese Government that they gave the sum of $1000 to his widow for a memorial to him. There is no doubt that the strenuous life he led in Pekin had undermined his constitution, so that when his last illness overtook him he had not the vitality left wherewith to combat it.

We cannot do better than to quote from a letter we have received on this subject:

"In the pneumonic plague epidemic he was among the first to volunteer, and went to Harbin to assist in staying the progress of the dread scourge.

"On his lamented death the Chinese Government, through their Red Cross Society, gave a sum of $1000 to his widow for a memorial to him, in recognition of the distinguished service he had rendered to the cause of humanity during the Revolution. This sum she generously placed at the disposal of the Union Medical College towards the equipment of a Bacteriological Laboratory, an object dear to his heart.

"But to carry out this scheme properly a sum of $3000 will require to be spent on the extension of one of the present buildings to render it suitable for a laboratory. The provision of such an extension would leave the above-mentioned gift free for the purchase of the necessary equipment.

"The Faculty of the Union Medical College make this urgent appeal to Dr. Gibb's many friends to do their utmost to perpetuate his memory by the erection of this Gibb Memorial Laboratory, which will not only be very useful for purposes of Medical Diagnosis and Research, and for the better training of students, but will also be a fitting testimony to the life of one who was so highly esteemed and respected during the time he was in Pekin."

Subscriptions should be forwarded to "The Warden, St. Bartholomew's Hospital, E.C."

* * *

The second annual report of the St. Bartholomew's Hospital Women's Guild is just issued. The report shows on subscriptions, etc., a gain of £16 3*s*. 8*d*. over last year's receipts. Unfortunately the total receipts are not so great as this year there was no dance, while last year's dance realised £56 13*s*. 0*d*..

The membership is now 447—an increase of 84 over last year's figures.

An effort is to be made this year to raise the membership to 1000, and once again we appeal to the relatives and friends of Bart.'s men to join this Guild, which is accomplishing so much useful work.

Names and addresses of those willing to start a branch or to help in any way should be sent to the Hon. Secretary, Mrs. Norman Moore, 67, Gloucester Place, Portman Square, W., who will give all the assistance in her power.

* *

The following awards have been made: Kirkes Medal and Scholarship, C. R. A. Thacker; Senior Scholarship, H. M. C. Macaulay; Harvey Prize, A. Morford. Hichens Prize, C. C. Okell; Junior Scholarship in Anatomy and Physiology, 1st, L. F. Ross, 2nd, E. M. Atkinson, G. H. Glenny, *æqu.*

The Department for Diseases of Children is now held at 1.30 on Monday and Wednesday afternoons instead of in the mornings of those days. We stated last month that the Skin Department would be held on those afternoons, but that was an error—due to a mistake in a notice which was put up—and the times of attendance remain as before, viz. Tuesday, Wednesday and Friday, at 9 o'clock.

NOTES ON MEDICAL PRACTICE IN EDMONTON, ALBERTA, CANADA.

By R. N. BARROW, M.B., B.S.

TWICE have I attempted to write my impression of life and practice in Edmonton, and each time I have failed to complete the paper. It is hard not to drift into a description of the city, the people, or the climate, all of which have respectively a bearing on medical practice. I came to Edmonton on pure speculation, and I do not regret having done so.

We, my wife and I, knew only one Englishman in the place on our arrival, and one Canadian whom we met on the journey out.

The essentials to success in Western Canada are not present in every Englishman; and the more English he is the harder will he find it to succeed. To get on in anything, particularly in any of the professions, one must adopt, and that quickly, the methods and ways of the Canadians, borrowed to a great extent from their neighbours of the U.S.A.

This is a difficult matter for the average Englishman, and those in this country who have failed to get on have done so from their inability to embrace the above fundamentals. One sees many of the latter I am afraid. There are several refinements of an old-established civilisation, like that of England, which one must throw off to begin with, at any rate.

Push, energy and advertisement are the keynote of success in the West, and these are hard to adopt for the educated and refined man. Here feelings are hurt with great difficulty, and, in fact, are little considered at all.

One just has to blunt one's own sensitiveness and keep pushing and striving to bring oneself to the notice of anyone and everyone, whether by starting conversation with strangers in the street, on tram-cars, or in any public place, telling them who you are, where you come from, what your business or profession is, etc., or by getting any friends or acquaintances residing in the place to introduce you to all and sundry of *their* friends.

If you know, or if you do not know, that you are any

good at your work, tell all you meet that you are. Tell them where you were trained, what appointments you have held—in fact, blow your own trumpet for all you are worth.

This appears to be a strange and unnatural procedure to educated andrefined gentlemen in England, but I am convinced that unless you adopt methods such as these in Western Canada you will be forgotten in a week.

You must acquire the brass and audacity of a commercial traveller or an insurance agent.

The undertaking is a big one — bigger than I ever imagined it to be when I decided to come to this country. However, having grasped the idea that I must either do this or starve, I just shut my eyes to the repugnance I felt at my conduct and kept my mind intent on the result I desired to accomplish, which was to be earning some sort of a living before my capital ran out.

The waiting business is bad, but it must be ten times worse in the old country, where one is compelled to remain inactive.

Here you can keep moving, pulling strings here and there, putting your card in the papers (which all professional men do here), and worrying your friends to get to know new people every day.

I know a Canadian doctor, but recently come to Edmonton from the south of the Province of Alberta, who, whenever he rings a wrong number on the telephone, excuses himself and says he is ringing up Dr. "X," his own, "office"—as a consulting-room is called here. All the same, the first few months were a trying and anxious time, and I have no wish to go through it again, though it is wonderful what stimulus to exist will do. I was lucky, too, from the beginning.

On the voyage from Liverpool to Quebec we met a man who is in business in Edmonton, and with whom we made friends.

He was interested in us, and his father having been English he was interested in every Englishman coming to Canada.

When we reached Edmonton he exerted himself in every direction to help us get on.

His business, which is selling pianos, brought him into contact with more ladies than men, and as he has made a success of it, he gave us introductions to most of the best known ladies in Edmonton.

We could not have met a more useful or kinder man. We never went into his establishment without his giving us three or four cards to various people. It was much against the grain, and with many misgivings on the part of my wife, who in true British fashion thought it was not right for a new-comer to call on older residents, that we invaded the houses of those good people.

We thought they would mind, but not a bit of it. They rather liked us, or my wife at any rate, and she was invited to all kinds of social functions. So it went on till at the end of three months we were quite well known in Edmonton.

The importance of cultivating the social side of the practice has been well shown by cases which have come my way indirectly by this channel.

Professionally, I was very fortunate to get an introduction from England to a doctor here, than whom none could have been kinder or more helpful.

He gave me advice of every kind, he sent patients to me that he did not want himself, and even went so far as to offer me financial help if necessary. This man, by name Dr. Allin, has a large surgical practice here. He was trained in Canada, but took the "Colleges" examination in England and held house appointments in hospitals there as well.

No Englishman coming first to this town could meet a better man.

He has confined his practice to general surgery alone for the last two years, though he has been in the city for eight years, and he is very busy.

He is one of the most progressive men here, sound in his work, and very conscientious—valuable traits of character in a get-rich-quick country.

Dr. Allin, as I have said, gave me great assistance professionally.

He introduced me to other members of the profession, proposed me as a member of the medical society, showed me round all the hospitals, and generally brought me in touch with the work here.

He employed me as his anæsthetist whenever he could, and turned what work he could, such as medical cases, in my direction.

Before becoming actually a licensed practitioner of the province of Alberta, I had to sit and pass the provincial examination and also pay my registration fee.

This, with examination fee, amounted to $100, or £20. The provincial examination is now being replaced by the Dominion examination, which entitles those passing it to practise in any part of Canada.

Those who have practised for ten years or more in any province are exempt.

I succeeded in passing the provincial examination, which was long and somewhat tedious, and obtained my licence to practise.

The next question was, Where was I to have my "office" or consulting-room. Within a week of our arrival we found a nice modern flat in the western part of the city. Edmonton is a much scattered town, owing to the land boom of two years ago, which inflated the price of land and consequently caused many people to live some distance out.

Our flat is about two miles due west from the centre of the city, in about the best residential district.

I considered, therefore, that the locality was a good one

in which to put up my plate, and I did so, turning one of the rooms of the flat into a consulting-room, there being a second door from it on to the corridor of the building.

Most of the other doctors told me they thought it would not pay, and said I would be wiser to have an office in the town, as most other men had.

Certainly very few patients came my way.

I then prospected round the town and found an outlying district in the S.E. quarter where there was a large working-class population and no doctor within a mile. Rent was very cheap there, so I took two rooms in a small wooden building, where there was also a grocer's shop and a land agent's or "real estate" office. I put up another plate, painted my name and office hours on the side door, which opened into my waiting-room, and spent my afternoons there.

Nothing came of it, however.

The man who kept the grocer's shop, a Yankee from Nebraska, told me that if he could not make expenses in two months "he pulled up stakes and quit."

I took his tip and left that office after two months.

Things were going too slow for me, and something had to be done. I therefore gave up my consulting-room at our flat and decided to open up down town.

A new block had just been built opposite the house of my friend, Dr. Allin, on the main street, and I took two rooms in it immediately.

It proved a successful move and bore out the advice of the other men.

Rent is high in Edmonton, and my two establishments cost me £18 a month, after which light, telephones, and living are extra.

One must start with a certain amount of capital, though when patients begin to come they soon pay for one's living expenses, if one is not extravagant.

The telephone is much used here. The system is automatic, obviates an exchange, and is quick and convenient. It would be much appreciated in England.

To return to business, my prospects then began to improve. My doctor friends could depend on cases reaching me when sent on, and it was in every way more central.

The practice began to grow steadily, so that at the end of January after five months' stay in the city I was just making expenses, somewhere about £30.

Considering that the financial depression has been very bad for the last year or so, I feel more or less satisfied with results.

When starting to practise in any Western Canadian city, a doctor, providing that he is a licentiate of the province, may send his cases to any of the public hospitals of the city and attend them there.

There are no free hospitals in Western Canada, which in some ways is a good thing; but from the point of view of teaching or advancing the science of medicine I think it is bad.

I think that the old system of apprenticing students to practitioners could be profitably employed in a country where clinical teaching is so deficient.

The University of Alberta, now founded at Edmonton, has lately opened its medical school, and in two years' time the question of clinical teaching for the students will become a very important one.

While the hospitals are just large nursing-homes, you cannot expect the patients to allow themselves to be subjects for demonstration.

As it is, the patients here resent any form of restraint or discipline unless they are very ill.

In true Western style they think they know as much or more than the doctor. They may be right.

Of course if one knows anything at all of one's job and takes up an independent attitude, one can show such people the folly of their ways. If you let them go far enough they pay for disobedience to orders, and then one explains carefully how the result might have been avoided.

There are no post-mortems at the hospitals, and this, too, is a great drawback to advance in medical progress.

There are four general hospitals in Edmonton and one isolation hospital.

Two of the former are run by Roman Catholic bodies, who were the pioneers of hospital work all through Canada. The other two general hospitals are run by the city, and are more up to date and better equipped.

Three of the general hospitals are situated on the north side of the river in Edmonton proper, and the other, the latest built one, on the south side in South Edmonton. There is a hospital board controlling the two city hospitals and the isolation hospital.

No doctor is on the board, but a medical superintendent has lately been appointed to manage them. There is talk also of appointing residents, but nothing has come of it so far.

The Edmonton Medical Society has lately been asked to appoint an advisory committee to the hospital board, which the Society is going to do.

The scale of payment in the hospitals is as follows: For private rooms, $2·00 (8*s.* 4*d.*) a day; semi-private rooms holding two beds, $1·50 (5*s.* 3*d.*) a day; public wards, $1·00 (4*s.* 2*d.*) a day.

This does not include the charge for the nurse in the case of the private rooms, which is $2·00 a day more.

The city and province make a grant of £20 a year towards all the hospitals in the province and cities, and in return for that the Public Health Department can send destitute patients to hospital at the rate of $0·25, or 1*s.* per day.

It may be as well here to mention the usual scale of fees of the profession in Edmonton.

Consultations at "office" . . .	$ 2·00	each.
Visits . . . (night $3·00)	$ 2·00	,,
Hospital visits	$ 2·00	,,
Minor operations: Opening abscesses, etc.	$ 5·00	,,
Removing fingers, etc. . .	$ 10·00	,,
Tonsils and adenoids . . .	$ 25·00	,,
Major operations: Varicocele . .	$ 50·00	,,
Hernia	$ 50·00	,,
Appendicectomy . . .	$100·00	,,
Hysterectomy, gastro-enterostomy, ovarian cysts, gall-stones . .	$150·00	,,
Cæsarian section . . .	$150·00	,,
Amputations: Hand, arm, foot, leg, thigh	$ 50·00	,,
Hip, shoulder	$100·00	,,
Confinements, including four visits following	$ 25·00	,,
Anæsthetics: T. & A. Minor operations	$ 5·00	,,
Major operations . . .	$ 10·00	,,
Fractures: Colles', Pott's . . .	$ 25·00	,,
Leg, thigh, upper arm . .	$ 50·00	,,
Vaccination	$ 1·00	,,

Charges for country work are the same + $1·00 per mile for mileage.

These are the fees for some of the commoner things.

The ear, nose and throat people, who all combine eye work as well, have their own scale of fees on a slightly higher level.

As one can see, the remuneration is not bad for the G.P., and one must remember that this scale holds good for working-class as well as other patients.

At present there is a kind of club being worked in the city on the system of monthly subscription by members. The people running it are Americans, and profits seem their chief object.

They have a doctor in their employ who gets a percentage on the cases he attends, but he has been greatly discredited lately in the profession, and has been requested to resign from the Medical Society.

I am sorry to say that many "old country" people have joined this club, some with dire results to themselves.

On the other hand, the profession in general thinks that some sort of a contributory association should be formed to enable the really poor to obtain good doctoring for a small monthly subscription and to obviate bad debts.

The Medical Society approached the Trades and Labour Council in the matter, but, as is the way with such people, they wanted full control of the whole business—an impossible attitude. The result was that the scheme fell through.

An attempt is now being made to form a sick benefit association controlled by the medical men and certain well-known business men.

One other matter which has an effect upon practice, or at least upon the complaints of the patients and their treatment.

I refer to the climate of Edmonton.

Edmonton is situated just about one hundred miles south of the centre of the province of Alberta.

It is 1600 ft. above sea-level, and the air is extraordinarily clear and dry.

Diseases benefiting from this condition are—chest diseases in general.

Early phthisis patients improve in Edmonton. Late phthisis is not much benefited, owing to the severity of the winters and the close atmosphere of the houses at that season.

Bronchitis of every kind is much benefited.

Asthmatic subjects are completely cured after living any time in Edmonton.

Cardiac conditions are much relieved by the benefit to the lungs.

Diseases which are more often seen are: Acute Bright's disease, due probably to the cold in winter; rheumatic fever of a mild type, not usually affecting the heart, and found in adults as a rule; pneumonia; typhoid endemic in some districts; various types of subacute rheumatism or pains in joints.

The fact that rheumatism of any kind is common in such a dry air dispels the idea that rheumatism is a disease of moist climates alone. The effect of the climate of Edmonton upon the nervous system has attracted my attention since I have been here. The result is summed up in one word—over-stimulation.

This effect makes itself apparent in many ways, both socially and medically.

The mental attitude of everyone here is optimistic.

Here is a desire to move quickly and get on.

On the other hand, concentration of mind is less in everything. People forget easily, facts, faces, worries, friends—everything, in fact.

One feels it oneself. It is more of an effort here to remember what one was doing yesterday at a certain time than it would be in England, for instance.

The whole outlook appears to be ahead. This spirit invades business transactions and the whole social life. Everything is done at high pressure. The result is that nervous breakdowns are frequent. Most people here say that they must go to the "Coast"—that is, Vancouver—once a year, just to be soothed by the low altitude and relaxing air.

Children are very apt to become overstrung and nervous. They are certainly precocious. I have twice been called to young children with high temperatures, and have found nothing to account for it but some excitement they have been through, such as a picture show or some performing bears.

I am told that the clinical thermometer reads higher here than in lower altitudes.

Alcohol and tobacco both affect the nervous system sooner in this climate. Personally I have reduced my smoking nearly one half.

Drunkenness is prevalent in the city, and though many blame the quality of the liquor and the intemperance of the population, I am disposed to think that alcohol combines more rapidly with the nerve-cells in high altitudes.

Certainly I have found in giving anæsthetics that chloroform does so, and the surprise it gave me was not a very pleasant one.

Open ether is used for the most part here, but chloroform can be used for induction if carefully handled. I generally use the open method, beginning with ether, 2 parts, chloroform, 1 part, proceeding to open ether when the patient is sufficiently under.

Eclampsia, I understand, is quite common here, and last year, out of a dozen cases in the town, only two were saved. I am therefore inclined to keep a watchful eye on any obstetric cases I have if I can get them early enough.

Then I have heard of several cases of headache due to high blood-pressure, which I think is due to the effect of the climate on the nervous system.

Insanity is common in the Province. Most of it is said to be caused by the lonely life in the country; but the over-stimulation of the nervous system has some predisposing action upon it I am sure.

As far as I have gone already, I feel inclined to include pot. brom. and pot. iod. in most of the prescriptions I write.

As regards the latter and dispensing, very few doctors dispense their own drugs.

The chemists charge very highly for medicine. I think the rate is 10 cents (5*d.*) a dose in a mixture. If there are ten doses in the bottle the charge is one dollar (4*s.* 2*d.*).

The drugs obtainable are not up to the English standard as a rule, but that is the same with a great many commodities in the north-west.

I have no more to add to this letter, and I hope it will be of service to some who read it. I may say that more English people come to Edmonton every year, and I would welcome any other Bart.'s man if he were to come out At present there is only one other English trained man here, and he is a "London" man practising in an outlying suburb.

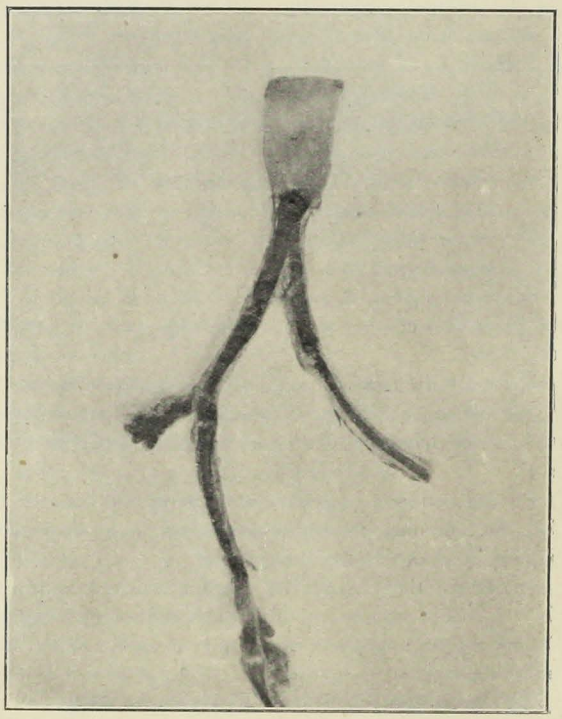
A CASE OF EMBOLISM OF THE FEMORAL ARTERY.

By R. StL. Brockman, M.R.C.S., L.R.C.P.

MR. C. GORDON WATSON requested that this case should be reported in the Journal:

History.—A woman, æt. 17, was admitted to Elizabeth Ward on March 2nd, 1914, under Dr. Barris, her pregnancy being complicated by mitral incompetence. On examination she was found to have well-marked mitral stenosis. The heart was not compensated, there was fluid at the bases of both lungs, and a large quantity of albumen in the urine. On March 4th, 1914, she was safely delivered, and all went well till March 12th. About mid-day of that date the woman was seized with a sudden acute attack of pain in her right foot and leg below the knee. Pulsation was not felt in the limb below the femoral artery in Scarpa's triangle.

On March 13th, about thirty hours after the onset, Mr. Gordon Watson was asked to see the patient. Her condition was desperately bad. There was no pulsation to be felt in the right lower limb anywhere, and by now the pulsation in the left lower extremity had disappeared. Mr. Watson said he thought an attempt ought to be made to remove the embolus from the right femoral artery. Accordingly, under a local anæsthetic, the vessel was exposed in the upper portion of Scarpa's triangle. Two Crile's clamps were applied, and the vessel opened. A small fibrinous mass at once protruded, followed by marked hæmorrhage, which ceased when digital pressure was applied to the profunda branch. When the upper clamp was now loosened a slow stream of blood escaped. Mr. Watson thought there was probably some more clot up above, but did not think it was worth while going any farther. The vessel was closed with fine vaseline silk. The woman died about one hour later.



Clot found at Post-mortem Examination.

Post-mortem report.—There was a large pleural effusion on both sides of the chest. The mitral valves were the site of recent vegetations, which almost closed the mitral orifice. An incision had been made into the right common femoral artery for the extraction of an embolus. The sutured wound had not healed, as no blood was found in the wound. A little clot was found adhering to the stitches internally, but not in any way occluding the vessel. A firm clot was found extending from just above Poupart's ligament up to half an inch above the bifurcation of the aorta and down to the division of the common iliac on the left side. On the right side the clot extended down the internal iliac artery for a distance of an inch. Mr. C. Gordon Watson has reported two other cases in the *Clinical Journal*, December, 1912, while a *précis* is given of most of the reported cases by Mr. Gask in the *St. Bartholomew's Hospital Reports* for 1913.

A CASE OF EXTENSIVE AND PROLONGED SUPPURATION SUCCESSFULLY TREATED BY THE X-RAYS.

By E. P. CUMBERBATCH, M.B., M.R.C.P.

THE case to be described illustrates the beneficial action of the X-rays upon some cases of chronic suppuration. The patient, a girl, æt. 10, was sent to the writer for treatment in October, 1913. Her right hand was very swollen, dusky red, and discharging pus profusely from incisions made on the palm and the front of the wrist.

In 1908 a compound palmar ganglion was excised from the right hand, and there was no history of further trouble in this hand till May, 1912, when a swelling of the palm of the same hand was noticed. It slowly increased in size.

In May, 1913, the swelling was opened, synovial fluid escaped and the cavity was scraped out. Soon after leaving hospital the swelling reappeared and spread over the palm, which became red and very painful. Incisions were made, and pus escaped and continued to discharge profusely.

On October 22nd, 1913, the writer exposed the palm to the action of the X-rays. Short applications were made and repeated once each week. No improvement was noticed till the latter part of November, 1913, when a striking change took place. The swelling rapidly subsided after the fifth application, the erythema disappeared except from over a small area at the centre of the palm, and the discharge stopped from all but three incisions. The X-ray treatment was continued week by week. A small amount of pus occasionally exuded from the remaining incisions. The patient rapidly recovered the use of her fingers. At the end of January, 1914, the remaining sinuses closed and all erythema disappeared, and the patient could use her hand quite well.

At the beginning of February, 1914, some erythema reappeared on the front of the wrist and pus began to discharge from the site of an old incision. The wrist was then exposed to the action of the X-rays, the palm being shielded. The discharge considerably lessened, and when last seen by the writer had ceased to appear.

The writer has had some successful results in the X-ray treatment of some other cases of prolonged suppuration, three being cases of infective periosteitis, one being a case of suppuration in connection with a tendon-sheath. Suppurating tuberculous glands are, in the writer's experience, very amenable to the influence of the X-rays.

The writer is indebted to Mr. Cozens Bailey, who has allowed him to publish the particulars of the case described, which was formerly under his care.

OBITUARY.

WILLIAM BRUCE CLARKE, M.B.Oxon., F.R.C.S.

NEARLY forty years ago, at a meeting of the Abernethian Society, during a disputation on its management and the direction of its discussions, in which several of the customary debaters took part, a relative stranger, looking older than his years, rose up and spoke with considerable eloquence, relating his experience of a somewhat similar society at his university. "That's Bruce Clarke, an Oxford man," said one member. He was already known at his university, but as he only entered our medical school in 1873 he had not hitherto put himself forward at St. Bartholomew's. From his skilful debating on this occasion he became distinguished as a student likely to do honour to his Hospital. A sketch of the state of surgical practice and teaching at our famed institution as it was when Bruce Clarke was a student, and as it, with his aid, developed up to its present condition, will enable us to understand his professional career and to do justice to his merits.

In 1874 the surgeons of the mid-Victorian type had nearly all passed away, although a few were living and taking an active part in medical education as examiners at the College of Surgeons, three ultimately becoming presidents. They were, on the whole, easy-going men, who taught clinical surgery very well indeed, and understood what surgical anatomy really meant. None of them, however, reaped high fame as an operator like Fergusson and Thompson, nor played an active part in advancing surgical art, whilst the one great pathologist among them had pursued his investigations in days already long past, when section-cutting was but ill-understood and staining unknown. The new men replacing them on the senior staff

included several surgeons of a different type—fine, tall men of strong physique, but also far above the average as operators, yet untainted by the faults of many general surgeons who endeavour to be specialists at the same time. A few years passed on, and then the mantle of Paget fell on the shoulders of an eminent scientific pathologist elected on the staff. Butlin knew how to make use of those improvements in microscopical technique which were not at the disposal of Quekett and Paget. After him came an admirable surgical anatomist, a first-rate teacher of students, dexterous, and endowed with high mechanical ability. Unfortunately both lacked the fine physique of several of their senior colleagues, and, like Bruce Clarke, neither lived to enjoy his retirement, Walsham dying long before he had attained the age-limit.

The honourable rivalry of these distinguished men and of two others still living and flourishing proved highly stimulating to Bruce Clarke. As he was free both from envy and from despondency, no obstacles were made for him by others, and he dreaded none of those shadows which Ratcliff advised Richard III not to be afraid of. "It is a paltry and inglorious mistake to let the shadow have its disheartening will of us. It is only a shadow after all!" says Mr. A. G. Benson in *Where no Fear Was*. These shadows come in the way of every hospital surgeon throughout his career and of every one else in any other career. Bruce Clarke faced the specialist and understood his real merits. He distinguished what was good from what was bad in the methods of Spencer Wells and Lawson Tait, and also saw clearly that renal surgery was capable of high developments. Bruce Clarke recognised how the establishers of variotomy had opened the door of abdominal surgery, perhaps more widely than they intended, to the general surgeon. Tait and Knowsley Thornton had already passed beyond the threshold. In 1881 Bruce Clarke became assistant-surgeon to the West London Hospital, and in 1884 full surgeon, holding for a year (1883–4) a similar appointment at St. Peter's Hospital. Thus opportunities favoured him, and he made the best of them. By 1883 he was an assistant surgeon at his own medical school. In 1885—let us mark the above succession of dates—he took the Jacksonian prize on "The Diagnosis and Treatment of such Affections of the Kidney as are amenable to direct Surgical Interference," and, after the fashion of most Jacksonian prizemen, he published his essay, with suitable addenda. It was already in the press when Sir Henry Morris's *Surgical Diseases of the Kidney* was issued, and was as a literary composition an original work. By 1911, after years of ripe experience, Bruce Clarke issued his *Hand-book of the Surgery of the Kidney*. During the same years that Bruce Clarke was engaged in witnessing these developments of renal surgery and in introducing the new methods into the hospitals where he held appointments, he did likewise in respect to the surgery of the liver and gall-ducts. At the same time, while assisting in the transference of these branches of the surgical art from the specialist to the general surgeon he never neglected general operative work. For that reason he never fell into error and into questionable ways like certain specialists —mostly foreign we are glad to say—who open the peritoneal cavity on the slightest excuse, and perform wonderful operative feats, which, however, are not surgery. Bruce Clarke was unfortunate in having to wait nineteen years before, in 1902, he became senior surgeon to St. Bartholomew's, but, like most other assistant surgeons, he had already reached his professional prime, and we have shown above how well he had made use of his time when technically a junior. He took charge of the gynæological ward at St. Bartholomew's Hospital on the resignation of Mr. Harrison Cripps. Unfortunately his health had long been failing, and he resigned his appointment as surgeon in 1912.

In the case of a man so honoured and beloved as Bruce Clarke, it is somewhat disagreeable to feel compelled to introduce into an obituary notice matter more suited to *Who's Who* and the *Medical Directory*. For that reason we have endeavoured to make his hospital appointments read as facts rather than as dates. Yet our readers may expect some chronological records of the departed surgeon. We can inform or remind them that William Bruce Clarke was the son of the Rev. W. W. Clarke, of North Wootton, near King's Lynn, Norfolk, where he was born on March 25th, 1850. Educated at Harrow, he afterwards studied at Pembroke College, Oxford, where he took first-class honours in Natural Science and the Burdett Coutts University Scholarship. In 1872 he held the appointment of Demonstrator of Comparative Anatomy at Oxford. For a time he attended the teaching and practice of Thiersch, Ludwig, and Volkmann at Leipzig and Halle, but his professional studies were mainly pursued at St. Bartholomew's. In 1877 he qualified as M.B.Oxon. and M.R.C.S.Eng., taking the Fellowship in 1879. He was house-surgeon to Sir William Savory in 1878 and house-physician to Dr. James Andrew a year later, suffering when in the latter appointment from that ill-health which often troubled him through his entire career, and his place was filled for a time by Mr. Lockwood. In 1880 Bruce Clarke became Assistant Demonstrator of Anatomy and full Demonstrator in 1881. From 1889 to 1903 he held the chair of Anatomy, and at the end of that long term he became Lecturer on Surgery, resigning in 1912. Both these chairs are joint appointments. He was active in preparing papers for the London medical societies and joining in discussions. In 1896–7 he was President of the West London Medico-Chirurgical Society, and when the British Medical Association met at Oxford in 1904 he was selected as Vice-President of the Section of Surgery. He was Examiner both at Oxford and at the College of Surgeons, and in 1905 the well-deserved honour of election on the Council of the College of Surgeons was insured to

SUPPLEMENT TO

St. Bartholomew's Hospital Journal,

MAY, 1914.

HOSPITAL AND TEACHING APPOINTMENTS

held by Past Students of the Hospital.

(Excluding those held at St. Bartholomew's Hospital.)

LONDON.

Hospital.	*Name and Post.*
Charing Cross Hosp.	J. Abercrombie, *Con. Physician.*
	J. A. Bloxam, *Con. Surgeon.*
	E. B. Waggett, *Surg. to Nose, Throat & Ear Dept.*
St. George's Hospital	H. D. Rolleston, *Phys.*
	J. R. H. Turton, *Dem. of Path. & Asst. Cur. of Museum.*
Guy's Hospital	C. J. Ogle, *Anæsth.*
King's College Hosp.	W. A. Turner, *Phys.*
	F. W. Tunnicliffe, *Asst. Physician.*
	T. P. Legg, *Asst. Surg.*
	W. d'E. Emery, *Path.*
	W. R. Smith, *Prof. of Forensic Medicine.*
London Hospital	C. W. Mansell Moullin, *Con. Surg.*
	P. Kidd, *Physician.*
	Sir F. Eve, P. Furnivall } *Surgs.*
	F. G. Chandler, *Med. Registrar.*
St. Mary's Hospital	W. J. Gow, *Obst. Surg.*
	G. Harrison Orton, *M.O. in charge of X-ray Dept.*
	J. E. S. Frazer, *Lect. on Anatomy.*
	S. R. Douglas, *Ass. Direct. Thera. Inoc. Dept.*
Middlesex Hospital	W. E. Wynter, *Phys.*
	Stephen Paget, *Cons. Aural Surg.*
	E. A. Cockayne, *Asst. Physician.*
	A. G. R. Foulerton, *Bacteriologist.*
	H. Martin Grey, *Asst. in Elec.-thera. Dept.*
	T. G. A. Burns, *Anæs.*
University College Hospital.	J. H. Parsons, *Ophth. Surg.*
Westminster Hosp.	F. de Havilland Hall, *Con. Physician.*
	G. H. D. Robinson, *Ob. Physician.*
	W. G. Spencer, *Surg.*
	P. R. W. de Santi, *Surg. to Throat Department.*
	N. W. Bourns, *Admin. of Anæst.*
	R. Farrant, *Surg. Reg.*
London School of Med. for Women (Royal Free Hospital).	S. West, *Con. Phys.*
	W. P. S. Branson, *Asst. Physician.*
	J. Berry, J. Cunning, T. P. Legg } *Surgs.*
	H. Work Dodd, *Ophthalmic Surgeon.*
	M. L. Hepburn, *Ophthal. Surg.*
	J. G. French, *Surg. Throat and Ear Department.*
	G. Harrison Orton, *M. O. in charge of Elect. Department.*
	W. d'Este Emery, *Lect. on Path.*
North-East London Post-Grad. College (Prince of Wales General Hospital), Tottenham.	P. Kidd, *Con. Phys.*
	H. W. Carson, E. Hooper May } *Con. Surgs.*
	H. D. Gillies, *Surg. Throat, Nose and Ear Department.*
	C. F. Hadfield, *Anæsthetist.*
West London Post-Graduate College (West Lond. Hospital).	F. Swinford Edwards, *Con. Surgeon.*
	H. Pritchard, *Phys.*
	G. D. Robinson, *Phys. for Dis. of Women.*
	P. Dunn, *Surg. for Diseases of the Eye.*
	P. S. Abraham, *Con. Dermatologist.*
	Robert Armstrong-Jones, *Lecturer on Mental Diseases.*
	E. D. McDougal, *Elect. Depart.*
	R. W. Lloyd, *Senior Admin. of Anæsthetics.*
	G. P. Shuter, *Admin. of Anæsths.*
	J. D. Mortimer, *Asst. Admin. of Anæsths.*
	Sir Dyce Duckworth, Bt., *Physician.*
London Scho Clin. Med. men's H Greenwich)	J. Gow, William- ig, chard Wood- wark, J. K. Murphy } *Extra Mural Lects.*

LONDON—*continued.*

Hospital.	*Name and Post.*
London School of Tropical Medicine.	L. W. Sambon, *Lect.* H. Williams, *Lect. on Port Hygiene.* Sir F. H. Lovell, C.M.G., *Dean.* F. W. O'Connor, *Demonstrator.*
Lister Inst. of Prev. Medicine.	J. A. Arkwright, *Asst. Bacteriologist.*
Royal Institute of Public Health.	Prof. W. R. Smith, *Principal.*
King Edward Memorial Hospital, Ealing.	J. G. French, D. N. Ruck — *Hon. Con. Staff.*
German Hospital	F. P. Weber, *Phys.* A. Compton, *Asst. Surg.*
Gt. Northern Central Hospital	C. M. Hinds Howell, *Physician.* J. Gay French, *Aural & Throat Surgeon.* E. H. Shaw, *Path.*
Hampstead General and N.W. London Hospital	Sir W. J. Collins, *Ophth. Surgeon to In-Patients.* M. L. Hepburn, *Ophthal. Surgeon to Out-Patients.* H. L. Whale, *Surg. for Dis. of Throat, Nose and Ear.*
Italian Hospital	Sir Dyce Duckworth, *Con. Phys.* F. Melandri, *Phys.* T. P. Legg, *Surgeon.*
Kens. and Fulham General Hospital.	C. A. Horsford, *Aural Surgeon.* J. H. Swanton, *Obst. Physician.* A. S. Worton, *Ophthal. Surgeon.*
Leyton, Walthamstow and Wanstead General Hospital.	C. J. Horner, *Medical Officer.*
London Temperance Hospital.	Sir W. J. Collins, *Con. Surgeon.* H. J. Paterson, *Surg.* H. Whale, *Thrt. Surg.* A. Abrahams, *Med. Registrar.*
Memorial Hospital, Mildmay Park.	S. H. Habershon, *Con. Physician.*
Metropolitan Hosp.	H. H. Tooth, A. T. Davies — *Con.* A. Haig — *Phys.* H. J. Waring, *Con. Surgeon.* W. T. Holmes Spicer, E. W. Brewerton — *Con. Oph. Surgs.* C. J. Ogle, *Con. Anæsthetist.* E. Cautley, W. Langdon-Brown, H. Thursfield — *Phys.* C. G. Watson, *Surg.* A. E. Stansfeld — *Asst. Phys.* A. Feiling — *Asst. Surgs.* R. C. Elmslie, R. M. Vick A. F. S. Sladden, *Path. and Regist.* A. H. Brewer, L. U. Young — *Med. Offs.*
Mildmay Mission Hospital.	S. H. Habershon, *Con. Physician.* W. McA. Eccles, *Con. Surgeon.* G. B. Price, *Hon. Phys.*
Miller General Hospital.	H. Marsh, *Con. Surg.* E. Clarke, *Con. Ophth. Surgeon.* W. Willes, *Con. Phys.* H. Pritchard, A. S. Woodwark — *Phys.* J. K. Murphy, *Surg.* R. E. Scholefield, *O P. Physician.*
Poplar Hospital	P. Kidd, *Hon. Con. Physician.*
West Ham General Hospital.	C. J. Stocker, *Con. Physician.* C. Worth, *Con. Ophth. Surgeon.*
Passmore Edwards Cottage Hospital, Acton.	E. W. Woodbridge, *Med. Officer.*
All Saints Hospital, Buxton St., E.	Sir Dyce Duckworth, *Con. Phys.*
Anti-vivisection Hospital and Battersea General Hospital	A. Wall, *Hon. Con. Physician.*
Battersea Provident Dispensary.	M. J. Anderson, *Med. Officer.*
Billingsgate Christian Mission and Dispensary.	Sir F. Eve, *Con. Surg.* H. J. Bumsted, *Med. Officer.*
Blackfriars Prov. Dispensary.	R. C. Gully, *Medical Officer.*
Blackheath and Charlton Hospital.	J. H. Drysdale, *Con. Physician.*
Bolingbroke Hospital, Wandsworth Common.	D'Arcy Power, *Con. Surgeon.*
Brixton Dispensary	A. G. Williams, *Med. Officer.*
Camberwell Provident Dispensary.	F. Norman, *Medical Officer.*
Chiswick and Turnham Green Dispensary.	H. H. Butcher, G. French — *Med. Offs.*
Eastern Dispensary, Leman St., Whitechapel.	E. A. Dorrell, *Ophth. Surgeon.*
Edmonton Medical Club.	J. A. P. Barnes, *Med. Officer.*
Farringdon General Dispensary.	W. J. Horne, *Laryngologist.* H. N. Burroughes, H. Rhodes — *Phys.* J. Morrison, *Physician Accouch.*
Finchley Cottage Hospital.	C. Barker, F. A. Spreat, C. F. Winkfield — *Med. Staff.*
Finchley Dispensary	C. Barker, F. A. Spreat, E. T. M. Tunnicliffe — *Med. Staff.*
Finsbury Dispensary	J. S. Sharman, *Surg.*
Forest Hill Prov. Dispensary.	A. H. Beadles, A. S. May — *Med. Offs.*
Greenwich Provident Dispensary.	W. Willes, *Medical Officer.*
Hampstead Provident Dispensary.	E. Jessop, *Con. Surg.* G. D. Pidcock, W. N. Evans — *Med. Offs.*
Hanwell Cottage Hospital.	G. H. Bennett, *Med. Officer.*
Haverstock Hill Dispensary.	W. H. Pepler, *Med. Officer.*
Incorporated East Dulwich Prov. Dispensary	P. Barham, *Medical Officer.*
Kennington Provident Dispensary.	H. Taylor, L. L. Winterbotham — *Med. Offs.*
Kensington Dispensary.	G. L. Turnbull, *Surg.*
Kilburn, Maida Vale, and St. John's Wood General Dispensary.	J. A. Smith, S. F. Gibbs — *Med. Offs.*
Kilburn Prov. Med. Institute.	M. Davson, F. E. Scrase, J. A. Smith — *Med. Offs.*
Lady Margaret Hospital, Bromley.	J. Oldfield, *Medical Officer.*
Metropolitan Dispensary, E.C.	V. D. Harris, *Con. Physician.* T. H. A. Chaplin, *Physician.* D'Arcy Power, *Con. Surgeon.*
Public Dispensary, Drury Lane.	T. P. Legg, *Consulting Surgeon.*
Queen Adelaide's Dispensary, Bethnal Green Road.	F. Arthur, *Surgeon.*
Royal General Dispensary, Bartholomew Close.	Sir W. S. Church, Sir Dyce Duckworth — *Con. Phys.* C. B. Lockwood, *Con. Surgeon.* W. Langdon-Brown, H. Thursfield — *Phys.* C. G. Watson, *Surg.* J. Kearney, *Res. Med. Officer.*
St. George's Prov. Dispensary.	H. N. Burroughes, *Physician.* A. C. Butler Smythe, *Surgeon.*
St. John's Hospital, Morden Hill, Lewisham.	E. J. Moore, *Medical Officer.*
St. John's Wood Dispensary.	C. Horsford, *Con. Throat Surgeon.*
St. Marylebone Gen. Dispensary	J. F. H. Dally, *Phys., & Phys. in Charge Tuberc. Dept.*
St. Pancras Dispensary.	Sir Dyce Duckworth, *Con. Physician.* C. S. de Segundo, T. G. M. Hine — *Phys.* C. Horsford, *Con. Throat Surgeon.* F. L. Provis, *Surgeon Accouch.*
Seamen's Hospital Society, Greenwich	Sir Dyce Duckworth, *Visit. Physician.* C. E. Robbs, *Surg.*
Seamen's Hospital Society, East India Dock Dispensary.	W. H. Oxley, *Medical Officer.*
Surrey Dispensary	D. Smart, *Surgeon.*

LONDON—*continued.*

Hospital.	*Name and Post.*
Tottenham Medical Club (Met. Prov. Med. Association).	J. A. P. Barnes, *Med.*; G. H. Vos, *Offs.*
Walthamstow Dispensary.	R. Jones, *Medical Officer.*
Western Dispensary, Westminster.	W. G. Spencer, *Con. Surgeon.*; G. D. Robinson, *Con. Accoucheur.*; H. Troutbeck, *Att. Medical Officer.*
Western General Dispensary, Marylebone Road.	J. B. Nias, *Con. Phys.*; G. L. Johnson, *Con. Ophth. Surgeon.*; B. Myers, *Physician.*; L. A. Lawrence, L. Evans, *Surgs.*; J. A. Willett, *Phys. Accoucheur.*
Westminster General Dispensary . .	K. R. Hay, *Phys.*
Whitechapel Prov. Dispensary.	T. Jones, *Medical Officer.*
Willesden, N.W., Passmore Edwards Hospital.	A. H. Levy, *Ophth. Surgeon.*; J. A. Smith, *Hon. Medical Officer.*
Wimbledon Cottage Hospital.	J. A. Hayward, *Med.*; F. C. Ford, *Offs.*

SPECIAL HOSPITALS, ASYLUMS, ETC.

Hospital.	*Name and Post.*
Cancer Hospital, Brompton.	T. J. Horder, *Phys.*; W. E. Miles, J. Cunning, *Surgs.*; H. W. Wilson, *Asst. Surgeon.*; N. W. Bourns, *Con. Anæsthetist.*
City of Lond. Hosp. for Diseases of the Chest, Victoria Pk.	V. D. Harris, Sir W. Church, *Con. Phys.*; T. H. A. Chaplin, H. Walsham, *Phys.*; C. Riviere, *Phys. to Out-patients.*
Hospital for Consumption and Diseases of the Chest, Brompton.	P. Kidd, *Con. Phys.*; S. H. Habershon, P. H. S. Hartley, *Phys.*; J. Dundas Grant, *Surg., Throat and Ear Department.*
Mt. Vernon Hospital for Consumption and Diseases of the Chest.	J. F. Halls Dally, *Asst. Physician.*
Royal Hospital for Diseases of the Chest, City Road.	H. Dobell, *Con.*; P. J. Hensley, *Phys.*; A. T. Davies, J. Calvert, J. H. Drysdale, *Phys.*; A. C. Jordon, *X-ray Department.*
Royal National Hospital for Consumption and Diseases of the Chest, Ventnor.	V. D. Harris, *Con. Physician.*; A. T. Davies, T. H. A. Chaplin, *Phys. in Lond.*

Hospital.	*Name and Post.*
Alexandra Hospital for Children.	J. Berry, *Con. Surg.*; H. M. Fletcher, *Phys.*; Sir A. Bowlby, *Con. Surgeon.*; W. T. Holmes Spicer, *Ophth. Surgeon.*; W. G. Ball, *Surg.*; H. D. Gillies, *Aural Surgeon.*; H. N. Burroughes, *Visit. Med. Officer.*; A. W. D. Coventon, *Pathologist.*; H. G. Adamson, *Dermatologist.*
East London Hospital for Children (Shadwell).	H. M. Fletcher, C. Riviere, *Phys.*; G. Graham, *Assistant Physician.*; J. E. H. Roberts, *Asst. Surgeon.*
Evelina Hospital for Sick Children.	Sir Frederick Eve, *Con. Surgeon.*
Hospital for Sick Children (Gt. Ormond Street).	A. E. Garrod, F. E. Batten, *Phys.*; H. Thursfield, *Phys. to Out-Patients.*; Howard Marsh, *Con. Surgeon.*; J. G. Forbes, *Clin. Path. and Bact.*
Paddington Green Children's Hosp.	Sir L. Brunton, Bart., W. P. Herringham, *Con. Phys.*; W. H. Jessop, *Con. Ophth. Surgeon.*; H. Davis, *Skin Department.*; L. G. Guthrie, *Phys.*; J. K. Murphy, *Surg. to Out-Patients.*
Queen's Hospital for Children, Hackney Road.	S. Neave, *Physician.*; A. E. Gow, *Asst. Phys.*; J. H. Connolly, *Ear, Thrt. & Nose Surg.*; A. W. G. Woodforde, *Pathologist.*
Victoria Hospital for Sick Children.	D'Arcy Power, *Con. Surgeon.*; H. D. Rolleston, *Phys.*; J. Cunning, *Surgeon.*; H. W. Wilson, *Out-Patient Surgeon.*; W. B. Grandage, W. W. Wells, *Anæs.*
National Hospital for Diseases of the Heart.	F. J. Halls Dally, P. Hamill, *Phys.*
Lock Hospital . .	J. A. Bloxam, *Con. Surgeon.*; H. J. Paterson, J. E. R. McDonagh, *Surgs. to O.-ptnts.*
City of London Lying-in Hospital.	J. A. Willett, *Asst. Physician.*; J. Barris, *Asst. Phys.*; E. Chambers, H. E. Whitehead, *Dist. Surgs.*

Hospital.	*Name and Post.*
Queen Charlotte's Hospital.	W. S. A. Griffith, W. J. Gow, *Con. Phys.*; C. H. Roberts, *Phys. to In-Patients.*; J. H. Drysdale, *Phys.*
Central London Ophthalmic Hospital.	Sir Dyce Duckworth, *Con. Physician.*; T. B. Archer, *Con. Surgeon.*; Ernest Clarke, *Surg.*; A. Levy, *Asst. Surg.*; R. Foster Moore, *Asst. Surgeon.*
Royal Eye Hospital, Southwark.	Sir W. J. Collins, *Surgeon.*; E. A. Dorrell, *Asst. Surgeon.*; A. L. Weakley, *Reg.*
Royal London Ophth. Hospital.	W. T. Holmes Spicer, J. H. Parsons, C. Worth, *Surgs.*; M. L. Hepburn, *Asst. Surgeon.*
Royal Westminster Ophth. Hospital.	H. W. Dodd, E. Brewerton, *Surgs.*
Royal National Orthopædic Hospital, Gt. Portland St.	E. Laming Evans, *Surgeon.*; W. H. George, R. Pollard, *Anæs.*
Central London Throat, Nose and Ear Hospital.	J. D. Grant, *Con-Surgeon.*; W. Stuart Low, *Surg.*; W. H. George, J. D. Mortimer, *Anæsth.*; A. Ryland, *Reg.*
Hospital for Diseases of the Throat, Golden Square.	F. A. Rose, T. J. Faulder, *Hon. Med. Staff.*; H. D. Gillies, *Path.*
London Throat Hospital.	E. B. Waggett, *Con. Surgeon.*; W. W. Wells, *Anæs.*
Metropolitan Ear, Nose and Throat Hospital.	J. Pickett, *Con. Surg.*; F. Spicer, W. J. Horne, *Surgs.*; H. Whale, *Asst. Surg.*
Hospital for Women, Chelsea.	F. L. Provis, *Surg. to Out-Patients.*
Hospital for Women, Soho Square.	C. J. Ogle, *Anæsth.*; R. H. Paramore, *Path. and Registrar.*
Royal Waterloo Hospital for Women and Children.	A. Haig, A. S. Woodwark, *Phys.*; W. J. Gow, H. Williamson, *Gyns.*; J. C. Marshall, *Surg.*; J. D. E. Mortimer, *Anæsthetist.*
Margaret St. Hosp. for Consumption and Diseases of the Chest.	J. Attlee, E. C. Bridges, *Con. Phys.*
Belgrave Hospital for Children.	E. Cautley, *Phys.*; F. J. Stevens, *Sanitary Officer.*
Infants' Hospital, Westminster.	Sir L. Brunton, *Con. Physician.*; R. Vincent, *Senior Physician.*

LONDON—*continued.*

Hospital.	*Name and Post.*
St. Monica's Home and Hospital for Children.	O. Lankester, *Con. Surg.* T. B. Archer, *Ophth. Surgeon.* J. A. Smith, *Medical Officer.*
Cripples' Nursery, Regent's Park.	H. F. Baker, *Con. Surgeon.*
Lord Mayor Treloar Cripples' Home.	F. E. Batten, J. Berry, Sir Frederick Eve, Howard Marsh — *Hon. Med. Brd.* H. J. Gauvain, *Senior Resident Medical Superintendent.*
St. Peter's Hospital for Stone.	F. Swinford Edwards, *Surgeon.*
Friedenheim Hosp. for the Dying.	S. H. Habershon, *Con. Physician.* W. McA. Eccles, *Con. Surgeon.* P. J. F. Lush, *Med. Officer.*
Home for Confirmed Invalids (Women).	F. de H. Hall, *Hon. Con. Physician.* E. S. Tait, *Hon. Med. Officer.*
Hostel of God (Free Home for Dying)	L. G. Guthrie, *Hon. Con. Physician.*
London Homœopathic Hospital.	C. E. Wheeler, *Asst. Physician.* J. C. Powell, *Asst. Ophth. Surgeon and Anæsthetist.*
Royal Hospital for Incurables	J. Gay, *Med. Officer.*
Woodside Home for Incurables.	E. T. M. Tunnicliffe, *Hon. Med. Attend.*
Willesden Isolation Hospital, Neasden.	N. H. Walker, *Asst. Med. Supt.*
Claybury Asylum	Robert Armstrong-Jones, *Med. Supt.* F. H. Guppy, *Asst. Med. Officer.*

Hospital.	*Name and Post.*
London County Asylum, Colney Hatch	H. C. Waldo, *Asst. Med. Officer.*
St. Luke's Hospital for Lunatics.	R. W. Gilmour, *Asst. Med. Officer.*
West Ham Borough Asylum, Goodmayes.	J. C. Shaw, *Asst. Med. Officer.*
East End Mothers' Lying-in Home.	W. J. Gow, *Hon. Con. Obst. Physician.* C. Mansell Moullin, *Hon. Con. Surgeon.* W. T. H. Spicer, *Hon. Con. Ophth. Surg.*
General Lying-in Hospital.	Sir F. H. Champneys, Bart., *Con. Phys.*
Hosp. for Epilepsy, Maida Vale.	G. Ogilvie, L. G. Guthrie — *Phys.*
National Hospital for Paralysed and Epileptic.	J. A. Ormerod, H. H. Tooth — *Phys.* W. A. Turner, F. E. Batten — *Phys. to O.-pts.* C. M. H. Howell, *Asst. Physician.* A. E. Cumberbatch, *Con. Aural Surg.* S. Scott, *Ear and Throat Surgeon.*
West End Hospital for Diseases of the Nervous System.	T. O. Wood, *Con. Physician.* H. Campbell, *Phys.* G. D. Robinson, *Gyn.* H. W. Dodd, *Ophth. Surgeon.* D. Grant, *Throat and Ear Surgeon.* Laming Evans, *Surgeon for Orthopædic Cases.* R. Pollard, *Anæsth.*
Western Ophthalmic Hospital.	Sir W. J. Collins, *Con. Surgeon.* L. G. Guthrie, *Phys.* G. K. Campbell, R. D. Batten — *Surgs.* J. C. Marshall, *Assist. Surgeon.*

Hospital.	*Name and Post.*
London Radium Institute.	A. E. H. Pinch, *R.M.S. and General Director.*
Gordon Hospital for Rectal Diseases.	C. J. Ogle, W. E. Miles — *Hon. Surgs.*
St. Mark's Hospital for Cancer, etc., of Rectum.	F. S. Edwards, *Surg.* C. G. Watson, *Asst. Surg.* R. W. Lloyd, *Senior Anæsthetist.*
British Skin Hospital	C. F. Marshall, *Surg.*
London Skin Hosp.	W. D. Butcher, *Surg. to X-ray Dept.*
St. John's Hospital for Diseases of the Skin.	W. Hampson, *Med. Officer in charge.*
St. Paul's Hospital for Skin and Genito-Urinary Diseases.	G. French, *Casualty Surgeon.*
Royal Surgical Aid Society.	E. Laming Evans, *Surgeon.*
City of London Truss Society.	G. E. Gask, *Con. Surg.* W. G. Ball, *Surg.* J. E. H. Roberts, H. Blakeway — *Asst. Surgs*
Florence Nightingale Hospital for Invalid Gentlewomen	H. M. Fletcher, *Con. Physician.*
Medical Aid Society for Gentlewomen in Reduced Circumstances.	A. E. Cumberbatch, E. Waggett — *Con. Surgs.*
New Hospital for Women	J. Berry, *Con. Surg.*
Samaritan Free Hospital for Women.	A. H. G. Doran, *Con. Surg.* C. H. Roberts, A. C. Butler Smythe — *Surgs. to In-Pts.* J. A. Willett, *Surg. to Out-Patients.*
Grosvenor Hospital for Women and Children.	A. C. Butler Smythe, C. A. Morris — *Surgs.*
Home and Infirmary for Sick Children, Sydenham.	G. C. Parnell, *Con. Surgeon.*

PROVINCIAL.

Hospital.	*Name and Post.*
BEDFORDSHIRE.	
Bedford Co. Hosp.	E. C. Sharpin, R. H. Kinsey — *Con. Surgs.* R. Coombs, W. G. Nash, H. Skelding — *Phys.*
Bedford Provident Dispensary.	R. H. Coombs, H. Skelding — *Med.* V. S. A. Bell, C. H. Perram — *Offs.*
BERKSHIRE.	
Reading: Royal Berkshire Hospital.	W. T. Freeman, G. F. Murrell — *Asst. Phys.* G. L. Ranking, *Med. Registrar.* J. L. Joyce, *Surg. Reg.*

Hospital.	*Name and Post.*
Reading Provident Dispensary.	W. T. Freeman, G. F. Murrell, G. L. Ranking, J. L. Joyce — *Surgs.*
Windsor: King Ed. VII's Hospital.	W. Fairbank, *Con. Surgeon.* W. F. Lloyd, W. H. W. Attlee — *Hon. Phys.* F. J. Hathaway, *Hon. Surgeon.* E. Burstal, *Hon. Asst. Surgeon.*
Abingdon Cot. Hosp.	P. Martin, *Med. Off.*
Maidenhead Cottage Hospital.	A. J. Edge, E. M. Baylis, A. Thompson — *Hon. Med. Offs.*

Hospital.	*Name and Post.*
Newbury Children's Cottage Hospital.	Howard Marsh, *Con. Surgeon.* T. Martin, *Med. Off.*
Newbury District Hospital.	A. Thompson, *M.O.* E. G. B. Adams, *Anæs.*
Wantage Cottage Hospital.	J. O. Sankey, *Con. Surgeon.*
Newbury Dispensary	A. Thompson, *M.O.*
Wokingham: Pinewood Sanatorium.	A. T. Davies, *Examining Physician.*
BUCKINGHAMSHIRE.	
Aylesbury: Royal Bucks. Hospital.	J. Berry, *Con. Surg.* J. C. Baker, *Surg.*
Marlow Cottage Hospital.	Selbourne Bailey, *M. Officer.*

PROVINCIAL—*continued.*

Hospital.	*Name and Post.*
CAMBRIDGESHIRE.	
Cambridge: Addenbrooke's Hospital.	P. W. Latham, Sir D. Macalister } *Con. Phys.*; G. Wallis, *Con. Surg.*; L. Humphry, *Phys.*; E. Lloyd-Jones, *Asst. Physician.*; Howard Marsh, *Surg.*; W. Malden } *Hon. Clin. Path.*; G. S. Haynes, *Hon. Anæsthetist.*
Newmarket: Rous Memorial Hosp.	C. F. Gray, J. H. Maund } *Surgs.*
CHESHIRE.	
Chester General Infirmary.	J. Elliott, *Hon. Phys.*; J. J. Blagden, *Hon. Assistant Surgeon.*
Macclesfield General Infirmary.	C. Averill, John B. Hughes } *Hon. Surgs.*
Altrincham Prov. Disp. and Hosp.	A. T. Blease, *Disp. Medical Officer.*
Crewe Memorial Cottage Hospital.	J. R. Atkinson, *Med. Off.*
Liscard: Victoria Central Hospital.	R. J. Hamilton, *Ophthal. Surg.*
Chester and District Skin Dispensary.	J. J. Blagden, *Phys.*
CORNWALL.	
Fowey Cottage Hospital.	S. Morse, E. E. S. Davis } *Med. Offs.*
Liskeard: Passmore Edwards Cottage Hospital	W. Nettle, *Med. Off.*
Redruth: West Cornwall Miners' and Women's Hospital	L. Phillips, *Med. Off.*
Helston Public Dispensary	M. R. Taylor, *Surg.*
Launceston Infirmary	H. H. Serpell, *Med. Officer.*
Penzance: West Cornwall Infirmary and Dispensary	J. B. Montgomery, *Con. Physician.*
Truro: Royal Cornwall Infirmary	H. Clarke, M. A. Cholmeley } *Med. Offs.*
CUMBERLAND.	
Millom and Bootle Joint Isolation Hospital.	P. B. Stoney, *Med. Supt.*
Carlisle: Cumberland Infirmary.	N. Maclaren, *Surg.*
Whitehaven and West Cumberland Infirmary.	W. I'Anson, *Visiting Surgeon.*
DERBYSHIRE.	
Ashbourne: Victoria Memorial Cottage Hospital.	G. V. Bull, A. Boswell } *Med. Offs.*
Buxton: Derbyshire Hospital and Buxton Bath Charity.	G. H. Thompson, *Con. Physician & Surg.*
Ilkeston Cottage Hospital.	W. H. Roache, *M.O.*
Derby: Derbyshire Royal Infirmary.	J. L. Wright, *Con. Surg.*

Hospital.	*Name and Post.*
DEVONSHIRE.	
Plymouth: S. Devon and E. Cornwall Hospital.	E. L. Fox, *Phys.*; W. L. Woollcombe, G. F. Aldous } *Surgs.*; H. G. Pinker, *Asst. Surg.*; C. H. Whiteford, E. G. Smith } *Anæs.*; W. L. Pethybridge, *Pathologist.*
Plymouth Public Dispensary.	C. A. Hingston, *Con. Phys.*; J. H. S. May, *Surg.*; C. R. Crowther, *Med. Off., Prov. Dept.*
Plymouth Royal Eye Infirmary, Mutley.	E. L. Fox, *Hon. Phys.*; J. E. Square, *Surg.*; W. L. Pethybridge, *Anæsthetist.*
Plymouth: Devon and Cornwall Ear and Throat Hospital.	C. A. Hingston, *Con. Physician.*; E. G. Smith, *Surg.*; C. H. Ashford, *Dental Surgeon.*
Barnstaple and N. Devon Dispensary.	W. Cooper, *Con. Med. Off.*; A. W. Lemarchand, A. J. Kendrew } *Med. Offs.*
Exeter: Royal Devon and Exeter Hosp.	J. D. Harris, A. C. Roper } *Surgs.*
Ashburton and Buckfastleigh Cottage Hospital.	G. E. A. Evans, *M.O.*
Bideford and District Hospital.	E. J. Toye, *Surgeon.*
Budleigh Salterton Cottage Hospital.	T. G. C Evans, *Med. Off.*
Dartmouth Cottage Hospital.	J. H. Harris, *Med. Officer.*
Dawlish Cottage Hospital.	M. Cutcliffe, *Med. Officer.*
Exmouth Cottage Hospital.	A. C. Roper, *Hon. Con. Surg.*; R. Martyn, *Hon. Med. Officer.*
Ilfracombe: Tyrrell Cottage Hospital.	C. W. E. Toller, *Surgeon.*
Kingsbridge and District Cottage Hospital.	E. L. Fox, *Hon. Con. Physician.*
Newton Abbot Hosp. and Dispensary.	J. Scrase, A. W. Ll. Jones } *Med. Offs.*
Paignton Cottage Hospital and Provident Dispensary.	B. J. Collyer, *Med. Officer.*
Sidmouth: Victoria Cottage Hospital.	A. C. Roper, *Hon. Con. Surg.*; B. G. Pullin, *Med. Off.*
Tavistock Cottage Hospital and Disp.	G. F. Aldous, *Con. Surg.*
Torquay: Western Hosp. for Incipient Consumption.	W. Odell, *Con. Phys.*
Torquay: Torbay Hosp. Prov. Disp. and Eye Infirmary.	F. T. Thistle, *Phys.*
Torrington Cottage Hospital.	E. Morse, H. Compton-Parsons } *Med. Offs.*

Hospital.	*Name and Post.*
Barnstaple and N. Devon Infirmary.	W. Cooper, A. W. Lemarchand } *Surgs.*
Exeter Dispensary	A. C. Roper, G. T. Clapp } *Con. Surgs.*; E. A. Brash, *Surg.*; A. L. Candler, *M.O.*
Exeter Lying-in Charity.	J. D. Harris, E. A. Brash } *Con. Surg.*
Exeter: West of England Eye Infirmary.	A. C. Roper, R. Pickard } *Surgs.*
Exmouth Dispensary.	J. T. Langley, *Con. Surg.*; E. L. Sturdee, *M.O.*
DORSETSHIRE.	
Dorchester: Dorset Co. Hospital.	G. G. Morrice, *Phys.*; B. W. N. Gowring, *Surg.*
Shaftesbury: Westminster Memorial Cottage Hospital.	H. U. Gould, *Medical Officer.*
Swanage Cott. Hosp.	G. D. Drury, L. A. Baiss } *Med. Offs.*
Wimborne: Victoria Cottage Hospital.	E. W. Ormerod, *Med. Officer.*
Portland: Royal Portland Dispensary.	G. G. Morrice, *Hon. Con. Phys.*
Weymouth and Dorset Co. Royal Eye Infirmary.	G. G. Morrice, *Con. Physician.*
DURHAM.	
Durham Co. Hosp.	E. Jepson, *Phys.*
Durham Co. and Sunderland Eye Infir.	W. Robinson, *Surg.*
Gateshead: Children's Hospital.	G. H. Norris, *Hon. Phys.*
Stockton and Thornaby Hospital.	Sir T. R. H. Smith, *Hon. Surg.*
Sunderland: Monkwearmouth and Southwick Hosp.	A. H. Davis, *Hon. Con. Surg.*
Sunderland: Royal Infirmary.	W. Robinson, *Surg.*
ESSEX.	
Colchester: Essex Co. Hospital.	S. W. Curl, *Phys.*
Buckhurst Hill Village Hospital.	C. E. Adams, *Hon. Med. Off.*
Chelmsford and Essex Hosp. and Disp.	T. H. Waller, *Med. Officer.*
Hatfield Broad Oak: Eden Cott. Hosp.	W. E. Miles, *Hon. Con. Surg.*; J. A. T. White, C. L. Chalk } *Hon. Med. Offs.*
Tilbury: Passmore Edwards District Cottage Hospital.	C. Firth, *Surg.*
Brentwood: County Asylum.	G. N. O. Slater, E. P. Court } *Asst. Med. Offs.*
GLOUCESTERSHIRE.	
Bristol General Hosp.	G. Parker, *Physician.*; C. A. Morton, *Surg.*; E. W. H. Groves, *Surg.*; E. A. Dowling, *Dent. Surgeon.*

PROVINCIAL—*continued.*

Hospital.	*Name and Post.*
Bristol Royal Hosp. for Sick Children and Women.	C. A. Morton, *Surg.*
Cheltenham General Hospital and Disp.	C. J. Bennett, *Con. Surgeon.* E. J. Tatham, *Hon. Anæsthetist.*
Cirencester Cottage Hospital.	O. H. Fowler, *Hon. Con. Surgeon.* C. P. Hooker, H. Marshall, L. Hughes, H. E. Graham — *Med. Offs.*
Fairford Cott. Hosp.	F. Lewarne, *Hon. Surgeon.* H. E. Bloxsome, *Med. Officer.*
Gloucester Free Hospital for Sick Children.	W. W. Grosvenor, C. V. Knight — *Con. Phys.* C. F. Cuthbert, *Surg.*
Hambrook Village Hospital.	F. W. Crossman, *Hon. Medical Officer.*
Redland, Bristol: Orthopædic Hosp. and Home for Crippled Children.	E. H. E. Stack, *Hon. Surgeon.*
Tewkesbury Hospital	G. Barling, *Con.* T. S. Ellis, *Surgs.*
Bristol Dispensary	G. Parker, *Con. Phys.* H. Finzel, *Med. Off.*
Bristol Eye Disp.	E. H. E. Stack, *Hon. Surg.*
Bristol Royal Infirmary.	H. Waldo, *Cons. Phys.* J. A. Nixon, *Phys.* H. F. Mole, E. H. E. Stack — *Surgs.*
Gloucester Provident Dispensary.	W. W. Grosvenor, *Con. Physician.* O. Clark, E. S. Ellis — *Med. Officers.*
Gloucester Royal Infirmary and Eye Institution.	J. P. Wilton, T. S. Ellis — *Con. Surgs.* O. W. Clark, W. W. Grosvenor — *Phys.* C. V. Knight, *Assist. Surgeon.*
Minchinhampton Dispensary.	B. E. Church, *Med. Officer.*
Winterbourne Gen. Dispensary.	F. W. Crossman, *Surgeon.*

HAMPSHIRE.

Bournemouth: Royal Victoria and West Hants. Hospital.	W. A. Smith, P. W. G. Nunn — *Hon. Con. Surgs.* F. Belben, *Surgeon.* F. Heasman — *Assist.* E. H. White — *Phys.* M. B. Scott, *Assist. Surgeon.* F. Heasman, *Anæs.* F. Belben, E. H. White — *Med. and Surg. Regs.* C. G. H. Morse, *Hon. Registrar.*
Portsmouth: Royal Portsmouth, Portsea and Gosport Hospital.	H. Rundle, *Con. Surgeon.* C. A. S. Ridout, H. Burrows — *Asst. Surgs.* H. Lamplough, *Hon Assistant Surgeon.*
Portsmouth and S. Hants. Eye & Ear Infirmary.	C. A. S. Ridout, A. M. Barford — *Surgs. Nose, Thrt. and Ear Dept.*
Aldershot Hospital	F. Stroyan, *Med. Off.*
Alton: Inwood Cottage Hospital.	W. Kay, *Med. Officer.*
Cowes Cottage Hospital.	T. A. Mayo, H. E. Hoffmeister — *Med. Offs.*
Fleet Cottage Hosp.	Sir T. Lauder Brunton, *Hon. Con. Phys.* J. G. Slade, H. Maturin, W. Balgarnie — *Med.* P. E. Adams — *Offs.*
Ryde: Royal Isle of Wight Co. Hosp.	H. J. May, *Ophthalmic Surgeon.*
Shanklin: Arthur Webster Memorial Hospital.	J. L. Jeaffreson, *Med. Officer.*
Southampton Free Eye Hospital.	J. F. Bullar, *Con. Surgeon.*
Winchester: Royal Hants. County Hospital.	H. J. Godwin, *Surg.* J. F. Bullar, *Hon. Ophth. Surgeon.*
Bournemouth Home for Invalid Ladies.	W. A. Smith, *Hon. Con. Surgeon.*
Ryde Dispensary	K. W. I. Mackenzie, *Medical Officer.*
Southampton Dispensary.	A. J. Bathe, C. P. le Quesne — *Acting Medical Officers.*
West Cowes Provident Dispensary.	T. A. Mayo, *Surg.*
Winchester Prov. Dispensary.	G. W. Wickham, H. J. Godwin — *Med. Offs.*

HEREFORDSHIRE.

Bromyard Cottage Hospital.	A. A. Beck, *Medical Officer.*
Leominster Cottage Hospital.	C. A. Robinson, *Med. Officer.*
Ross Dispensary and Cottage Hospital.	L. Green, *Hon. Med. Officer.*

HERTFORDSHIRE.

Hertford Co. Hosp.	J. T. Tasker Evans, *Hon. Con. Med. Off.* C. E. Shelley, *Hon. Med. Officer.*
Barnet: Victoria Cottage Hospital.	W. J. Harnett, W. Roughton — *Hon. Con. Surgs.* F. C. Evill, J. W. Nunn — *Med. Offs.*
Bushey Heath Cottage Hospital.	H. Morley Fletcher, *Hon. Con. Phys.* L. P. Shadbolt, *Hon. Medical Officer.*
Cheshunt Cottage Hospital.	F. H. Best, *Medical Officer.*
Hemel Hempstead: West Herts. Hosp.	H. D. Rolleston, *Con. Physician.* S. A. Bontor, *Hon. Surgeon.*
Hertford and Ware Joint Isolatn. Hosp.	C. E. Shelley, *Hon. Con. Surgeon.* R. A. Dunn, *Med. Superintendent.*
Hitchen: North Herts. and S. Beds. Hospital.	C. G. Grellet, *Hon. Con. Med. Officer.* J. H. Gilbertson, C. P. Charles — *Hon. Med. Offs.*
Royston Cott. Hosp.	C. F. Wightman, *Surg.*
Royston Joint Isolation Hospital.	C. F. Wightman, *Med. Supt.*

HUNTINGDONSHIRE.

Huntingdon County Hospital.	F. E. Whitehead, *Med. Officer.*

KENT.

Ashford Cott. Hosp.	E. G. Colville, *Med. Officer.*
Bromley Cott. Hosp.	H. Tooth, *Hon. Con. Physician.* D'Arcy Power, *Hon. Con. Surg.* H. J. Ilott, *Med. Off.*
Canterbury: Kent & Canterbury Hosp.	E. D. W. Reid, *Surg.*
Chislehurst, Orpington and Cray Valley Hospital.	P. S. Abraham, *Con. Surg. Dis. of Skin.* J. M. Bennion, *Med. Officer.*
Dover Borough Fever Hospital.	E. Elliott, *Med. Supt.*
Dover: Royal Victoria Hospital.	I. D. C. Howden, *Hon. Med. Officer.*
Eltham and Mottingham Cott. Hosp.	H. W. Dodd — *Hon. Con. Surg.* F. de H. Hall, H. Walsham — *Hon. Con. Phys.* H. S. Smith, *Med. Off.*
Folkestone: Royal Victoria Hospital.	E. J. G. Calverley, *Hon. Asst. Med. Off.*
Gravesend Hospital	C. Firth, C. E. Robbs — *Surgs.*
Herne Bay: Queen Victoria Memorial Cottage Hospital.	C. K. Bowes, T. A. Bowes — *Med. Offs.*
Holmesdale Cottage Hospital.	J. F. Alexander, F. M. Burnett, J. Sterry — *Hon. Med. Offs.*
Maidstone: West Kent Gen. Hosp.	A. H. B. Hallowes, *Con. Surgeon.* W. Shaw, *Physician.*
Ramsgate: General Hospital.	F. Woods, *Hon. Phys.* T. G. Styan, *Vis. Surg.*
Sevenoaks: Children's Hospital for Hip Disease.	D'Arcy Power, *Con. Surg.* F. M. Burnett, *Med. Officer.*
Tonbridge: Queen Vict. Cott. Hosp.	H. A. Andrews, E. S. Cardell, H. J. M. Watts — *Med. Offs.*
Tunbridge Wells General Hospital.	E. Lammiman, *Con. Surgeon.* G. L. Pardington, *Physician.* W. T. Storrs, *Asst. Surgeon.*
Barming Heath: Co. Asylum.	W. E. Collier, *Asst. Medical Officer.*
Deal and Walmer Victoria Hospital Prov. Disp. and Nursing Institute.	E. Ll. Davey, *Med. Officer.*

PROVINCIAL—*continued.*

Hospital.	*Name and Post.*
Ramsgate and St. Lawrence Disp.	T. G. Styan, R. T. Bowden — *Hon. Con. Surgs.*
Tunbridge Wells Homœo. Hospital and Disp.	N. Grace, *Hon. Surg.*

LANCASHIRE.

Hospital.	*Name and Post.*
Liverpool Royal Southern Hosp.	R. Hamilton, *Hon. Con. Ophth. Surg.*; G. P. Newbolt, *Hon. Surgeon.*; F. M. Gardner-Medwin, *Anæsthetist.*; G. C. E. Simpson, *Surgeon, Tutor, and Registrar.*
Liverpool Royal Infirmary.	T. R. Glynn, *Con. Physician.*; R. A. Bickersteth, *Surgeon.*; T. C. Littler, Jones, F. A. G. Jeans — *Asst. Surgs.*
Alverston and Dist. Cottage Hospital.	A. J. Dearden, *Med. Officer.*
Barrow-in-Furness: N. Lonsdale Hosp.	J. T. Williams, *Surg.*
Bootle Boro' Hosp.	T. R. Glynn, *Con. Physician.*
Liverpool: David Lewis Northern Hospital.	G. C. E. Simpson, *Hon. Surgeon.*
Liverpool Hosp. for Consumption and Diseases of Chest.	T. R. Glynn, *Med. Officer and Path.*
Liverpool Maternity Hospital.	G. Whittle, *Hon. Con. Medical Officer.*
Liverpool: St. George's Hospital for Dis. of Skin.	T. R. Glynn, *Con. Medical Officer.*
Liverpool: Samaritan Free Hospital for Women.	G. P. Newbolt, *Hon. Con. Surgeon.*
Lytham Cottage Hospital.	J. C. Fisher, *Hon. Med. Supt. & Sec.*
Manchester: North. Hosp. for Women and Children.	T. C. Railton, *Con. Physician.*; R. W. Walsh, *Asst. Medical Officer.*
Salford Royal Hosp. and Dispensary.	E. T. Milner, *Con. Surgeon.*
Blackburn and E. Lancashire Infirm.	J. Ramsay, *Hon. Asst. Physician.*
Lancaster: County Asylum.	R. P. Sephton, *Asst. Medical Officer.*
Lancaster Royal Infirmary.	G. R. Parker, C. W. Dean — *Hon. Med. Offs.*
Liverpool Dispensaries	J. Edwards, *Hon. Con. Medical Officer.*
Liverpool Eye and Ear Infirmary.	H. B. H. Shears, *Hon. Con. Surgeon.*; H. Holmes, *Hon. Asst. Surgeon.*
Liverpool Infirmary for Children.	N. P. Marsh, *Phys.*; G. C. E. Simpson, *Asst. Surgeon.*
Oldham: Royal Infirmary.	H. T. Doble, *Asst. Surgeon.*
Ormskirk Dispensary.	A. A. Bradburne, *Ophth. Surgeon.*
Southport Infirmary	R. J. Hamilton, *Hon. Oculist.*
Warrington Infirmary and Disp.	E. J. Fox, *Hon. Surg.*
Whittingham: County Asylum.	J. J. G. Blandford, *Asst. Med. Officer.*
Wigan: Royal Albert Edward Infirmary and Dispensary.	H. Holmes, *Ophth. and Aural Surg.*
Woolton Provident Dispensary.	C. S. Pethick, *Surg.*

LEICESTERSHIRE.

Hospital.	*Name and Post.*
Loughborough and Dist. Gen. Hosp.	P. Phelps, *Surgeon.*
Leicester Infirm. and Children's Hosp.	R. Sevestre, *Phys.*; J. S. Sloane, *Surg.*; W. I. Cumberlidge, *Surgeon to Out-Patients.*
Leicester and Leicestershire Provident Dispensary.	L. K. Harrison, W. P. Peake, T. C. Clare, D. G. Pearson, R. Crawford — *Med. Offs.*
Leicestershire and Rutland Asylum.	A. T. W. Forrester, *Asst. Med. Officer.*
Market Harborough Dispensary.	R. Ballard, *Surgeon.*

LINCOLNSHIRE.

Hospital.	*Name and Post.*
Lincoln Gen. Disp.	C. Harrison, *Con. Physician.*; C. Brook, E. M. Sympson — *Con. Surgs.*; J. S. Chater, *Med. Off.*; T. H. White, *Dental Surgeon.*
Grantham Hospital	C. H. D. Robbs, *Hon. Medical Officer.*
Lincoln County Hospital.	C. Harrison, *Con. Physician.*; C. Brook, *Con. Surg.*; W. H. B. Brook, D. J. G. Watkins — *Surgs.*
Grantham Provident Dispensary.	C. H. Robbs, K. Pretty — *Med. Offs.*
Horncastle Public Dispensary.	J. W. Jessop, *Med. Officer.*
Louth Dispensary and Hospital.	A. Gresswell, *Med. Officer.*
Willingham-by-Stow: Reynard Cottage Hospital.	B. H. C. Lea Wilson, *Medical Officer.*

MIDDLESEX.

Hospital.	*Name and Post.*
Potter's Bar Cottage Hospital.	L. G. Guthrie, C. Drage — *Con. Phys.*; H. V. Jackson, W. C. Douglass, A. B. Fearnley — *Med. Offs.*
South Mimms: Clare Hall Smallpox Hospital.	A. C. Ta'Bois, *Med. Superintendent.*
Stanmore Cottage Hospital.	Sir Lauder Brunton, *Hon. Con. Phys.*
Teddington Cottage Hospital.	I. Coalbank, H. Davidson — *Med. Offs.*
Isleworth: Brentford Union Infirmary.	J. B. Cook, *Medical Superintendent.*
Napsbury: Middlesex County Asylum.	L. W. Rolleston, *Med. Supt.*; F. B. Roberts, A. O'Neill — *Asst. Med. Offs.*

NORFOLK.

Hospital.	*Name and Post.*
Norwich: Norfolk & Norwich Hospital.	H. S. Robinson, *Con. Surgeon.*; D. D. Day, *Surgeon.*; E. W. Everett, J. Burfield — *Asst. Surgs.*
Norwich Free and Prov. Dispensary.	H. S. Robinson, *Hon. Con. Med. Off.*; C. J. Muriel, E. W. Everett — *Med. Offs.*
Norwich: Jenny Lind. Inf. for Children.	H. S. Robinson, G. R. Master, C. J. Muriel, H. C. Nance — *Con. Surgs.*; H. Whitwell, *Surg.*; J. Burfield, B. B. Riviere — *Asst. Surgs.*
Norwich: Norfolk & Norwich Eye Infirmary.	H. S. Robinson, *Con. Surgeon.*; C. J. Muriel, *Surg.*
Gt. Yarmouth Hosp.	H. R. Mayo, *Hon. Med. Off.*; D. C. Henry, *Hon. Asst. M.O. & Hon. M.O. X-ray Dept.*
King's Lynn: West Norfolk and Lynn Hospital.	C. T. M. Plowright, *Con. Surgeon.*; J. R. Kingdon, *Phys.*

NORTHAMPTONSHIRE.

Hospital.	*Name and Post.*
Brackley Cottage Hospital.	G. N. Stathers, *Med. Officer.*
Kettering and Dist. General Hospital.	J. L. Price, *Con. Med. Officer.*; L. W. Dryland, J. P. Roughton — *Med. Offs.*
Wellingborough Cottage Hospital.	W. C. Pickering, *Hon. Med. Off.*
Northampton: Royal Victoria Dispensary.	C. J. Evans, *Surgeon.*
Peterborough Infirmary and Disp.	L. B. Cane, *Assist. Physician.*

NORTHUMBERLAND.

Hospital.	*Name and Post.*
Newcastle-on-Tyne Hospital for Sick Children.	F. C. Pybus, *Surg.*
Newcastle-on-Tyne Maternity Hosp.	R. A. Nesham, *Obst. Physician.*
Morpeth Dispensary.	A. Brumell, *Surg.*
Newcastle-on-Tyne: Royal Victoria Infirmary.	W. G. Richardson, *Assistant Surgeon.*; F. C. Pybus, *Surg. Registrar.*

NOTTINGHAMSHIRE.

Hospital.	*Name and Post.*
Nottingham General Hospital.	W. T. Rowe, *Hon. Physician.*; S. E. Gill, *Hon. Asst. Phys.*; A. R. Anderson, R. G. Hogarth — *Hon. Surgs.*; W. M. Willis; A. R. Tweedie, *Hon. Assistant Surgeon.*

PROVINCIAL—*continued.*

Hospital.	*Name and Post.*
Nottingham General Dispensary.	T. D. Pryce, *Hon. Con. Surgeon.* W. T. Williamson, *Resident Surgeon.* W. H. S. Hodge, *Asst. Res. Surgeon.*
Nottingham General Disp. (branch).	E. W. Whiting, *Asst. Res. Surgeon.*
Nottingham Children's Hospital.	R. G. Hogarth, *Surg.* G. A. Coulby, *Assist. Physician.*
Nottingham: Midland Institution for the Blind.	T. D. Pryce, *Medical Attendant.*

OXFORDSHIRE.

Oxford Eye Hosp.	Surg.-Gen. Sir A. F. Bradshaw, K.C.B., *Hon. Secretary.*
Oxford: Radcliffe Infirmary and Co. Hospital.	E. B. Gray, *Con. Phys.* A. Winkfield, *Hon. Surgeon.* R. H. Sankey, *Radiographer.*
Oxford: St. John's Home and Hosp.	J. O. Sankey, *Med. Officer.*
Banbury: Horton Infirmary.	E. Franey, *Con. Med. Officer.*

SHROPSHIRE.

Shrewsbury: County Hospital.	H. W. Gardner, R. H. Urwick — *Phys.* A. Jackson, L. J. Godson — *Surgs.* E. Burd, E. L. Burd — *Phys. Extraord.* W. Edmond, *Radiog.*
Broseley: Lady Forester Hospital.	H. W. Gardner, *Con. Physician.*
Ludlow Cottage Hospital.	W. H. Farmer, *Hon. Surgeon.*
Much Wenlock: Lady Forester Memorial Hospital.	H. W. Gardner, *Con. Physician.*
Oswestry and Ellesmere Cottage Hospital.	J. P. Cartwright, *Med. Officer.*
Whitchurch Cottage Hospital and Dispensary.	E. A. Perram, *M.O.*
Baschurch: Shropshire Convalescent & Surgical Home.	H. W. Gardner, R. Stawell, R. H. Urwick — *Hon. Med. Offs.*
Bridgnorth and S. Shropshire Infirmary.	J. C. Padwick, *Surg.*
Ironbridge Dispensary.	F. H. Davis, *Surg.*
Ludlow Dispensary .	W. H. Farmer, *Surg.*

SOMERSETSHIRE.

Bath: Royal Mineral Water Hospital.	R. Waterhouse, *Phys.* G. H. H. Almond, *Hon. Pathologist.*
Bath Royal United Hospital.	F. K. Green, *Con. Surg.* E. J. Cave, *Phys.* R. Waterhouse, *Asst. Phys., Path. and Curator of Museum.* H. G. Terry, F. Fraser — *Surgs.*
Frome: Victoria Hospital.	P. T. Jones, *Hon. Med. Off.*
Taunton and Somerset Hospital.	R. L. Meade-King, *Phys.*
Weston-super-Mare Hospital and Dispensary.	C. P. Crouch, *Hon. Surg.*
Bath: Eastern Dispensary.	O. A. G. Collins, *Hon. Med. Off.*
Wivelescombe Dispensary.	W. H. Randolph, C. Randolph — *Surgs.*
Bath Maternity Charity.	G. H. H. Almond, *Surg.*

STAFFORDSHIRE.

Wolverhampton and Staffs. Gen. Hosp.	W. H. T. Winter, *Con. Surg.* W. F. Cholmeley, *Surg. & Gynæcol.* H. H. C. Dent — *Asst. Surgs.* C. A. Stidston — *Asst. Surgs.*
Stoke-on-Trent: N. Staffsh. Infirmary Hartshill.	S. K. Alcock, H. Nicholls — *Phys.* G. H. Sowry, *Asst. Phys.* E. E. Young, *Asst. Surg.* A. H. John, *Elect. Med. Off.*
Burslem: Haywood Hospital.	S. K. Alcock, *Hon. Med. Off.*
Hammerwich and District Cottage Hospital.	W. H. Horton, *M.O.*
Leek Memorial Cottage Hospital.	E. Brunt, *Med. Off.*
Longton Cottage Hospital.	E. E. Young, *Hon. Med. Off.*
Walsall and District Hospital.	J. G. Cooke, *Surg.*
Burton-on-Trent Infirmary.	W. G. Lowe, *Vis. Surgeon.*
Stafford: Staffsh. Gen. Infirmary.	L. Gray, *Phys.* F. H. Marson, *Surg.*
County Asylum, Cheddleton, Leek.	C. S. Lee, *Asst. Med. Officer.*

SUFFOLK.

Ipswich: East Suff. and Ipswich Hospital.	J. Gutch, *Med. Off.* C. K. Moseley, *Asst. Med. Off.*
Beccles Hospital.	W. M. Crowfoot, *Hon. Con. Surg.* G. R. Fox, H. Wood-Hill — *Hon. M.O.*
Bury St. Edmunds: West Suffolk Gen. Hosp.	G. Master, *Med. Off.*
Gorleston Cottage Hospital.	P. G. Gilmour, *Hon. Med. Off.*
Lowestoft Hospital	R. T. Worthington, *Asst. Surg.*
Sudbury: St. Leonard's Hospital.	P. W. Latham, *Hon. Consulting Phys.*

SURREY.

Guildford: Royal Surrey Co. Hosp.	A. M. Mitchell, F. K. Weaver — *Med. Offs.* H. F. Parker, H. B. Butler — *Asst. Med Offs.*
Richmond: Royal Hospital.	H. F. Chapman, S. S. Burn, J. Williamson — *Med. Offs.* C. S. Blair, *Ophth. Surgeon.*
Richmond Disp.	S. S. Burn, H. F. Chapman — *Med. Offs.* C. Blair, *Hon. Opthh. Surgeon.* H. B. Boulter, *Visit. Med. Off.*
Carshalton and District Hospital.	W. Gripper, *Hon. Surg.*
Cranleigh Village Hospital.	J. K. Willis, *Surg.*
Dorking Cottage Hospital.	R. S. Batson, W. L. Batson — *Hon. Med.* H. Blakeney, S. Cornish — *Offs.*
Croydon Prov. Med. Dispensary.	E. Morris, W. G. Paget — *Med. Offs.*
East & West Molesey & Hampton Court Cottage Hospital.	T. Compton, *Med. Off.*
Egham Cott. Hosp. .	H. E. Giffard, *Med. Off.*
Epsom and Ewell Cottage Hospital.	E. N. Reichardt, C. Ormerod, J. Ferguson — *Med. Offs.*
Farnham: Trimmer's Cottage Hospital.	J. Hussey, S. G. Sloman, C. E. Tanner — *Med. Offs.*
Haslemere & District Cottage Hospital.	A. Lyndon, G. Smith — *Med. Offs.*
Reigate and Redhill Hospital.	C. S. Palmer, *Con. Medical Officer.* E. C. Drake, *Medical Elect.*
Sutton Hospital .	W. S. Danks, *Med. Off.*
Woking: Vict. Cott. Hospital.	F. E. A. Colby, *Hon. Med. Off.*
Co. Asyl., Netherne, near Merstham.	F. C. Gayton, *Med. Superintendent.*
Egham Dispensary .	H. E. Giffard, *Med. Off.*
Godalming: Meath House of Comfort for Female Epileptics.	W. H. Jessop, *Hon. Con. Oculist.*

SUSSEX.

Brighton: Royal Sussex Co. Hosp.	W. A. Hollis, *Con. Physician.* C. F. Bailey, *Asst. Phys. & M.O. in charge of Elec. and X-ray Dept.* W. Turner, T. J. Verrall — *Con. Surgs.* R. F. Jowers, F. J. Paley, A. H. Buck — *Surgs.* M. Rigby, *Anæst.* T. S. Worboys, *Asst. Dental Surgeon.*
Hastings: E. Sussex Hospital.	T. H. Wadd, *Con. Surgeon.* A. S. Wilson, A. W. Brodribb — *Phys.* C. Christopherson, *Asst. Physician.* L. E. Jowers, *Asst. Surgeon.*
Brighton, Hove and Sussex Throat and Ear Hospital.	A. H. Buck, *Surgeon.*
Brighton: Royal Alexandra Hosp. for Sick Children.	W. C. Chaffey, *Con. Physician.*
E. Grinstead: Queen Vict. Cott. Hosp.	F. C. Poynder, R. A. Fegan — *Med. Offs.*

PROVINCIAL—*continued.*

Hospital.	*Name and Post.*
Haywards Heath: Eliot Mem. Cott. Hospital.	Evan Alban, *Med. Off.*
Horsham Cott. Hosp.	E. I. Bostock, M. H. H. Vernon, F. W. E. Kenneir — *Med. Offs.*
Worthing Hospital	H. L. Harrison, H. F. Hyde — *Med. Offs.*
Brighton, Hove and Preston Disp.	H. Langton, *Hon. Con. Surgeon.*
Brighton and Hove Lying-in Institute.	D. W. Giffard, *Con. Surgeon.*
Brighton, Hove and Preston Provident Dispensary.	W. A. Hollis, *Hon. Con. Physician.*; H. Langton. *Hon. Con. Surgeon.*; A. Upton, *District Med. Off.*
Chichester: West Sussex, East Hants. & Chichester General Infirmary & Disp.	F. V. Paxton, *Con. Physician.*; G. C. Garratt, *Phys.*; F. Skaife, *Surgeon.*; A. M. Barford, *Asst. Surg. & Surg. Thrt., Nose & Ear Dept.*
Eastbourne Provident Medical Assoc.	A. C. Gurney, *Med. Off.*
East Grinstead Gen. Dispensary.	F. C. Poynder, *Med. Officer.*
Lewes Disp. & Infirm. & Victoria Hosp.	R. F. Jowers, *Con. Surgeon.*; W. A. Dow, *Surgeon.*; W. E. Roberts, *Med. Officer.*

WARWICKSHIRE.

Hospital.	*Name and Post.*
Birmingham General Hospital.	G. Barling, G. Heaton, A. Lucas — *Surgs.*; E. M. Woodman, *Asst. Surgeon.*; R. H. Rollinson-Whitaker, *Anæs.*
Leamington: Warneford, Leamington, and S. Warwicksh. General Hospital.	O. F. Wyer, F. H. Haynes — *Hon. Con. Phys.*; T. E. C. Cole, *Hon. Physician.*; B. Rice, *Hon. Surg.*; T. Harrison Butler, *Ophthal. Surgeon.*
Birmingham & Midland Ear & Throat Hospital.	C. B. Dale, *Anæs.*
Birmingham & Midland Eye Hosp.	T. H. Butler, *Hon. Assist. Surgeon.*
Birmingham & Midland Free Hospital for Sick Children.	G. Heaton, *Con. Surg.*; A. W. Nuttall, *Surg.*
Birmingham & Midland Hospital for Women.	C. Martin, J. Hewetson — *Surgs.*
Birmingham Lying-In Charity Maternity Hospital.	J. T. Hewetson, *Surg.*
Birmingham: Queen's Hospital.	A. W. Nuthall, *Cas. Surgeon.*
Birmingham Royal Orthopædic and Spinal Hospital.	W. E. Bennett, *Surg.*
Coventry & Warwickshire Hospital.	W. E. Bennett, *Hon. Med. Off.*; T. H. Butler, *Hon. Ophth. Surgeon.*
Rugby: Hospital of St. Cross.	C. R. Hoskyn, *Hon. Med. Off.*
Stratford-upon-Avon Hospital.	H. Lupton, *Hon. Con. Med. Off.*; E. S. E. Hewer, *Surgeon.*
Birmingham General Dispensary.	G. Heaton, A. Lucus — *Con. Surgs.*; C. Martin, *Con. Gyn.*
Leamington Prov. Dispensary.	F. H. Haynes, B. Rice — *Con. Staff.*
Rugby Provident Dispensary.	C. R. Hoskyn, H. J. Beddow — *Med. Offs.*; F. H. Haynes, *Con. Physician.*
Leamington: Royal Midland Counties Home for Incurables.	F. Thorne, B. Rice — *Surgs.*; T. H. Butler, *Hon. Ophth. Surgeon.*; P. Hicks, *Med. Off.*

WILTSHIRE.

Hospital.	*Name and Post.*
Chippenham Cottage Hospital.	F. K. Green, *Hon. Con. Surgeon.*
Devizes Cott. Hospital.	G. S. A. Waylen, *Surgeon.*
Melksham Cot. Hosp.	C. F. Rumboll, *M.O.*
Salisbury and South Wilts. Prov. Disp.	J. E. Gordon, J. O. March — *Med. Offs.*
Salisbury Gen. Infirmary.	J. E. Gordon, G. G. Morrice — *Con. Phys.*

WORCESTERSHIRE.

Hospital.	*Name and Post.*
Worcester: General Infirmary.	M. Read, *Physician.*; T. Bates (jun.), *Surg.*; M. Bates, *Hon. Anæs. and Pathologist.*
Kidderminster Infirmary and Children's Hospital.	S. Stretton, *Hon. Con. Surgeon.*; E. H. Addenbrooke, *Con. Surgeon.*; J. L. Stretton, O. C. P. Evans, W. H. Moore — *Surgs.*
Redditch: Smallwood Hospital.	J. E. Pierce, *M.O.*
Worcester Disp. and Prov. Med. Institution.	M. Read, *Surgeon.*

YORKSHIRE.

Hospital.	*Name and Post.*
York County Hosp.	G. W. Micklethwait, J. S. Gayner — *Phys.*; G. S. Hughes, *Surg.*; H. E. Bateman, *Elec. Therap. Dept.*
Barnsley: Beckett Hospital and Dispensary.	F. J. Sadler, E. W. Blackburn — *Hon. Surgs.*
Barnsley: Kendray Hospital.	F. J. Sadler, *Phys.*
Barnsley: Smallpox Hospital.	F. J. Sadler, *Phys.*
Bradford Children's Hospital.	W. G. Burnie, H. Meade — *Hon. Con. Med. Offs.*
Bradford City Fever & Infect. Dis. Hosp.	T. Wilmot, *Vis. Phys.*
Denaby Main: Fullerton Hospital.	J. J. Huey, *Med. Off.*
Halifax Eye, Ear and Throat Hospital.	G. G. Oakley, *Hon. Surgeon.*
Harrogate: Royal Bath Hospital.	H. Walker, *Hon. Med. Off.*
Hull: Victoria Hosp. for Sick Children.	W. C. F. Harland, *Hon. Asst. Phys.*
Leeds Hospital for Consumption.	J. E. Eddison, *Hon. Con. Physician.*
Leeds Hospital for Women and Child.	J. E. Eddison, *Con. Physician.*
Mexborough: Montagu Hospital.	J. J. Huey, F. Harvey — *Med. Offs.*
Middlesboro': North Ormsby Hosp.	H. Walker, *Surgeon.*
Rotherham Hospital and Dispensary.	H. E. Knight, *Surg.*
Scarborough Hosp. and Dispensary.	W. C. E. Taylor, *Con. Surgeon.*; L. Giles, H. B. Maingay — *Med. Offs.*; W. B. Griffin, *Asst. Hon. Surgeon.*
Sheffield Free Hosp. for Children.	J. H. Wilks, *Med. Off.*
Sheffield: Jessop Hosp. for Women.	R. Favell, P. E. Barber — *Med. Offs*
Sheffield Royal Hospital.	A. Hall, *Physician.*; A. E. Naish, *Asst. Physician.*
Bradford Royal Infirmary.	T. Wilmot, *Phys.*; H. Meade, *Con. Surg.*; W. Wrangham, *Asst. Physician.*
Dewsbury and District Gen. Infirm.	J. W. Applegate, *Hon. Med. Off.*
Halifax Royal Infirmary.	J. E. Wright, F. Whitaker — *Med. Offs.*
Harrogate Infirmary.	E. S. Steward, *Ophth. and Aural Surgeon.*
Hull and Sculcoates Dispensary.	F. F. Walton, A. F. Perl — *Surgs.*
Hull Royal Infirmary	T. M. Evans, *Con. Surgeon.*; A. G. Francis, *Surg.*; G. B. Nicholson, *Asst. Surgeon.*
Leeds Gen. Infirmary	J. E. Eddison, *Con. Physician.*
Leeds Public Disp.	G. L. Wells, *Surg.*
Middlesborough-on-Tees: North Riding Infirmary.	W. S. Dickie, *Med. Officer.*
Pontefract Gen. Disp. and Infirmary.	A. Hillaby, *Hon. Con. Med. Off.*
Ripon Dispensary & Cottage Hospital.	S. Hey, *Hon. Surg.*
Ripon Union Workhouse.	S. Hey, *Med. Off.*
Scarborough: Royal Northern Sea-Bathing Infirmary.	C. E. Taylor, *Con. Med. Off.*
Sheffield Royal Infirmary.	G. H. Pooley, *Ophth. Surgeon.*; W. D. Mart, V. Favell — *Anæs.*
Willerby: Hull City Asylum.	J. S. Anderson, *Asst. Med. Off.*
York Dispensary	H. E. Bateman, *Con. Surgeon.*; J. P. Wightman, *Hon. Med. Off.*
York: Friends' Retreat.	B. Pierce, *Med. Supt.*

CHANNEL ISLANDS.

Hospital.	*Name and Post.*
Guernsey: Victoria Cottage Hospital.	J. F. Bullar, *Ophth. Surgeon.*
Jersey: Gen. Disp. and Infirmary.	H. Smith, *Hon. Med. Officer.*; C. N. Le Brocq, *Asst. Hon. Med. Off.*

WALES.

Hospital.	*Name and Post.*
BRECONSHIRE.	
Builth Cottage Hospital.	B. Jones, *Med. Off.*
CARMARTHENSHIRE.	
Carmarthen: Carmarthenshire Infirmary.	E. R. Williams, *Med. Officer.*
CARNARVONSHIRE.	
Bangor: Carnarvonshire and Anglesea Infirmary and Dispensary.	E. J. Lloyd, *Hon. Con. Med. Off.*
DENBIGHSHIRE.	
Chirk: Miss Moyra Hill Trevor's Nursery Hospital.	J. D. Lloyd, J. D. S. Lloyd — *Med. Offs.*
Denbigh: Denbighshire Infirmary and General Disp.	F. W. Jackson, *Hon. Med. Off.*
Wrexham Infirmary.	R. Williams, *Hon. Con. Surg.*; R. G. Williams, *Hon. Surg.*
FLINTSHIRE.	
Holywell: Flintshire Disp. and Cottage Hospital.	J. Williams, *Hon. Surg.*
Rhyl: Royal Alexandra Children's Hospital and Convalescent Home.	W. Goodwin, *Hon. Med. Off.*
GLAMORGANSHIRE.	
Bridgend Cot. Hosp.	W. Randall, *M.O.*
Cardiff: King Edward VII's Hosp.	H. G. Cook, C. A. Griffiths — *Asst. Surgs.*; R. R. Thomas, *Oph. Surgeon.*; H. A. Schölberg, *Gyn.*
Pontypridd and Dist. Cottage Hospital.	H. A. Schölberg, *Hon. Pathologist.*; I. Morris, L. Roberts — *Med. Offs.*
Porth Cottage Hospital.	C. A. Griffiths, *Con. Surgeon.*
Bridgend: County Asylum.	W. Brown, *Assist. Med. Off.*
MONMOUTHSHIRE.	
Monmouth Hospital and Dispensary.	T. G. Prosser, P. G. Harvey, K. Armstrong — *Hon. Med. Offs.*
Newport and Monmouthshire Hosp.	H. M. Brewer, R. E. W. Brewer — *Con. Surgs.*
Welshpool Disp.	J. A. Crump, *M.O.*
PEMBROKESHIRE.	
Haverfordwest: Pembrokesh. & Haverfordwest Infirmary.	C. A. Brigstocke, *Surgeon.*

SCOTLAND.

Hospital.	*Name and Post.*
ABERDEENSHIRE.	
Aberdeen Royal Infirmary.	J. W. Milne, G. H. Colt — *Asst. Surgs.*
FORFARSHIRE.	
Montrose Royal Asylum.	J. G. Havelock, *Med. Superintendent.*
RENFREWSHIRE.	
Renfrew Dist. Asyl., Dykebar, Paisley.	R. D. Hotchkis, *Med. Superintendent.*

IRELAND.

Hospital.	*Name and Post.*
ANTRIM.	
Belfast: Royal Victoria Hospital.	T. K. Wheeler, *Con. Surgeon.*
Belfast: Ulster Hosp. for Children and Women.	T. K. Wheeler, *Surg.*
CORK.	
Cork: County & City of Cork Lying-in Hospital.	N. H. Hobart, *Phys.*
Cork: Eye, Ear and Throat Hospital.	N. H. Hobart, *Con. Surgeon.*
Cork: Victoria Hosp. for Women and Children.	N. H. Hobart, *Med. Off.*
Cork: North Charitable Infirmary.	N. H. Hobart, *Surg.*
KERRY.	
Listowel: Union Workhouse and Fever Hospital.	J. T. Dillon, *Med. Off.*

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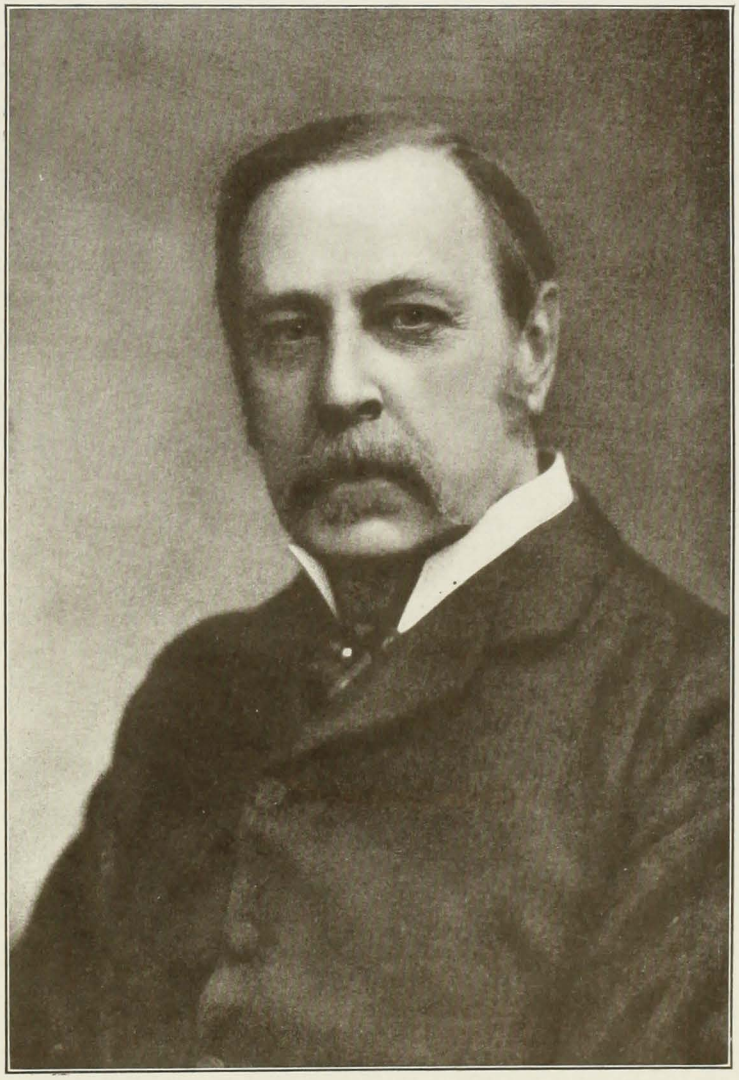

W. Bruce Clarke, M.A., M.B., F.R.C.S.

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him by his numerous friends amongst the Fellows. He remained on the Council till 1913.

In 1883 the popular and promising Mr. James Shuter died suddenly, and Bruce Clarke was elected assistant surgeon in his place, defeating another able young man, the late Mr. Macready.

For a time he was in charge of the Orthopædic Department at St. Bartholomew's, an appointment for which he was admirably fitted. He was a man of mechanical talent, and set up a carpenter's shop in his own house in Harley Street. He caused that residence to be rebuilt, working himself at the decorations and fittings. He was ever ready to give hints to his friends about how to keep their costly professional residences in repair. He was likewise an experienced virtuoso and spent much on *bric-à-brac* and oil paintings. At the time of his death he was engaged in altering and improving a Wiltshire farm which he had bought, loving amateur building. From the first he was beloved by his friends, who increased in number down to his last years. He was a delightful companion, whether for a country walk or for an evening at a club. After his retirement in 1912 he suffered from acute cardiac mischief, from which he recovered, and at his convalescence all his numerous friends sincerely hoped that he might enjoy his retirement for many years. Unfortunately he contracted influenza, followed last month by pneumonia, and he died at his sister's residence at Eastbourne on March 28th, three days after his sixty-fourth birthday. He had married twice, and had one son, who survives him. A memorial service was held in the church of St. Bartholomew-the-Less on April 1st, the day on which he was buried in the churchyard of his native village, North Wootton. Thus passed away one of the worthiest of the many worthy sons of St. Bartholomew's.

ALBAN DORAN.

W. BRUCE CLARKE: AN APPRECIATION.

THE first emotion that came to me when I read of the death of Mr. Bruce Clarke was one almost of anger. Such men should not die; we cannot afford to lose them. It was my good fortune to be surgical dresser to this splendid man. I always regarded him as a type of the complete English gentleman, and it is given to few men to be so loveable as he was. He was without affectation or any meanness of spirit, he hated anything artificial or disingenuous, or indirectness of speech. I remember in the early days of my surgical dressing reading out in the note, "His belly is blown up with wind." He said "What?" and I replied, "Distended with flatulence." "No, no," he said, "what did you say?" "Blown up with wind," said I. "That's right, good English word, isn't it? it is, His belly is blown up with wind." Anything unnecessary he could not abide, and it was always said of him that he went out to private operations with a knife and a few pressure forceps jangling in his pocket and little else. Everyone who dressed for him will remember the way he would peer into the dish of instruments, take out any particularly superfluous ones and send them scuttling over the floor. Great modesty, a pleasing bluntness, and the kindest of hearts characterised him.

He was a fine surgeon, and his life spanned the time from the old surgery to the new. He saw the ward sponge, with which the purulent wounds of each patient were mopped in turn, replaced by tow, a fresh piece being used for each patient, and the mortality of the surgical wards greatly reduced thereby, and he saw the tow give place to the elaborate ritual of scrupulous cleanliness of modern surgery. Not only was he a fine surgeon, but he was an able and, I believe, expert mechanic. He preserved an enthusiasm for the ordinary things of life and saw the wonder of the universe.

The stories told of him are many; I wish they could be preserved. One I can vouch for is this, that once when going on a journey he fell from the hansom-cab at the station and cut through his lip, and happening to have an ordinary sewing-needle and some thread in his pocket, went and sewed it up in front of the waiting-room looking-glass.

For the whimsical humour that would lead him to pick up some passing tramp in the country, take him in his car, and deposit him in style at the nearest inn or workhouse whither he would go; for his enjoyment of every touch of humour that occurred in the wards; for the spirit that could enable him to break the jaw of a rough who in the earlier days set upon him, take him into hospital, mend his jaw, and send him away without a reproach; for his fine presence; for his genial personality; for his simplicity of taste, which showed itself in many ways; and in one most pleasingly by the garden of hardy weeds and wild flowers which he cherished on a flat roof in Harley Street. For these, and for many things besides, the dear old man, as he was often called, will ever have a place of honour and affection in the memories of more than one generation of Bart.'s men.

F. G. C.

BART.'S DINNER AT DELHI.

THE distances separating medical officers in India and the difficulties generally experienced by them in leaving their professional and administrative duties, even for a day or two, prevent the frequent meeting together of any considerable number of Bart.'s men, except in the Presidency cities. But in spite of this a very successful gathering took place at Delhi on February 7th, when a large number of old students of the Hospital were able to accept the kind invitation of the Honourable Surgeon-

General Sir C. Pardey Lukis, K.C.S.I., D.G., I.M.S., to a Bart.'s dinner.

During dinner Sir Pardey Lukis received telegrams from Col. G. W. P. Dennys, I.M.S., Inspector-General of Civil Hospitals, Central Provinces, and from the Bart.'s men in Calcutta, which conveyed their good wishes for and added to the success of the evening. It is hardly necessary to say that the toast to the prosperity of Bart.'s Hospital was duly observed.

A special feature were the menu cards, which had been prepared by Lady Lukis, each bearing the Bart.'s shield; besides enhancing the effect of the table decorations they formed excellent mementos of the occasion.

As is natural on these occasions, conversation was centred on the Hospital, the many changes that have occurred there since each of us first entered the School, and the stories and incidents we had heard and witnessed. In a land where one's thoughts and conversation so often recur to the hopes and plans for its future welfare, and to one's individual duties, it is a very pleasant change to meet with others, and recall our student days at the Hospital to which we owe our personal prosperity, and it was the general feeling among all present that a Bart.'s dinner should in future be annually held in some such central city as Delhi.

The guests present on this occasion were: Col. H. Hendley, I.M.S., Deputy Director of Medical Services in India; Col. B. G. Seton, V.H.S., I.M.S., Deputy Director-General, I.M.S.; Lieut.-Col. F. W. C. Jones, R.A.M.C., Commanding Station Hospital, Meerut; Lieut.-Col. B. J. Inniss, R.A.M.C., Commanding Station Hospital, Delhi; Lieut.-Col. W. Selby, D.S.O., V.H.S., I.M.S., Principal, King George's Medical College, Lucknow; Major F. A. Smith, I.M.S., Residency Surgeon, Indore; Major J. H. Hugo, D.S.O., I.M.S., Agency Surgeon, Bundelkhand; Major H. Boulton, I.M.S., Deputy Assistant Director Medical Services, 7th (Meerut) Division; Capt. F. N. White, I.M.S., Deputy Director General, I.M.S. (Sanitary); Capt. W. H. Hamilton, I.M.S., Deputy Assistant Director Medical Services, 8th (Lucknow) Division; Capt. R. H. Bott, I.M.S., Professor of Surgery, Medical College, Lahore; Capt. R. S. Townsend, I.M.S, Plague Duty, Aligarh; Capt. T. L. Bomford, I.M.S., Medical Officer, 1st—2nd K.E.O. Gurkhas; Capt. C. Newton-Davis, I.M.S., Medical Officer, 18th K.G.O. Lancers; Lieut. T. E. Osmond, R.A.M.C., Station Hospital, Lucknow.

ST. BARTHOLOMEW'S HOSPITAL WOMEN'S GUILD.

THE invitation of the Editor of the JOURNAL to write a short article about the Women's Guild gives a welcome opportunity of removing a misapprehension about it which hinders its progress. An impression exists that an invitation is required to become a member, but this is far from being the case. We are most anxious that all interested in St. Bartholomew's should join the Guild. Subscriptions should be sent to Mrs. Jessop, 73, Harley Street, W., applications for needlework to Miss Gask, the Matron's office, and correspondence on all matters of organisation, such as the formation of new branches, to Mrs. Norman Moore, 67, Gloucester Place, W.

The date of the second annual meeting has been fixed for View Day, May 13th, at 4.45, to be preceded by tea at 4.15. Lady Sandhurst has promised to take the chair, and Mr. Acton Davis to address the meeting. Invitations will be sent to all members of the Guild, but the Hon. Secretary would gladly send cards to anyone who would like them either for themselves or for others. And if readers of the JOURNAL would be so kind as to interest their friends in the Guild a large increase of membership aud augmented powers of usefulness would doubtless speedily result. Up to the present time the work done has been limited to the provision of clothes and of feather pillows, with certain grants to wards, linen and blankets, but much more remains to be done. It is the season of growth and progress, and the St. Bartholomew's Women's Guild should now put forth new and vigorous shoots.

MILICENT MOORE, Hon. Sec.

THE PROFESSOR'S EXPERIMENTS.

By PAUL BO'LD.

[*From the memoirs of his assistant and secretary, Gertrude Delaney, D.Sc.*]

III.—THE GREEN PASTE.

SOME people in attempting to roar like lions only succeed in braying like asses. Professor Mudgewood was one of those who succeeded in being leonine without an effort, but during the present memoir I shall show that even he was capable of becoming asinine sometimes.

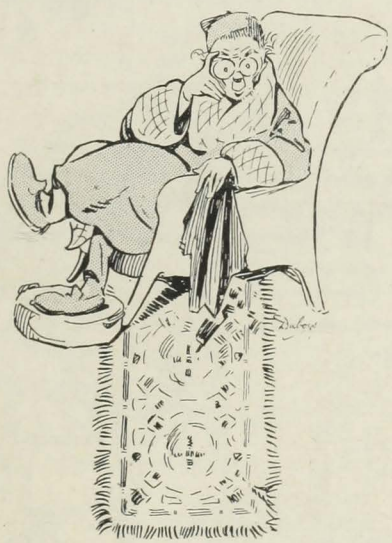
I attribute the great value of the Professor's work—its originality and wonderful conception—to the fact that it was imprescriptible to a great extent. He never let preconceived ideas interfere with his reasoning, and his work was in the fullest sense original.

The Professor was recovering from a sharp attack of

pneumonia, through which I had nursed him, and he was still unable to leave his room. He was sitting in a deep arm-chair, clad in a voluminous grey dressing-gown, and with his inseparable red silk handkerchief spread over his knee.

I had been reading to him for half an hour, but with the impatience of a fractious invalid, he raised a thin white hand in feeble protest, and asked me to stop. After a few moments of silence, he spoke to me in dreamy tones, quite unlike his usual brisk expositions.

"During my illness I have been letting my mind run upon Psychological Science. One day, I feel sure, it will be reckoned as exact a science as physics or chemistry. Two hundred years ago chemistry was regarded as a heterogeneous collection of isolated details—its great underlying



THE POOR LITTLE MAN WAS A MERE WRECK.

laws and principles were unguessed. Even so is psychology to-day."

"Do you think so?" I asked doubtfully, yet with the respect due to one's employer, and an invalid at that.

"I feel sure of it—sure of it—*quite* sure of it," he replied, in his old pseudo-pleonastic manner, with which he irritated me time and again; "yes—I am *quite* sure of it. There is law everywhere—everywhere. It is unthinkable that there should not be law in the higher or psychical world just as there is in the lower and physical world. I have determined at last to try one experiment which my observation has suggested to me in the realm of physico-psychology——"

"I beg your pardon?" I interrupted.

He looked at me interrogatively.

"I mean, what is that?" I exclaimed.

"*That?* You mean physico-psychology? The borderland of physics and psychology—just as electro-chemistry is the borderland of electricity and chemistry—the common ground where the two meet and coalesce, and where the factors of one may be partially expressed in terms of the other."

He frowned and stared into the fire, rubbing his unshaven, bristly chin with the palm of his hand the meanwhile.

After a few moments' silence he removed his glasses and thoughtfully scratched his nose with them. Then he polished them on his large red handkerchief, and I knew by this sign that he was collecting his thoughts before making some important announcement. I was right. He replaced the glasses upon his fat little nose, placed a hand upon either knee, and looked at me abruptly—quite in his former disconcerting manner.

"Do you know anything about eyes?" he asked.

I knew when he said "do you know" he did not mean knowledge in the ordinary sense, but was referring to knowledge he alone possessed, and although biology had been one of my subjects when studying for the D.Sc., I shook my head, intending to convey thereby that my knowledge on the subject was entirely rudimentary, and not worth considering.

"Well, well," he said, "it is of no matter. The experiments which I am thinking of will not necessitate much that is known upon the subject; we shall have to strike out for ourselves. You will probably have noticed the peculiar compelling or so-called magnetic power which some eyes possess. Many people put the fact down to strength of will, but I am personally inclined to think that the strength of will more often follows as the corollary to a certain type of eye."

"That's a very unorthodox opinion," I remarked, "and I hardly feel justified in agreeing with you as the result of my own observations."

"Perhaps not, perhaps not," snapped the Professor a little impatiently. "However, it is not a matter of much moment, but it may become so after our experiments have been concluded. The serpent which can fascinate its prey does not appear to have much will power; yet what more magnetic eye is known? The hypnotist, whose will power is quite a variable quantity, can, under certain conditions, compel with his eye. Many men of strong will power can force ideas or wishes upon others *when using their eyes*, and fixing their glance directly upon the eyes of the person to whom they are speaking. But—and here is a curious thing—many a man with enormous will power, many a man who can undertake and carry through, quite fails to impress one through the medium of his eyes. I am such a man."

I laughed. It was quite true. The will power of the Professor was enormous—his continuity of purpose and his perseverance were proverbial, yet his look was mild, and he could never influence with that magnetism which some men wield.

"Are you going to prove your theory?" I asked, perhaps more facetiously than was respectful.

The Professor eyed me sternly. "I never set out to *prove* a theory—never," he replied. "I ascertain facts. The theories must be modified to suit the facts. Many people, I know, find it more easy to twist the facts to fit the theories. I do not call such people scientists." He sniffed contemptuously.

"What is precisely your idea?" I asked with more diffidence in my tones, for the Professor had a way of subduing one in a quiet, dignified manner.

"In the first place I believe that chemical or physical action in the brain produces various 'forces,' which are emitted as rays. There is nothing very surprising if such should be the case. Marconi, with a simpler apparatus than the brain, sends messages through space. Telepathy would seem to be of a similar nature. The vibrations known as 'X rays' are very powerful and extraordinary, and they are formed in apparatus less complex than the brain. Again, Delaney, actinic rays, which will, as you know, assist chemical action—cause chlorine and hydrogen to combine, or affect the silver salts on a photographic plate—are still more simply formed. Yes—decidedly—it would be no strange thing if the brain were the seat of more than one type of powerful ray."

"It does seem possible—even probable," I ventured, "but I can hardly conceive of it being in the realm of experimental science."

"Dear me—I think our absence from the laboratory has dulled your perceptions, Delaney," was the cutting rejoinder, followed by silence, during which the Professor again polished his glasses.

Soon, however, he took up the thread of his discourse.

"The difficulty we have is in focussing these rays," he said. "The eye is specially adapted to the transmission of light rays, and just as glass is more or less opaque to 'X rays,' so the eye may be more or less opaque to mental rays, as one may term them."

I nodded. I was beginning to catch a glimmer of the Professor's idea. Then abruptly he asked me a question.

"What would you do if the lens of a magic lantern were covered with lamp black?"

"Wipe it off," I replied—but I knew that questions from the Professor always forestalled some startling development, so I listened more attentively.

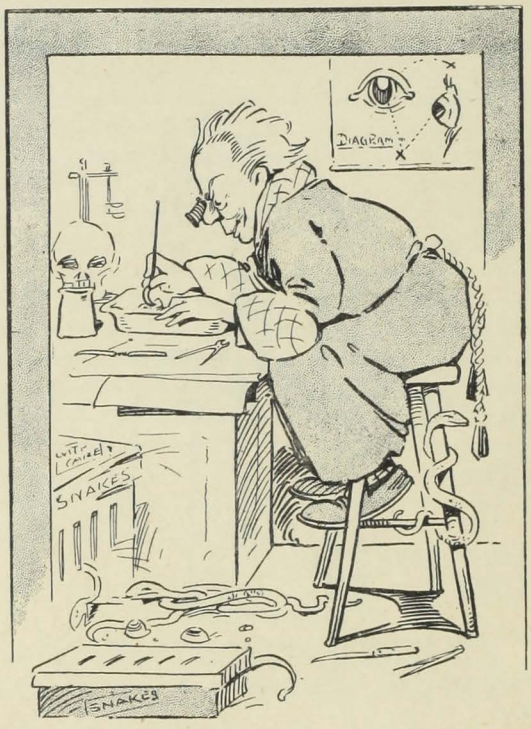
"Suppose the lens were filled with air bubbles—how could you theoretically cause it to give good definition?" he asked slowly.

I considered a moment. "Well," said I, "practically I could not do anything, but if I could fill the bubbles with glass or with some other substance of the same refractive index, the result would be achieved."

"Quite so—quite so," he exclaimed excitedly, "that is the point. I believe the eye—for various reasons I need not go into at the moment—to be opaque, or partially opaque, as far as mental rays are concerned. I believe in every eye there is a small portion of some substance which causes the opacity to be less pronounced. If we can find that substance—if we can artificially give more of that substance to the eye—we shall achieve a great thing. Do you understand that—eh? Do you see how big a thing it is?"

I nodded—but I did this more to avoid irritating the Professor than because I thought that great results would follow.

"As soon as I am strong enough we will commence to



A GRIM LITTLE CHUCKLE WOULD DENOTE HIS SUCCESS WHEN ANALYSING THE EYES.

investigate the matter," was the final dictate of the Professor. He was tired, and having finished with the subject for the time being, felt the strain of his conversation, so I helped him back into bed.

In a few weeks the Professor was back in his laboratories, working sometimes twenty hours a day to make up for lost time.

He went to work systematically, and it may be added expensively. First of all, he obtained snakes' eyes, and of these made very careful chemical and physical analyses. Then he went through a similar set of experiments upon monkeys' eyes, and other less expensive optic elements. Finally came human eyes. The way he went about this last piece of work was decidedly gruesome. He would go

to hospitals and study patients who were *in extremis*, or hopelessly incurable; he would watch the expression of the eye, the strength of the glance, and make voluminous notes. He remarked that he would have preferred to experiment on normal healthy persons, but, of course, he could not carry out subsequent experiments upon these, because as soon as one of the patients under observation died, the Professor was supplied with the eyes of that person. In passing, I may remark that he had to pay heavily for these gruesome objects. Then he analysed the eyes, and compared the results with his notes about their appearance during life. Sometimes the sound of a grim little chuckle as he did this would denote that he had advanced one small stage nearer the goal.

One day, some ten months after he had commenced, he came to me as I sat by the library fire.

"I feel sure that I have it now, Delaney," he said excitedly. "There is no doubt—really no doubt."

"I am glad," I remarked coldly. I dare not show my own excitement, for though the Professor was very excitable himself, he hated anything but a stoical calm in others.

"Yes—I have found it—a complex organic compound associated in its incipience with the formation of the visual purple. The latter is imperfect in those eyes containing most of the new substance."

He rubbed his hands together like a gleeful schoolboy, and stood first upon one little leg and then upon the other.

"Have you tested it in any way?" I asked, trying to restrain my excitement.

"Not yet—no—not yet. But I have made sufficient of the Green Paste——"

"The Green Paste?" I queried in astonishment.

"Yes—it—the substance is a green paste. I tried to synthesise it, but failed. However, I obtained a lot by the fractional distillation of the visual purple of human eyes—eight or nine grammes, I should say."

"Eight or nine grammes?" I echoed. "How many eyes——?"

He laughed. "Thousands—thousands."

"But the expense?" I said.

"Thousands also—I can afford it." He chuckled and removed his glasses, wiping them carefully on his red silk handkerchief, and then breathing upon them before replacing them. Truly, in some ways, he was absent-minded. However, I never think it is to anyone's discredit to be absent-minded. Absent-mindedness means present-mindedness. The man whose thoughts are not on his surroundings is generally concentrating them upon something else.

"Shall we test it at once?" I asked.

"No—*we* will not. *I* shall," was the uncompromising reply. Then, seeing that I looked disappointed, the Professor smiled kindly. "It is quite sufficient for one of us to risk his eyesight—that is all—that is all."

He spoke as though losing one's eyesight might have been about as unlucky as losing a sovereign. A marvellous man, the Professor!

We went through into the laboratory. The Professor lifted up a little china box, like an ointment box, and, removing the lid, disclosed a bilious green paste—with a horrible odour.

"You're not going to put that stuff into your eyes?" I exclaimed in horror.

"Certainly—now—*most* certainly," he replied, looking at me with equal astonishment. I sometimes wondered whether the Professor were human.

Forthwith he took a small quantity upon the end of a spatula and deliberately placed some in the corner of each eye. He dropped the spatula, and, clapping his hands to his eyes, spun round in apparent agony. Then he sat down in a chair, gasping. In a few moments he was better, and motioned me to remain quiet. In ten minutes he opened his eyes—and laughed!

"Of all weird experiences," he commenced. Then, apparently shocked at having admitted anything to be "weird," he went on in more even tones. "Most strange—most unusual!"

"Do you feel all right now, Professor?" I asked, very much relieved that he had not lost his sight.

"Quite right—quite—thank you. This paste has affected my sight wonderfully. In the first place, everything seems less real—quite solid—*quite* solid, you know—but less real. I seem to be more powerful—I feel a kind of mastery over what I see." I could tell that—the Professor's eyes fascinated me; I felt that without a great effort of will I should fall under his influence in any way that he pleased. He continued: "Besides that, I am colour-blind—monochroic vision. Everything is a dull grey—an indigo grey. Evidently the substance, though beneficial to the eyes so far as the passage of mental rays is concerned, is deleterious as far as light rays are concerned. Have you observed the fact that many men of power are colour-blind—more or less?"

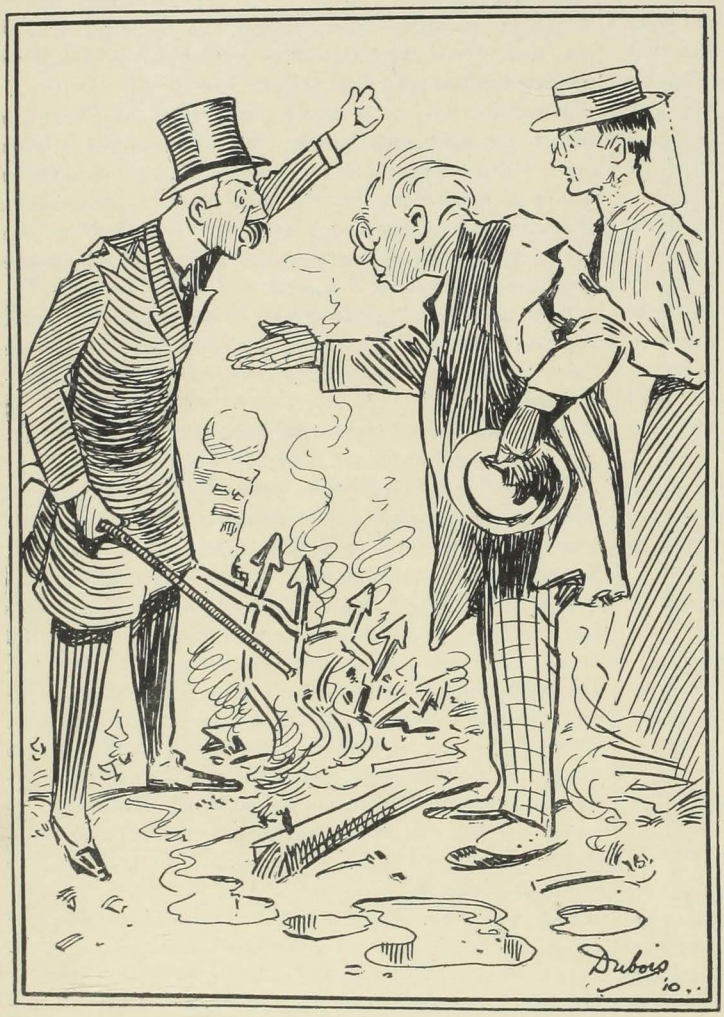
"No," I remarked.

"It is so," he replied. "It certainly is so—I know several scientists—tut, tut! Delaney—I feel quite funny—so powerful, you know. I can't express quite what I mean. I think a little fresh air will be good for me; will you come for a walk?"

I assented, and, having put on my hat, accompanied him into the street.

We had not proceeded far when the Professor was unfortunate enough to knock the back of his hand against the sharp angle of a garden gate. Everyone knows the exquisite momentary agony that such a thing causes sometimes, and how a kind of fury rises in one's mind against the inanimate object—a fury unexpressed in word or feature—which passes as quickly as it comes. The Professor

afterwards told me that such a change took place within himself. He turned towards the gate and looked at it. In an instant it bent, trickled, and then suddenly melted before our eyes, while the wooden gate posts flared up. We gazed at the rapidly cooling iron puddle upon the ground, and the Professor murmured quite unconcernedly, "Something more than actinic rays focussed there—I'm sure of that."



"FOR HEAVEN'S SAKE GO AWAY, OR I SHALL MELT YOU."

So was I.

Unfortunately the frock-coated, silk-hatted owner of the house emerged at this moment, and after one puzzled glance at the puddle, the flaring gate posts, and ourselves, he broke into a torrent of abuse.

"Now, then, come along to the police-station," he concluded. "I'll teach you to commit arson in this way—come along."

The Professor meanwhile kept his eyes on the ground. "My good man," he replied, "for heaven's sake, go away I'm angry. If I look up I believe I shall blast you—or melt you—like I did the gate."

At this the man got more furious; but I whispered to the Professor, and as the result we both started running in different directions.

I reached home safely, the stranger following the Professor. When the latter arrived, breathless and hatless, he laughed. "I could not shake him off," he gasped, "so I looked at his boots—that stopped him."

He volunteered no further information, but I gathered from his tone that nothing very serious had happened to the man.

The Professor forthwith attempted several feats of ignition and illumination, but without success. He tried to light the gas and to set fire to a piece of paper—but nothing happened. It seemed clear that *mere* "will" was not sufficient, that some kind of emotion or "brain storm" was necessary simultaneously with the desire. We soon had evidence of this.

During the evening we sat in the library discussing the events of the day. The night was cold, and we shivered somewhat.

Now, one thing that the Professor hated was cold. He grew irritable under its effect.

"Why have not the servants lighted the fire?" he grumbled, glancing at the grate.

"But, Professor, they were not told——" I commenced. Then my tongue was tied. With a merry crackle, paper, wood and coal burst into a fierce blaze.

"Good Lord!" I ejaculated.

But the Professor looked serious—very.

"I shall have to be careful—very careful," he remarked thoughtfully.

Later we were in the laboratory—one of his fractional distillation tubes had cracked. He frowned, and looked at the bench. He must have been slightly irritated, for in a moment the whole of the woodwork was in a blaze!

"My God!" cried the Professor in sudden despair. "What am I to do? I shall be burning the house about my head—I shall destroy everything I come across!"

We soon got the fire under with a few buckets of water and sand, but the Professor was absolutely unstrung—and at a moment when he needed his self-possession most.

"It is attitude of mind that counts," he said despairingly. "The deed is merely an expression of the thought. Our sins lie in our thoughts, Delaney. The mere refraining, from personal motives, is of no use to our characters. We

might just as well commit them unless a higher force within us is the reason of our refrainment."

I could not help realising this as I saw thought transformed into active force in this way.

For some time we had little conflagrations and other similar events to contend with, but on the whole the Professor managed to restrain himself wonderfully well.

One day, however, he gave me a shock of quite another kind.

"Delaney," he cried as he came in from the street, "Delaney—I am engaged to be married!"

St. Paul as a clown at the Hippodrome! The Pope at the Palace of Varieties! But—the Professor engaged! To a woman, too! If it had been to a brother scientist—a man—I could have passed it over. But the picture of the Professor at the marriage altar!

I did not congratulate him.

It was several days before I saw the lady in question, but when I did so I was astounded. I had expected her to be an intelligent and somewhat scientific member of the human race, with a *penchant* for short hair and plain clothes like myself—the Professor had conveyed this idea to me somehow. I found her the reverse—a regular fluff-and-butter girl, with a weak face, voluminous curly hair, and too much light drapery hanging about her person. Her mind was as solid as fluff, her manner and *tout ensemble* resembled soft, yielding, yellow butter. How on earth the Professor had been attracted by her I could not imagine.

When I had studied her in his presence a few times I saw what it was, however. His will had so strongly affected her, that she was a mere echo of his thoughts. She agreed with all he said, she thought as he thought, she did as he did, until the foolish man had been flattered into a proposal of marriage. He looked upon her as a paragon of all the virtues of reason, and overlooked her essentially feminine dress and mannerism. What he admired in her was the reflection of himself!

It was all quite clear to me, and I dreaded the thought of later—if his power waned—if the effect of the Green Paste wore off. I determined at least to try and show the woman up in her true colours, to make her express some of her own feeble and commonplace thoughts. This, I thought, would postpone matters, or, at any rate, enable the Professor to enter the state of matrimony with his eyes open. But how was I to do this? How was I to exercise control? For two or three days I ruminated on the subject, and then a solution came. The Green Paste! I would use the same method as the Professor, but I would not take such a heavy dose.

So I stole some of the ointment. I did not use so much as the Professor, and my ordinary vision was not so greatly affected. I only became partially colour-blind—trichroic was the stage. I had gathered from the Professor that the effect was wearing off with him, and that his own vision was now also trichroic. I mention this as I believe it had some bearing upon what happened afterwards. The difference in the strength seemed to affect the transparency of the eye to mind rays in a curious manner; never did I succeed in causing a conflagration. But I found the egress and ingress of telepathic rays to be very considerably affected. I could *sense* the thoughts of people. I could not put them into words, but a kind of visualisation of their thoughts took place in my mind—it is difficult to explain what I mean. I also felt an exuberant sense of power, for I found that I could control other people with but little effort, in many ways.

I had a kind of shock on one occasion. I was out cycling, and a little dog ran out and tried to snap at my right foot. Everyone knows the feeling of helplessness on such an occasion.

A senseless flicker of rage passed over me.

I looked at the dog, with this feeling in my mind. It rolled head over heels with its own momentum, and lay still. I had killed it—I knew I had killed it. I tried to persuade myself that accidental death from natural causes should have been the verdict, but I did not succeed. I was *positive* that I had killed it. The momentary wish had been translated into fact.

I cannot describe the horror that overcame me. Not so much on account of the dog's death, but on my own account. I possessed a power which needed a powerful curb. Was I strong enough to bear it? I was tortured lest I should bring this power into play unintentionally. To wander through the world as a kind of glorified lucifer match is one thing, but to be a human lethal chamber is quite another. Was this on account of the smaller quantity I had used?

I dare not go to the Professor for advice. I knew not what to do, and for many days I went about rigorously guarding every wish and curbing every spirit of temper, and I was pleased to find that I was simultaneously losing power.

Then my opportunity came. Mary Thompson and the Professor and I sat at tea. As usual, he was talking, she was echoing. Then I looked at her and caught her eye.

"Don't you think that the present system of educating men and women on different lines is very wrong?" asked the Professor genially.

"No—I like it," she replied, still looking at me. "Let men have the brains; we will amuse them," she laughed, and seemed to seek my commendation.

I shook my head. Her views were awful, but they had to be expressed. The Professor looked pained and grieved.

"Surely—surely—my dear—you don't mean that? Why—reason is the great difference between man and brute. You do not intend to say that you prefer women to remain in mind more akin to brutes than men are? More severed

from the higher ideal after which we are striving? You have often expressed a contrary opinion."

It was Mary Thompson's turn to look puzzled. She passed a hand across her brow rather wearily—I don't wonder, for the Professor's will was endeavouring subconsciously to make her echo, while I was pulling her in the opposite direction and intending to make her speak like her own feeble, silly self.

"I don't quite see what you mean," she replied. "Isn't it enough for us to look after you men, and to be pretty and look nice for you? You are very bad, you know, you men!" She shook a forefinger playfully at the Professor.

He rose from his seat rather abruptly, and paced the room rapidly on his little legs. He pulled out his red silk handkerchief and mopped his brow—unnecessarily.

"Dear me—dear me!" he exclaimed. "This is extraordinary. Bad men! Yes—but you help—you make yourselves so attractive—physically! By heavens, woman, you do all you can to bring the animal in man out!—subconsciously, of course, subconsciously. You are still half savage—half animal—so, of course, are men; but *you*, Mary—to say that *you* are content to remain there! With the whole world of mind to be conquered, with the whole development of reason to be attained!"

His force overcame mine for the moment, try as I would to conquer. She changed back like a weathercock.

"You are quite right—I agree with you," she said forcibly.

The Professor stood still in surprise; he could not make her out. For the moment his force was weaker, and mine triumphed; Mary went on without a pause. "Oh, what nonsense we are talking. How do you like my new dress, dearest? Leave your silly old ideals and ambitions, and come down to the world of woman for a bit!"

The Professor grew icy in his manner. "Come down to the world of *fools*, of unthinking fools, who eat and drink and laugh—content with the mire in which they live. That is what you mean. I have always heard that the only certainty about woman is her uncertainty. It seems there is some truth in the saying."

Mary Thompson looked rather frightened. She had fired a hidden mine and felt uncomfortable, and she tried to set the matter right in her own feeble way. "*Do* be reasonable, dear," she pouted.

It was the last straw—that word "reasonable"—from an unreasoning to a reasoning being. Nothing could have been more calculated to stir the Professor to the depths.

"Reasonable!" he almost shouted, and turned towards her. "Did you say *reasonable?* Reasonable—*reasona——?*"

He stopped short, while I sprang to my feet. Mary Thompson was looking very strange. Her face became set. She gave a quick gasp, and a little half-choked cry. It was the last sound she ever uttered. Her figure stiffened, and her eyes stared vacantly into nothing.

She never recovered. For two years she lived—a house without a tenant; then her body died, too.

It was a long time before the Professor became normal again. Then he would refer to the Green Paste. The last time he mentioned the matter he was quite enthusiastic.

"It is wonderful—wonderful," he exclaimed. "Even the miracles no longer seem unreasonable."

His face grew drawn and sad. The old scene haunted him again. He went on, half to himself:

"Why I did not kill the body, too, I know not. Perhaps my thoughts were not concentrated upon that. I do not know. I hardly seemed to think. Perhaps the effect of the Green Paste was wearing off. I remember that at the time my vision was trichroic, and shortly afterwards I lost these powers and my vision became normal. However—there it is—I learned to realise that attitude of mind counts most. Ah, Delaney, there are some powers which we men are not strong enough to wield. There are hidden secrets which we are not great enough to learn—yet. Sometimes we tumble upon them prematurely, and they blast us with their force. They blast us."

We were sitting before the library fire at the time, and as he finished speaking a solemn silence pervaded the room. I rested my chin upon my hands, and stared into the glowing embers. "*Per aspera ad astra*," I murmured.

THE CLUBS.

STUDENTS' UNION.

The following is a list of newly elected officers and Council of the Students' Union:

President: Mr. Waring. Hon. Treasurers: Mr. Gask, Mr. Girling Ball. Vice-President: J. G. Ackland. Hon. Secretaries: Senior, O. B. Pratt; Junior, C. H. D. Banks.

Council.—Constituency A: E. Catford, R. R. Powell, C. H. Savory, E. G. Dingley, R. H. Williams.

Constituency B: C. H. D. Banks, R. H. Maingot.

Constituency C: N. F. Norman, C. E. Kindersley, P. H. Wells.

Constituency D: W. T. Thompson.

Constituency E: Mr. Sargant.

Finance Committee.—The President, two Treasurers, two Secretaries, Messrs. Ackland, Norman and Savory.

College and Catering Representative: N. F. Norman.

General Meeting Sub-Committee: Mr. Gask, the two Secretaries, Messrs. Kindersley and Wells.

THE BOOKSHELF.

REVIEWS.

A SYSTEM OF SURGERY. Edited by C. C. CHOYCE, M.D., F.R.C.S. Vol. iii. (Cassell & Co.) Price 21*s.* net. Pp. xvi + 901.

This is the last volume of an exhaustive work, which has been written by a large number of contributors. The present volume deals, among other things, with the surgery of the cardio-vascular

system, of the throat, nose and ears, of the lungs and pleura, of the nervous system, and of the bones and joints. The information in most of the sections is concise and to the point, and there do not appear to be any notable omissions. There are a large number of illustrations, some of them in colours.

THE FÆCES OF CHILDREN AND ADULTS. CAMMIDGE. (Bristol: John Wright and Sons.)

Few persons might believe that the investigation of fæces could be made a subject requiring 467 well-filled pages of a fat book for its complete exposition; still less, perhaps, that the perusal of those pages could become a matter of absorbing interest. Readers of Dr. Cammidge's book will be astounded at the number of unexpectedly simple clinical investigations of fæces that are possible, and more particularly at the very real practical bearing of most of them. Particularly interesting are the data throwing light on the problems of constipation. The chapter, too, on the bacteriology of fæces should appeal to all students of "summer diarrhœa." In the chemical examination of fæces Dr. Cammidge is more than ever on his own ground. This part of the subject is dealt with as exhaustively as the rest, and deductions are drawn from the smallest observations of colour and reaction up to the most complex estimations of the percentage of fat or starch which has escaped digestion. An interesting feature of the chapter on intestinal parasites is the illustration of a large number of food residue substances, which by the inexperienced may be mistaken for parasites. A very helpful appendix on diets in gastro-intestinal disorders closes a book which we feel may be profitably studied as much by practising physicians as by those engaged in more remote physiological and pathological investigations.

THE MEDICAL ANNUAL FOR 1913. Thirty-second issue. Pp. cxxxvi + 951. (Bristol: John Wright & Sons.) Price 8*s.* 6*d.* net.

This book is now so well known that it is hardly necessary to review it in detail. It should be on the book-shelves of every practitioner and student, because it is a mine of useful and up-to-date information which would be very difficult to collect and keep in one's mind.

Among many noteworthy features of the book, the Glossary near the beginning will be found very useful; it is astonishing how many extraordinary and, in many cases, horrible words have been invented in medicine and surgery in the past few years. We read recently in a periodical, which produced no small disturbance on its publication, that the medical profession had decided to give up their Latin and Greek works and to speak plainly. One wishes this could come to pass. Certainly, if things go on as they are at present, a medical dictionary will be an absolute essential to every medical man who wishes to keep up to date, and we congratulate the publishers of this book on their effort to help us.

The volume is a very able and comprehensive review of modern methods and appliances in surgery, medicine, and obstetrics, and no practitioner should be without it.

ANÆSTHETICS: THEIR USES AND ADMINISTRATION. By DUDLEY W. BUXTON, M.D. Fifth Edition; enlarged. Pp. xiv + 477. Demy 8vo. Price 10*s.* 6*d.* net.

This book should prove extremely valuable to practitioners and students who are interested in anæsthetics.

We must confess to a feeling of bewilderment on reading of the enormous number of ways in which anæsthetics can be administered nowadays, but we managed to recover to some extent when we realised that, with some experience and practice, the simple methods are quite effective still. However, the book will be found a useful guide to modern methods, as, except that the rectal administration of ether with oil is not mentioned, it is quite up-to-date. Dr. Buxton is to be congratulated on the way in which he has dealt with what is rapidly becoming a very important and difficult subject.

DISEASES OF THE HEART. By JOHN COWAN. Pp. 438. (London: Edward Arnold, 1914.)

This book is a bold attempt to present an account of the present knowledge of diseases of the heart within the compass of a single volume. The treatment of the subject is comprehensive, and includes chapters on the pathology of the heart and blood-vessels, with many good illustrations of the conditions described.

The recent additions to knowledge gained by the use of the polygraph, sphygmomanometer and electro-cardiograph are fully dealt with, and their clinical bearing brought out by a description of illustrative cases. By thus giving a clinical account of cases with pulse and polygraph tracings and electro-cardiographic records taken during life, together with macroscopical and microscopical findings post-mortem, the gap which often appears to exist between the clinician and the pathologist is largely bridged. This real gain, of necessity, makes the book somewhat discoursive for a text-book.

A. J. Ballantyne has contributed a concise account of the ocular manifestations in arterio-sclerosis, and W. T. Ritchie a useful chapter on the interpretation of electro-cardiograms. The book has a great attraction, containing, as it does, data which are chiefly drawn from the author's own experience, and tracings which, with only one exception, are his own.

EXAMINATIONS AND DEGREES.

UNIVERSITY OF CAMBRIDGE.

The following degrees have been conferred:

M.B. and B.C.—G. N. Stathers, G. D. East, E. J. Bradley, R. W. Willcocks.

B.C.—F. W. Watkyn Thomas.

UNIVERSITY OF LONDON.

Second Examination for Medical Degrees.

Part I.—E. M. Atkinson, K. N. G. Bailey, J. E. A. Boucaud, G. Bourne, N. J. Boxall, T. Carlyle, E. H. Glenny, R. G. Mack, J. P. Ross, C. M. Titterton.

Part II.—C. F. Beyers, J. D. Constantin, L. W. Evans, J. L. R. Fortier, W. B. Heywood-Waddington, J. B. Hume.

CONJOINT BOARD EXAMINATION.

First Examination.

Chemistry.—G. K. Arthur, A. J. C. Eland, J. C. W. MacBryan, G. Millar.

Physics.—G. K. Arthur, A. J. C. Eland, J. C. W. MacBryan, W. A. Jolliffe.

Elementary Biology.—G. K. Arthur, A. J. C. Eland, W. A. Jolliffe, H. Amin, M. V. Boucaud, T. G. Evans, A. V. Lopes, K. E. Shellshear.

Practical Pharmacy.—G. W. Parry.

Second Examination.

Anatomy and Physiology.—P. S. Clarke, E. G. P. Bousfield, G. A. Beyers, A. Arias, T. F. Zerolo, H. M. Wharry, D. S. Pracy, P. G. Horsburgh, W. R. Dickinson.

Final Examination.

The following have completed the examination for the diplomas of M.R.C.S. and L.R.C.P.—C. J. Scholty, V. M. Métivier, R. A. R. Wallace, R. Ellis, B. Z. Shah, D. C. G. Ballingall, H. A. Bell, E. C. Bradford, G. B. Richardson, J. B. Randall, E. Donaldson, G. C. Fairchild, A. N. Rushworth, F. H. Cleveland.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

F. Heasman, M.R.C.S., L.R.C.P., has been admitted a member.

LONDON SCHOOL OF TROPICAL MEDICINE.

B. Haigh has taken the diploma of D.T.M.(Lond.).

DEATHS.

COLLYER.—On April 9th, at Paignton, South Devon, Bertram Joseph Collyer, M.R.C.S., L.R.C.P., son of the late James Collyer, of the Old Hall, Hurworth-on-Tees, aged 44.

WILLIAMS.—On April 17th, at Ty-Clyd, Govilon, Abergavenny, William Edwin Williams, F.R.C.S.(Edin.), after a short illness.

NEW ADDRESSES.

ANDREWS, S. H., Unstead Villas, Rushmere Road, Ipswich.
ARMIT, H. W., B.M.A. Building, 30–34, Elizabeth Street, Sydney, N.S.W.
BARROW, R. M., 105, Balmoral Block, Edmonton, Alberta, Canada.
BURNE, T. W. H., The General Hospital, Singapore, Straits Settlements.
GRAHAM, G., 17, Bentinck Street, W. (Tel. 2209 Padd.)
HADFIELD, G., Dreadnought Hospital, Greenwich.
LETCHWORTH, G. H. S., St. Bartholomew's Hospital, Rochester.
MAW, G. O., Metropolitan Hospital, Kingsland Road, N.E.
NICHOLSON, C. J., Ailsa Lodge, Wokingham.
OGDEN, W. E., 58, Avenue Road, Toronto.
SHAH, B., Miller Hospital, Greenwich.
SMITH, H. GORDON, 7, St. Mary's Road, Doncaster.

APPOINTMENTS.

ARMIT, H. W., M.R.C.S., L.R.C.P., appointed Editor of the *Medical Journal of Australia*.
BROCK, E. A., M.R.C.S., L.R.C.P., appointed Junior Resident Anæsthetist to St. Bartholomew's Hospital.
BOWER, H. J., M.R.C.S., L.R.C.P., appointed Junior Resident Anæsthetist to St. Bartholomew's Hospital.
BURNE, T. W. H., M.B., B.S.(Lond.), appointed Medical Officer in the Straits Settlements.
FENTON, T. G., F.R.C.S., appointed Surgeon in charge of Throat and Ear Department of the Torbay Hospital, and Hon. Laryngologist to the Western Hospital for Consumption.
HADFIELD, G., M.D.(Lond.), appointed Medical Registrar to Dreadnought Hospital, Greenwich.
JOYNT, I., B.C.(Cantab.), appointed Clinical Assistant to the West End Hospital for Diseases of the Nervous System.
LETCHWORTH, G. H. S., M.R.C.S., L.R.C.P., appointed House Physician to St. Bartholomew's Hospital, Rochester.
SHAH, B., M.R.C.S., L.R.C.P., appointed Junior House Surgeon to Miller Hospital, Greenwich.

INDIAN MEDICAL SERVICE.

Capt. N. M. Wilson is posted as Plague Medical Officer, Gurdaspur.

Capt. A. T. Pridham, M.B., is posted to the charge of the Mandalay Central Jail.

Major H. W. Illias, Officiating Civil Surgeon, second class, to be substantive *pro tempore* in that appointment.

Capt. A. F. Hamilton, M.B., F.R.C.S., proceeds home on leave.

Capt. R. H. Bott, F.R.C.S., officiates as Professor of Surgery, Medical College, Lahore, from October 9th, 1913.

Capt. G. Holroyd officiates as Superintendent, Central Prison, Bareilly.

Lieut.-Col. R. H. Elliot has an extension of furlough up to May 1st, 1914.

BIRTHS.

ADDISON.—On Easter Sunday, at Prestwood, Great Missenden, the wife of Dr. Christopher Addison, M.P., of a son.
FOSTER.—On April 21st, at Widey Grange, Crownhill, S. Devon, the wife of Capt. R. L. V. Foster, M.B., Royal Army Medical Corps, of a daughter.
FRENCH.—On March 30th, at 135, Harley Street, London, W., the wife of J. Gay French, of a son.
KELLOND-KNIGHT.—On April 3rd, at 36, Ritherdon Road, Balham, S.W., the wife of Staff-Surgeon H. A. Kellond-Knight, Royal Navy, of a son.
STOTT.—On March 25th, at 24, Addison Road, North Kensington, W., the wife of Dr. Arnold W. Stott, of a daughter.

MARRIAGES.

Golden Wedding.

BRADSHAW—EWART.—On March 9th, 1864, at St. Paul's Church, Umballa, India, by the Rev. FitzHenry W. Ellis, Chaplain, Alexander Frederick Bradshaw, Assistant-Surgeon, 2nd Battalion, The Rifle Brigade (the Prince Consort's Own), to Ellen Charlotte, only daughter of Colonel Richard Sheridan Ewart, Retired List, Bengal Army. Present address, 111, Banbury Road, Oxford.

COOK—KEED.—On April 4th, at Emmanuel Church, West Hampstead, Joseph Basil Cook, M.D., D.P.H., son of Dr. and Mrs. Cook, of Great Missenden, to Evelyn Russell, eldest daughter of the late Charles Keed, and Mrs. Keed, of Crowhurst, Sussex.
FOWLER—STONE.—On April 18th, at All Saints, Isleworth, Middlesex, by the Vicar, the Rev. J. H. C. McGill, Oliver H. Fowler, M.R.C.S.(Eng.), of Cirencester, to Helen Grace Stone, daughter of C. Stone, Lancing, Worthy Road, Winchester.
PRINGLE—COOPER.—On April 23rd, at Lacca Church, Queen's County, by the Rev. A. H. S. Anderson, Vicar, Kenneth Douglas Pringle, M.B.(Cantab.), son of H. T. Pringle, M.D., J.P., of Hawtree Ferndown, Dorset, to Dorothy Despard Cooper, daughter of the late L. S. Cooper and of Mrs. Cooper, of Lacca Manor, Mountrath, Queen's County, and granddaughter of the late Lieut.-Colonel Despard, also of Lacca Manor.
REICHWALD—ROUQUETTE.—On April 16th, at the Parish Church, Ashtead, Surrey, by the Rev. A. J. Hooper, assisted by the Rev. R. A. Waddilove, Rector of the Parish, Max Balzar Reichwald, M.B., B.S., fourth son of August Reichwald, of Burnbrae, Beckenham, to Katharine Civil, elder daughter of Henry Seymour Rouquette, of Highfields House, Ashtead.
SLADDEN—WILLIAMS.—On April 15th, at Dowlais, Arthur F. S. Sladden, M.D., son of Julius Sladden, of Badsey, Worcestershire, to Mary Christabel Williams, daughter of the Rev. Ll. M. Williams, Rector of Dowlais and Rural Dean.
SMITH—JOHNSTON.—On April 11th, at the Cathedral, Newcastle-on-Tyne, by the Rev. Canon Gough, Vicar, Henry Gordon Smith, M.B., B.S.(Lond.), D.P.H., son of Henry Williams Smith, of 127, Upper Richmond Road, Putney, to Alice Grace, daughter of James Harvey Johnston, of 16, Kingsland, Newcastle-on-Tyne.

ACKNOWLEDGMENTS.

Upsala Läkareförenings Förhandlingar, Nursing Times, British Journal of Nursing, The Hospital, Giornale della Reale Societa Italiana d'Igiene, South African Nursing Record.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, Smithfield, E.C.*

The Annual Subscription to the Journal is 5s., including postage. Subscriptions should be sent to the MANAGER, W. E. SARGANT, M.R.C.S., *at the Hospital.*

All communications, financial or otherwise, relative to Advertisements ONLY, should be addressed to ADVERTISEMENT MANAGER, *the Journal Office, St. Bartholomew's Hospital, E.C. Telephone: 1436, Holborn.*

A Cover for binding (black cloth boards with lettering and King Henry VIII Gateway in gilt) can be obtained (price 1s. post free) from MESSRS. ADLARD AND SON, *Bartholomew Close.* MESSRS. ADLARD *have arranged to do the binding, with cut and sprinkled edges, at a cost of 1s. 9d. or carriage paid 2s.—cover included.*

St. Bartholomew's Hospital

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

Journal.

Vol. XXI.—No. 9.] June 1st, 1914. [Price Sixpence.

CALENDAR.

Tues., June 2.—Dr. Morley Fletcher and Mr. Bailey on duty.
Wed., ,, 3.—Clinical Lecture (Surgery), Mr. Waring.
Fri., ,, 5.—Dr. Herringham and Sir Anthony Bowlby on duty.
Clinical Lecture (Medicine), Dr. Herringham.
Sat., ,, 6.—Applications for the Lawrence Scholarship to be sent in.
Mon. ,, 8.—Examination for Matriculation (London) begins.
Tues., ,, 9.—Dr. Tooth and Mr. D'Arcy Power on duty.
Wed., ,, 10.—Clinical Lecture (Surgery), Mr. Waring.
Fri., ,, 12.—Dr. Garrod and Mr. Waring on duty.
Clinical Lecture (Medicine), Dr. Garrod.
Mon., ,, 15.—First and Second Examinations for M.B.(Camb.) begins.
Tues., ,, 16.—Examination for Third M.B.(Camb.) begins.
Dr. Calvert and Mr. McAdam Eccles on duty.
Wed., ,, 17.—First and Second Examinations for M.B.(Oxford) begin.
Clinical Lecture (Surgery), Mr. Bailey.
Fri., ,, 19.—Dr. Morley Fletcher and Mr. Bailey on duty.
Clinical Lecture (Medicine), Dr. Tooth.
Tues., ,, 23.—Dr. Herringham and Sir Anthony Bowlby on duty.
Wed., ,, 24.—**Midsummer Day.**
Clinical Lecture (Surgery), Mr. McAdam Eccles.
Cambridge Easter Term ends.
Fri., ,, 26.—Dr. Tooth and Mr. D'Arcy Power on duty.
Clinical Lecture (Medicine), Dr. Calvert.
Mon., ,, 29.—D.P.H. Conjoint Examination begins.
Tues., ,, 30.—Dr. Garrod and Mr. Waring on duty.
Examination for Shuter Scholarship begins.
Wed., July 1.—Clinical Lecture (Surgery), Mr. McAdam Eccles.
Thurs., ,, 2.—Second Examination Conjoint Board begins.
Fri., ,, 3.—Dr. Calvert and Mr. McAdam Eccles on duty.
Clinical Lecture (Medicine), Dr. Fletcher.
Mon., ,, 6.—Second Examination for Med. Degrees (London), Part II, begins.
M.D. and M.S. Examinations (London), begin.
Second Examination of Society of Apothecaries begins.
Tues., ,, 7.—Dr. Morley Fletcher and Mr. Bailey on duty.

EDITORIAL NOTES.

THE thirteenth day of May witnessed the annual celebration which we call View-day. As on previous occasions clouds threatened us in the early hours, but owing to an anti-cyclone in the south-west and a high-pressure area over the coast of Norfolk, the hydroscopic state of the atmosphere was such as to enable the visitors to attend in large numbers. The day was eminently successful, and we believe that the attendance was a record one.

* * *

From time to time we receive letters from far-away Bart.'s men complaining of the paucity of news concerning the clubs, and we publish one such letter in another place. We know that on previous occasions it has been said "If the secretaries don't send in their reports, let 'em go without!" That attitude, while dealing explicitly with the situation so far as the secretaries are concerned, altogether overlooks the fact that club news is not published for the sole edification of the secretaries. We therefore suggest, in no apologetic manner, that the said secretaries should attempt to let us have full and up-to-date accounts of the various happenings of the clubs, and that they should remember that in days to come they will themselves be in a position where they are dependent upon their successors for the news which links them with the past.

* * *

The Annual Athletic Sports will take place at Winchmore Hill on June 13th. It is hoped that all Bart.'s men will be present, and that most of them will take an active part.

* * *

The Past *v.* Present Cricket and Tennis Matches and Garden Party will take place at Winchmore Hill on June 17th. Old Bart.'s men who wish to play should send their names to Mr. N. F. Norman, at the Hospital.

A band will play in the grounds and refreshments will, as usual, be provided. We hope that there will be a large

attendance of Bart.'s men, past and present, together with their friends.

* * *

In our last issue we published a supplement containing the names of Bart.'s men who are on the staffs of the different hospitals in the United Kingdom. Of necessity the work had to be commenced some six months ago, and the medical directory was that of last year. Under the circumstances it was impossible for us to avoid errors both of ommission and commission. We beg to thank those who have called attention to such errors, and to ask that all readers would be good enough to send us notices of errors or alterations, which we shall publish from time to time as they arrive. In this way we shall hope to keep the list up to date, and to publish it as a special supplement with every May issue of the JOURNAL.

* * *

An editorial note in the May issue which introduced an allusion to the National Health Insurance Acts, has called forth some friendly criticism.

It would perhaps be interesting to many old Bart.'s men who read the JOURNAL if some now on the panel would send in short accounts of how the work has impressed them, and if others who are not on the panel would indicate how the working of the Acts had affected them also. No names would be mentioned, but a selection of the brief articles received would be published.

* * *

We desire to call attention to the special post-graduate vacation courses held at this hospital. These will begin on Tuesday, September 8th, and end on Tuesday, September 22nd. Practitioners entering for this course are entitled to attend not only the special classes for clinical and laboratory instruction, but also any part of the practice of the hospital. Full particulars may be obtained by writing to the Dean of the Medical School.

* * *

We extend our heartiest congratulations to Dr. C. Hubert Roberts, formerly Resident Medical Assistant and Demonstrator of Practical Midwifery and Obstetrics at St. Bartholomew's Hospital, who has been awarded a prize of £250 by the Local Government Board for his success as Public Vaccinator to Queen Charlotte's Hospital.

* * *

We have to extend our heartiest congratulations to the following: Dr. J. F. Gaskell, who has been elected F.R.C.P., Messrs. R. R. Armstrong and T. H. G. Shore, who have obtained the M.R.C.P., and Mr. A. L. Weakley, who has been admitted F.R.C.S. (Edinburgh).

* * *

For the benefit of those Bart.'s men who may not have received notices of the Decennial Club dinners we have been asked to announce that the Club will meet as follows: The Seventh Decennial on Wednesday, July 1st; the Eighth Decennial on Wednesday, June 24th; the Ninth Decennial on Wednesday, July 1st.

ERRATUM.

An unfortunate mistake found its way into Mr. Brockman's article in the May number of the *Journal*. Page 131, line 6, for "had not healed" read "had not leaked."

A BART.'S MAN IN THE BUSH.

By ARTHUR ANDREWS, M.R.C.S., L.S.A.

HAVING to leave the Old Country for health's sake in 1873 I reached Melbourne early in the following year. Having heard much about the "Bush" as the back country of Australia is still called, I took advantage of some of my shipmates taking a trip into the interior, and came to the portion of New South Wales known as "Riverina." Though only a few miles from the head of the railway, in the middle of the hot Australian summer I found the accommodation at the so-called hotel decidedly rough. Water supply and sanitary matters were primitive, no luxuries, and a limited variety of food, but plenty of strong drinks, which almost every one seemed to take every opportunity of "shouting" for friend or stranger. However there was a silver lining to the cloud in the shape of a brother medico, overworked and anxious for assistance. This induced me to settle, and with the constant exercise in the open air health was soon regained. The township was small, with ill-formed streets, mostly unlighted at night, while the only comfortable, and often safe, mode of travelling on the country roads, was in the saddle. I often now look back on that time, and wonder how the young doctor of the present day, who must have his car and other nice things, would have succeeded. My journeys on horse-back, frequently of fifty or sixty miles in the day, have extended to eighty, ninety, and nearly one hundred without rest, and on one horse. I have had to start at night seventy miles out on horse-back to a midwifery case. How fit I should have been to use forceps, etc., if the case had not been fortunately over before my arrival! Another time I had to travel all night ninety miles through mountainous country to an accident, and at the end of the trip found a case of ruptured kidney. As an adjunct the patient's wife and brother were both suffering from acute attacks of delirium tremens, and the only help was a tutor, who had been keeping the two latter quiet by giving them frequent nips of whisky. No medicine to be had nearer than home, so that Nature had a good chance to show her powers.

At another time, when I was extremely busy, I received a call one evening to a sheep station forty-five miles away to see a teething child said to be dying. I had an important engagement for nine next morning, so that my feelings may be imagined when, after a hasty journey, I found that all that had happened was that the infant had "gone to sleep," which alarmed the mother. I kept my appointment next morning.

Again, once when riding home very tired after two nights spent in the saddle I was overtaken by a half-intoxicated undertaker, who forced his company on me, and only left after I had given his horse a sharp cut with my hunting crop, he having offered me 10 per cent. on all funerals I should send to him.

Another experience was a drive of eighty-six miles in pouring rain, in the depth of winter, finding no less than four times that the road was washed away (necessitating considerable deviations), to make a post-mortem. When I arrived at the house where the death had taken place I found that the body had been taken to a small township some miles away, and had to follow. On reaching the place I was obliged to take the body into the local church for examination, there being no other public building available.

Bushranging had hardly died out, and many were the yarns duly instilled into the "new chum," so that when riding in a lonely part, quite five miles from the nearest house at 3 a.m., I heard shouting, followed by a gunshot, which startled my horse, I did not interfere with his gallop till in sight of the next residence. At that time the population was scattered, fences few, scarcely a formed road, no bridges except over the main river, mostly narrow tracks, which one followed merely because they appeared to lead in the desired direction, and one always knew that following the freshest would be most likely to be right. The settlers, as a rule poor, but most hospitable and ready to share whatever they had, and quite injured if you did not stop for a "bite" and a "yarn." In a bad season I have had to take a horse seventy miles before being able to get him a drink, and then could not venture to have one with him on account of decaying matter in the water-hole.

It is marvellous that bad cases did so well. There was none of the present antiseptic dressing and treatment except carbolic acid, no trained nurses as now, none but the bush "Gamp," goodhearted, untiring, but without the faintest idea of cleanliness. Midwifery was an awful ordeal. One would be called to a case far from home to find that labour had been in progress perhaps two, three or even four days. I have seen the bladder so over-distended that it was constantly dribbling, and had not been emptied for as much as four days when the use of the catheter was all that was required to allow the case to terminate. One was not allowed to use chloroform, from prejudice against relieving the normal pain which woman was heir to, making the use of instruments a real torture to both patient and attendant. Still, though hæmorrhage was frequent from exhaustion of the uterine muscle, sepsis was rare. When it did set in the course was rapid, and treatment of little use. It was quite a common thing to be detained for twenty-four or more hours with a case, where the friends had been a little more anxious than usual.

My first operation for ectopic pregnancy was in a small cottage. The only assistance, a rough neighbour of about 16 st. weight, who quietly settled down against the door as soon as I made the first incision and remained there helpless and probably harmless throughout. I am glad to say that the patient is still alive.

Another time a call at 10 p.m. to a rough mountainous mining camp where four men had been injured by an explosion of dynamite. One was quite blind, another had a large wound just below the umbilicus with protrusion of bowel. After dressing them rough stretchers had to be made and parties arranged to carry them five miles to the nearest road that a vehicle could travel, to take them to the hospital twenty-four miles away.

Again, a call at 11 a.m. on a Sunday to proceed forty-four miles and make a post-mortem on a man that had died suddenly. It was in the mountains, and I arrived in time to meet the funeral just outside the cemetery close to the little township. Much persuasion was required before the bearers were persuaded to return to the "pub." with the body. Reaching that place admission was refused and I was told that "the diggers had held an inquiry and were satisfied that the deceased had died from natural causes and that they would not allow him to be touched." The solitary constable that should have been there had not turned up, darkness was coming on and I had a pressing engagement at home the next morning. Obtaining the help of the only two responsible persons I could find, the body was placed in a strong stable where we could shut ourselves from interference. My examination was finished by the light of a candle and the problem was then to get away safely. The delay had enabled the miners to get a little more drink and taking the opportunity when a fresh "shout" was called, I slipped away by the back of the premises and hid in a friendly cottage down the street. A return journey starting before daylight, and at another township, calling up the J.P. who was to hold the inquiry to take my evidence, I succeeded in getting home to breakfast.

Many and great the changes since. Good roads, trained nurses, private hospitals (four in this little town), skilled assistance, railways, and cars make life in the "Bush" quite a different matter. Possibly there is more comfort, but one misses the old spirit of good fellowship and hearty welcome, given in the early days to all travellers whatever their circumstances.

A CASE OF GANGRENE OF THE RIGHT FOOT, FOLLOWING INJURY TO THE POPLITEAL ARTERY BY A BULLET.

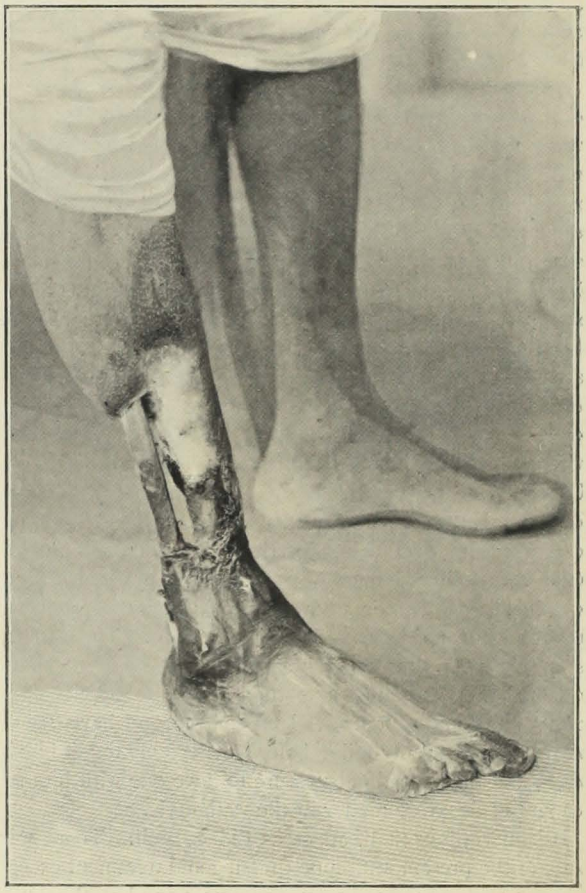
By J. C. JOHN, M.B.Cantab., Lt. I.M.S.

THE patient, a Mussulman syce, æt. 41, was standing by watching a quarrel between two Pathan sowars when the accident occurred.

LIEUT. J. C. JOHN'S CASE.

On admission to hospital he was found to have a fracture of the lower end of the femur and a lacerated wound of the popliteal space. The bullet had entered 2 in. above the inner condyle of the femur and the exit wound was in the popliteal space.

There was no profuse bleeding, but on examining the wound under an anæsthetic the popliteal artery was found to be divided, but the vein had escaped injury—the severed ends of the artery were ligatured and antiseptic dressings applied, also a long Liston splint—the wound healed easily and the bone had united in six weeks. No pulsation was present in the dorsalis pedis artery. Three months later the patient came to hospital complaining of coldness in his right foot; the foot presented the appearance of commencing dry gangrene, the toes and foot as far as the bases of the metatarsal bones being involved. The patient refused to stay in hospital and went home to return four months later with the leg and foot in the condition seen in the photograph. The line of demarcation seems to be fixed, the tibia and fibula are exposed and dry and the foot quite mummified. He refused operation and now parades the station platform where he shows his limb to the passengers and makes quite a decent living. He is in the best of health and has every intention of living to a ripe old age.



LIEUT. J. C. JOHN'S CASE.

A CASE OF ICTERUS GRAVIS FROM THE SURGICAL WARDS.

By G. L. KEYNES, M.R.C.S.

THE following is an account of a rare condition which is seldom diagnosed during life, and, in this case, presented a characteristically puzzling clinical picture.

The patient, a young woman, æt. 24, was admitted to Mr. Waring's wards on March 22nd, 1914, complaining of jaundice. She stated that she had given birth to a healthy child on June 13th, 1913, which was weaned in the following September. Shortly after her confinement she noticed that she was becoming jaundiced, and she suffered from loss of appetite and vomiting, but she does not appear to have been very ill until, in September, 1913, she had a sudden attack of acute pain, starting in the right hypochondrium and travelling upwards in the mid-axillary line and downwards into the right iliac fossa. The pain was accompanied by rigors, sweating, and vomiting. In December, 1913, she had another less severe attack of pain, but noticed that after the attack she became more deeply jaundiced. She had a third attack in January, 1914; the jaundice again became darker, but after this varied in intensity.

On admission in March, 1914, the patient was obviously jaundiced, but did not appear to be very ill. There was some tenderness in the region of the gall-bladder, and on percussion the liver dulness, which started above at the fourth intercostal space, did not quite reach the right costal margin; otherwise nothing abnormal was discovered. The case was felt not to be a clear one, but in view of the history a provisional diagnosis of cholelithiasis was made. Dr. Garrod was asked to see the patient before any operation was done; he agreed with the provisional diagnosis, but also felt that the case was not a straightforward one.

On March 30th, 1914, the gall-bladder was exposed, but no stones could be found in the gall-bladder or ducts. The surface of the liver was seen to be irregular, and a swelling seen in the right lobe of the liver near the neck of the gall-bladder was explored with an aspirating syringe, but nothing except blood could be drawn off. The walls of the gall-bladder were thought to be somewhat thickened, and it was therefore removed; a section subsequently showed it to be the seat of acute catarrhal inflammation. Nothing further was done, and the patient made an uninterrupted recovery from the operation. The stitches were removed on the eighth day, and the wound was then found to have healed by first intention. The patient did not appear to be more ill than she had been before the operation, and she was definitely less jaundiced. On the following day, however, March 8th, she was evidently worse, and had a hæmatemesis of about an ounce of dark blood; occult blood was also found in her stools. She had no further hæmatemesis, though hæmorrhage appeared to continue in spite of treatment, and she died early the following morning with all the signs of acute anæmia.

A *post-mortem* examination of the abdomen was allowed and the following condition was found: The stomach, small intestines, and peritoneal cavity were full of blood, which had not come from any bleeding point, but had occurred as a general oozing from the omentum and from the mucous membrane of the stomach and intestines. The liver was somewhat small and contracted and the surface was rough; the stump of the cystic duct was firmly tied off and a probe could be passed down without obstruction into the duodenum. On section, the liver, especially the right lobe, was studded with enormous numbers of small, brilliantly yellow areas, which had somewhat the appearance of new growth. A microscopical section showed degenerating liver-cells and strands of fibrous tissue enclosing numerous so-called "regenerating bile-ducts." The pancreas appeared normal.

This was therefore a case of icterus gravis simulating cholelithiasis and is of some interest, both medically and surgically. Death did not take place until nine months after the patient was confined, and it may be doubted whether there was any connection between the two events. Since the diagnosis of icterus gravis had not been considered during life, the urine was not examined for leucin and tyrosin, which are said to be present in this condition.

The liver from this case has been added to the specimens in the museum.

I am indebted to Mr. Waring for permission to publish these notes.

THE PROFESSOR'S EXPERIMENTS.

By PAUL BOUSFIELD.

[*From the memoirs of his assistant and secretary, Gertrude Delaney, D.Sc.*]

No. IV.—MATTERS OF MUCH GRAVITY.

MOST people view life through the wrong end of the telescope; they judge by the results instead of by the aims and efforts. Judged by the results, some of the Professor's hitherto unpublished work is deplorable, yet I cannot but think that there may be unseen benefits accruing in the future, and there certainly are excellent morals to be derived in the present. The discovery of the green paste is an illustration; however, I will not labour the point.

As a whole the Professor's experiments were expensive, and he could never have attempted most of them had not ate lined his pockets with gold. High fees are always pay-

able in the school of experience; there are no deductions, and all extras must be paid for whether taken or not.

I fear that hypercritical scientists may cavil at the paucity of accurately detailed information which I am able to give in this memoir. The meagre nature of this is, however, unavoidable for two reasons. In the first place, Professor Mudgewood was even more secretive than usual about this matter, and the knowledge I gleaned was sketchy and disconnected; while in the second place, I was myself so much part of the phenomena during one stage of the proceedings, that I was quite unable to make observations with any degree of accuracy.

The Professor had been away for a week. He had given no explanation when he departed, but on his return he was quite voluble for a few minutes.

"I have rented a house, Delaney," he exclaimed as soon as he entered his laboratory.

"Rented a house!" I repeated in amazement.

"Tut, tut, my good woman—don't echo my words in that silly way," he said, frowning irritably, at which I felt very wroth indeed. Echo his words! He echoed his own words every few minutes, and to speak to me, a Doctor of Science of London University, in this manner—well—I had to keep my temper, but it was difficult.

"I have rented a house," he said again; then repeated very thoughtfully, "a house."

"What for?" I asked, in even tones.

"For experimental purposes, Delaney. I rather think it will be safer than carrying them on in the laboratory. A set of experiments which I am about to undertake is rather problematical. I cannot foresee the results as clearly as usual, and having in my mind one or two previous incidents, I have determined that the work shall be done in the country, so that there shall be no danger to my valuable apparatus and to neighbouring property. I don't anticipate danger, but one can never tell—one can never tell."

"May I ask," I said, "what the nature of the experiment is?"

"It is a question of the force of attraction. You yourself suggested it to me when I discovered Magnetos."

"What force of attraction do you mean?" I asked.

"There is only one—I feel sure there is only one," he replied slowly, nodding his head as if to convince himself. "That one consists of the circular currents in the ultimate element—the 'Ether,' as men call it."

I shrugged my shoulders—he had not enlightened me much. He saw the movement, and seemed rather pained.

"Dear me," he exclaimed, "you should not do that—you should not do that. The matter is very simple—I refer to gravity and cohesion."

"But they are quite different forces," I replied, puzzled. "Why, it has been *proved* that——"

He interrupted me impatiently. "They are the *same*—absolutely the same. *All* forces are the same, but they may be expressed in different terms. If you wait a few months you will see—you will see."

I had to rest content with this, for no more would the Professor say. A week afterwards, however, he abruptly informed me during breakfast that he wished me to accompany him to Waltham Downs, where his new house was situated, to go into the question of ways and means with him.

I sat in the corner of the first-class compartment opposite to the Professor. We were the sole occupants of the carriage, and to my delight he suddenly referred once again to the subject, beginning exactly where he left off a week previously. This was very characteristic of the Professor.

"I said there was one force in nature. I made a mistake—there are two."

"They are?" I queried.

"The etheric force—gravity, cohesion, and the rest, *and* life. Life is distinctly a separate force."

"Why do you call life a separate force?" I asked.

He looked up at me as though much surprised.

"Dear me," he remarked, placing his glasses on the end of his nose and tilting his chin up that he might survey me better. "Dear me—really—I should have thought——" He paused, then went on, "I say life is a different force, because it is totally unconnected, so far as I can see, with any other force. Thus, a man lives: he can, by *will power*, ordain that a certain force shall move his arm; by *will power* he changes a physical force from one term into another. The man dies. The chemical and physical properties of his body are for a few moments the same as before. No loss of heat, or electricity, or weight, or any other measurable property has taken place, but something has gone—the something which enabled him to control his forces—the force of life."

But is that a force?" I questioned; "or is it a property quite distinct from a force?"

For answer the Professor asked another question.

"The locomotive with steam up does not start itself. What starts it? What enables the great force of steam pressure to be changed into motion?"

"A man," I replied, "who moves a lever."

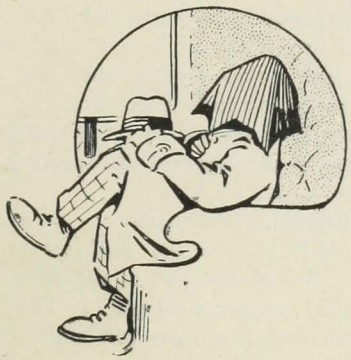
"Quite so—quite so. An external force, small indeed, is needed. Nevertheless, a force sufficient to move the lever. Without it the engine would be a dead body. So it is with us. Will power, life—*that* is needed before the forces of the body can be put in motion, before organisms can grow. Will power may be merely an expression of the force of life, as heat is an expression of the force of gravity. Is the matter clear?"

It was *not* quite clear, but the Professor did not wait for me to reply. He went straight on with his theme.

"Apart from life there is only one force, a force which I firmly believe will be found to consist in circular currents

in the etheric atoms, which may indeed be nothing more than circular currents themselves. Where do all our forces come from? Electricity, for instance. We trace it to the dynamo; thence back to the pressure of steam in a boiler; thence to inert lumps of coal; thence to primeval forests; thence to growth generated by the sun's rays; thence to the sun; thence to a nebulous body of gas, or to the concurrence of several cold bodies and their consequent fusing; thence to motion, thence to—what? Gravity causing the motion, or, further still, to the forces in the ether which form atoms, which bind molecules, which coalesce, which are cohesive, and which gravitate to one another. One force! Only one!"

He had said these things almost in one breath; but, nevertheless, his line of triumphant argument was quite clear, albeit it reminded me rather of a fact which I learned in my early days, that Nun begat Joshua, *und so weiter.*



IN THIS CONDITION HE REMAINED TILL WE REACHED WALTHAM DOWNS.

He ceased as abruptly as he had commenced, settled himself comfortably in his corner, spread his large red handkerchief over his chubby little face, and went to sleep. In this condition he remained till we reached Waltham Downs.

The village is a small one, and we walked through the main street to reach the Professor's house, which lay about half a mile beyond the village. The house stood back from the road about a hundred yards, and was approached by a fine avenue of elms. A large shed of corrugated iron was erected some thirty yards from the road, just off the avenue. This, the Professor explained, was his store-room for gravity!

It was a large shed, perhaps thirty-five feet long by twenty feet broad, and it was well lighted by means of half a dozen windows.

As we walked up the avenue, I stepped on to the turf at the side, and up to the shed to take a cursory glance through one of the windows.

"Some of your apparatus has already arrived, then," I exclaimed. "There is a large machine in the corner, which looks as if it were intended for the liquefaction of gases."

"Quite right—quite right," replied the Professor, as he stepped to my side and looked in also.

"What are those large tanks?" I asked.

The Professor smiled.

"Can you not recognise a Dewar's vessel when you see one?" he cried. "Surely you can see that the glass is double?"

"Yes," I replied; "but they are so large. I did not know that a vacuum vessel of such size could be made."

"It can, if one pays for it," was the grim rejoinder.

We turned away and passed up towards the house. The Professor let himself in with the key, and I found that he had already furnished two bedrooms and a sitting-room, and had had gas and water laid on in what had evidently been the billiard-room once, but which was now to become the laboratory. We went through the house, from the upper windows of which a magnificent view was obtained. Behind lay the rolling downs with their gorse and heather. In front, at the end of the avenue, came the road, which wound its way to London, twenty miles distant. Across the road were four semi-detached villas, only one of which was yet occupied, and beyond these again lay well-wooded fields and pasture lands. No other houses were in sight.

I did not take much notice of this at the time, for I was wondering what the liquid air apparatus was for—and those Dewar vessels—what part did these things play in matters of gravity? For a long time I forebore from asking questions, lest the Professor should turn on me with the remark that the whole matter "was so simple." At last I ventured to ask, and my surmise was justified. He sighed wearily, and responded:

"It is very simple, Delaney—quite simple. However, since the pin-point which you term a brain is not sufficiently educated to deductive reasoning, I will try and elucidate the matter for you."

The patronising way in which he spoke was almost more than I could stand. But I knew that allowance must be made for a great man; therefore, though I muttered something more expressive beneath my breath, I merely replied "Thank you" in somewhat chilly tones.

The Professor did not seem disturbed. He scratched his head, wiped his face with his red handkerchief; then, stroking his chin thoughtfully, turned and gazed through the window, and addressed the scenery outside.

"As we take heat from any substance, the molecular vibrations become less, and if we could reach the absolute temperature of minus two hundred and seventy-three degrees Centigrade, these vibrations would cease altogether."

"What would happen then?" I interjected, interested.

"What happens if you put a weight on to a glass marble, and gradually increase the weight?" he asked by way of reply.

I considered a moment. It was always well to consider carefully before answering the Professor.

"First of all, the glass would be compressed and become more solid in its character. Finally, it would be smashed into a thousand fragments.

"Exactly, *exactly*," was the response. "Only at the absolute zero, I believe, matter would disintegrate altogether. The disturbance in the forces of the ether, which constitute what we call matter, would be remedied, and what we call matter would be disseminated into its primordial particles. Indeed, I regard heat as being a symptom rather than a disease. When we say that heat is passing through a hot body to a cold, it would be more correct, I believe, to say that force—cohesive force—is flowing from the cold body to the hot, and that the apparent equalisation of temperature is merely a symptom of equalisation of cohesive force. It will be quite clear to you that cold bodies possess more of this force than hot ones; that is why they are more solid, and occupy less space. If we then place a body under such conditions that we notice heat loss in it, we have placed it under such conditions that it is drawing this force from surrounding bodies until it reaches a point at which it is fully charged. At this point we notice no further possibility of lowering the temperature, and I believe that the state of unstable equilibrium would cause the disintegration of the body. We can never reach the absolute zero; but I have devised a storage battery, which, kept as near that temperature as possible, is capable of storing a vast quantity of gravity or cohesive force at a high potential."

Now I come to the first matter which will disappoint some scientists. In view of subsequent events, the Professor bound me with an oath of permanent secrecy; therefore I am not going to tell you how the Professor produced or, rather, collected his force. Suffice to say that it was accomplished by a process of induction, and that he used a "Gravity Induction Machine." The chief constituents of his storage batteries were glass plates and sheets of bitumen, and, instead of wires, he used "conductors" of glass surrounded by bitumen. The storage batteries in the shed were connected by means of such conductors with the laboratory, and here his first real tests were carried out.

We had cooled down our batteries, which were made up in the large Dewar's vessels, or, rather, according to the Professor's view, we had charged them to a high degree with cohesive force. We were about to store a very small quantity of "induced" gravity in our cells, taken by means of a conductor from some object in the laboratory, and now we were to find out what, if anything, there was in the Professor's mathematics, for the whole matter had been arrived at through abstruse calculations of the Professor in the first instance.

We stood before the bench in the improvised laboratory. Upon it rested a glass slab embedded in pitch. Above there was suspended a movable glass rod coated with the same material. Through the open window came the scent of the gorse and heather, and the droning of bees—no, it was the hum of the induction machine in the shed!

The Professor removed his glasses, wiped them, and replaced them. Then he rubbed his hands together in schoolboy glee.

"Now, Delaney!" he cried.

He picked up a cube of wood, some five inches square, and placed it on the glass slab. Then he drew down the glass rod until it touched the top of the wooden block.

There was no visible change at first; but the Professor poked the wood with his finger. It was soft—like putty!

The Professor quivered with excitement.

"We're drawing it out—drawing it out!" he cried.

"What?" I asked.

"The cohesive force. The wood has less cohesion now—look."

Again he poked it. This time his finger went right into it. The curious part was that the wood seemed quite *dry*, and in that sense unlike putty, and it did not adhere to the finger. I tried it myself: it was more like poking a block of soft powder than anything else—only there was no powder. It was a most curious sensation.

Suddenly the wood seemed to be getting flatter, *yet not broader nor longer*. It appeared to be sinking through the plate!

"What is happening?" I cried.

"Look—look!" shouted the Professor in a frenzy of excitement. "The bottom part of the wood has lost *all* cohesion—where it touches the plate! The particles have separated; the molecules—the very atoms have disintegrated!"

Slowly, before our eyes, the piece of wood settled down and disappeared—just as a pat of butter settles down on a hot frying-pan! But there was no melting, and no remains; only the bare glass!

"It is astounding," I said, scarcely able to believe my eyes. "Think what this means, applied to surgery, for instance! The removal of malignant tumours; the cure of——"

"Tut, tut!" the little man interrupted, frowning. "The *chief* thing is that it proves my mathematical calculations to have been strictly logical. The whole syllogism is correct. As for surgery—we shall see. Perhaps—perhaps not—perhaps *not*." He removed his glasses, and with some irritability tapped the top of his head with them. He never seemed to appreciate my suggestions. I feel sure that I could have earned a fortune for him with this discovery, like I did with one or two of his others, only he seemed to value that at—well, to tell the truth, at its proper value, I suppose—nil! To him the *truth* was everything, the personal *result* nothing.

"There is another matter I wish to test," the Professor said, after pausing a moment. "I feel sure my idea—the two forces, you know—hum—well——" He rubbed his

nose thoughtfully. "I suppose you haven't a mouse?" he added, half hopefully, half apologetically.

I could not subdue a laugh. "Really, Professor, you should have discovered by now that I am not perfect. I do *not* happen to possess a mouse; but if you could wait till to-morrow I might set a trap—two traps—and possibly——"

"Yes, yes, by all means. Of course—very silly of me. What is the price of a trap? Will you go and buy one or two now? Not expensive ones, you know—not expensive ones. Don't spend more than, say, ten shillings."

The Professor had no more idea of the price of household commodities than a child of two. However, I got the traps, and in the morning was favoured with a fine specimen of the rodentia, which I handed to the Professor.

He placed it, in the trap, on the glass slab, and poked the little animal from time to time. It was unchanged, quite unchanged. After a time the trap got "soft," and the little animal, none the worse for its experience, jumped through the bars and sped lightly away. The trap disappeared.

A LITTLE CHLOROFORM.

Again the Professor rubbed his hands. "Life *is* a force: a living organism is so controlled that it cannot part with its cohesion. It is bound by strong fetters, a force which outmarshals gravity. Now, if the mouse were *dead*, Delaney!"

"Professor?"

"Dear me, I am absorbed in my other thoughts." He apologised. "Catch another mouse, and wring its neck, or do whatever is usual in such cases."

"A little chloroform!" I suggested.

"Yes, yes—certainly, chloroform."

The next day we experimented on the dead mouse. It "melted" down and disappeared in the same way as the block of wood had done.

"This is very good—very good," said the Professor. "But I am anxious to try things on a larger scale. I hardly think we ought to do this work in the house. We will transfer our bench to the shed, I think—yes, that will be best—be best."

So two or three days later we were to be found at work in the shed.

The Professor's idea was to store a considerable quantity of gravity in his cells, and then to charge various bodies with it, and experiment in a variety of ways. Unfortunately, he never completed his experiments—they were altogether too expensive.

We laid three conductors from the shed to points about forty yards distant from it; two of them extended towards the road on either side of the avenue, and one lay in the direction of the house. The object of this distribution was to take gravity from widely separated sources, so as not to disturb any fixed thing in the shed, lest it should be unpleasantly affected.

It was about nine o'clock in the morning when we set the apparatus to work, and at twelve o'clock we "knocked off" to take a little lunch, which we enjoyed beneath a large elm tree in the grounds.

A confused murmur of voices attracted my attention.

"There seem to be a good many people in the road over there," I remarked, pointing to a spot some thirty yards to the right of our entrance gates.

The Professor looked up. "I dare say—I dare say," he replied, without much interest; "villagers going home to dinner."

But the villagers did not appear to be going home. The shouting continued, and I heard one man cry out, "I tell 'ee it's acid in the road. The soles iv my boots 'ave gone, too!"

This sounded interesting, and I jumped up and, running down to the gate, looked along the road.

A dozen men were stamping about, perplexed and angry. *They were ankle deep in the road*, and at each step they seemed to *to break through a hard layer or crust* into some soft substance underneath. I wondered!

"I TELL 'EE THE SOLES IV ME BOOTS 'AVE GONE."

With a cry of "Professor," I ran along just inside the hedge, but ere I reached the point opposite to where the men were "wading," my own feet began to sink in. It was like walking on butter, only it was dry and did not stick. The earth and turf *looked* solid enough, but my feet sank through, until at last I was walking with the earth up to my knees. Curiously enough, it did not impede my progress; it was much easier to walk through the earth than to wade through water of equal depth. I guessed at once what had happened. The end of the gravity conductor was buried close to this spot.

In two minutes the Professor joined me, hopping on tip-toe, as though his subconscious mind feared lest he should get wet.

"Dear me—most gratifying—*most* gratifying!" he exclaimed, with a beaming countenance.

"The poor men outside hardly find it so," I remarked dryly. "Apparently they stood too long, and the soles of their boots became soft, and disappeared. Cohesion seems to be at a discount here!"

The Professor chuckled, and looked at me. "Lift up your own feet," he cried. "One at a time, of course—one at a time!"

I did so: the soles were bare.

I whistled. "By jove, Professor, you'll kill those men," I cried, and prepared myself to beat a hasty retreat.

But he held up his hand warningly. "You forget—it has no effect on living organisms. It will be all right when we reverse the current. The road will become hard again, unless—unless——"

The throbbing of a motor-car interrupted him. The owner of the car, seeing the men "wading" in the road, dismounted in order to prospect.

"I think we can get through," he cried to the chauffeur. "But go slow. It's queer—devilish queer!" he added.

The car went forward at the rate of about a mile an hour; but a cry from the owner brought it to a standstill in the midst of the watching group.

"I've lost my boots," he said. "What devil's game is this? Look at the bally road—it's a bed of salt with the crust knocked off! Here—I'll get in and be off. This stuff will probably burn my feet. Lord knows what's happened, or what these beggars are up to," he added, pointing to the staring yokels. "Probably the County Council has some new road-perfecting scheme on—usual expensive experiments."

He reached the car, and was just lifting a bare foot towards the step.

Bang!

"There's a bally tyre burst—and in the middle of this mud, too! Here, quick—get out the jack and put the spare rim on!"

Alas for the jack! Ere it was under the rear of the car another tyre went off with a loud explosion, and in quick succession the remaining two followed suit.

"Of all the . . . ! . . . ! . . . ! . . . !" I leave the adjectives the owner of the car used to be filled in by the imagination.

He resolved to ride out of the "mire" without tyres, and went to search for the jack. But it was no longer there.

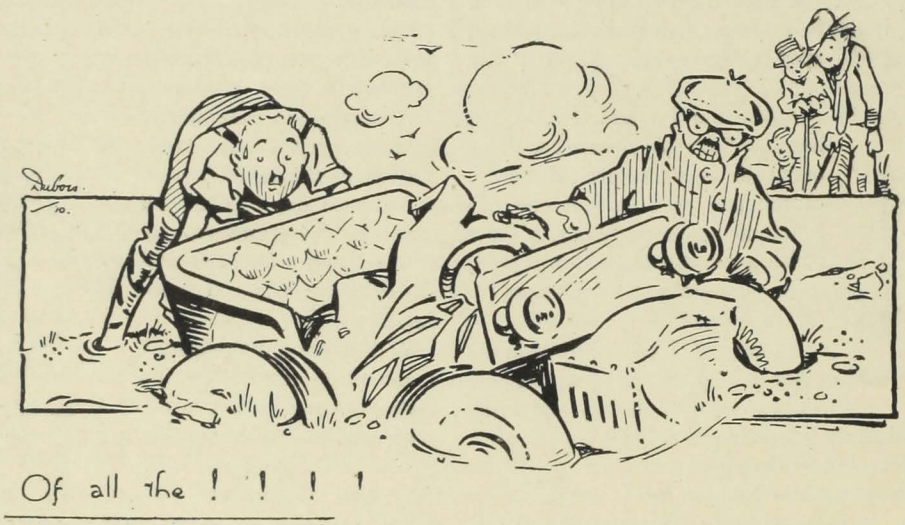
"It's a blessed quicksand!" he exclaimed, and mounted the car. It refused to budge, and was obviously settling down into the earth before our eyes. The axles of the wheels were just disappearing.

"Is it really sinking into the ground?" I asked.

"No, no," the Professor replied, shaking his head. "The bottoms of the wheels have gone—the whole of it will go. It's too late to stop it."

So it proved. Like the flat piece of wood in the laboratory, it settled down and disappeared, while the owner, thinking that it was merely sinking, set off at full speed for the village to obtain assistance for the recovery of a car which was ceasing to exist.

We walked back to the shed.



"Shan't you turn that force off now?" I asked. "Surely this sort of thing will bring trouble undeservedly on many people?"

"Not yet. The car would have been all right if the fool had driven straight on. No—I will have a *little* more—just a *little* more. It would be a pity to stop now we have got so far. We will let it run all through the night, and turn it off at eight in the morning. No, no—I *must* have a little more." He shrugged his shoulders impatiently and entered the shed.

That night we retired to rest in the house with the distant hum of the machine droning in our ears. I had my misgivings, for during the morning it had only been working at low pressure. To-night it was set at "full speed ahead!"

I awoke about seven o'clock in the morning with an unpleasant conviction that something was the matter. I could still hear the merry humming from the shed, and I sprang from my bed in some trepidation.

The floor seemed to slope queerly. I ran to the window—my room was in the front of the house—and looked out. Between myself and the houses on the opposite side of the road was a great circular pit with sloping sides. On an island mountain in the centre stood the shed. The avenue was gone—the grass—the shrubs! Part of the road had disappeared. Nothing but yellow clay remained in these parts. Evidently, after becoming soft, the matter had disintegrated entirely!

I did not stop to see more. Hastily I ran to the Professor's room and informed him what had occurred. Besides, the sloping floor made me surmise that the pit was extending to the house. I rushed back, and hurriedly threw on my clothes, the Professor meanwhile doing the same. Then together we descended the stairs. They seemed shorter than before—and the hall!

"The foundations of the house have gone—and three feet of the walls!" exclaimed the Professor. "Look there!" He pointed to the hall door. Only about four feet of it remained; we should have to stoop to get through.

HE RAN—RAN AS HE HAD NEVER RUN BEFORE.

The handle was just above the floor! The floor—it was clay! The rest had gone, and the ceiling was close to our heads.

Somehow we got the door open, and we began to run down the sides of the pit, towards the shed.

"I have forgotten the shed key!" exclaimed the Professor, and turned back again.

"Don't go back!" I shouted. "Come here—quick—run!"

He ran—ran as he had never run before, with his little legs twinkling and flickering down the pit side and up the hill upon which stood the shed. The house was falling. Slowly it heaved over; then, with a crash, rolled pell-mell into the pit.

"A close shave!" exclaimed the Professor; "a close shave! That reminds me—I have not shaved this morning. Dear me—dear me!"

Was ever a man so callous of external happenings?

He was panting with the exertion, but mechanically he took his glasses from his pocket, polished them carefully on his red handkerchief, and, placing them upon his nose, calmly surveyed the scene of devastation.

Then he went up to one of the windows of the shed and looked through.

"Tut, tut!" he exclaimed in tones of annoyance. "One of the cells has cracked, and the conductor is broken. We must break in and stop that oil engine at once; we shall have that cell short-circuiting and discharging concentrated gravity. It will break the others up. Dear me, how very annoying—how *very* annoying! There may be polarisation, too!"

He continued his inspection through the window, but I dashed to the door, and, the lock being flimsy, soon found myself inside the shed.

I had not moved three steps inside, however, before I was dashed to the ground, and as I fell I heard a crash of splitting glass. An enormous weight seemed to press me down, to stifle me and hold me. Gravity was being discharged!

In five seconds this passed away—the circuit was broken again, or polarisation had ceased. I know not which. Anyway, the current was reversed.

I sat up and looked around me in a dazed way. Outside lay the Professor, gasping.

"Come outside. If that happens again the shed will fall in!"

I was about to do as he told me when it *did* happen again. Down to the ground I went with a thud, and the clay became solid round my hand, so that I could not move it! I gave myself up for lost, when to my relief the pressure was once more relaxed, and the clay grew soft. I withdrew my hand, and scrambled out of the hut. The Professor, too, was rising to his feet.

"How very unpleasant!" he gasped. There was a crash of glass. "Another cell gone!" he groaned. "How very unpleasant—*most* unpleas——!"

"Ugh!" I grunted as I fell again with crushing weight upon the ground. One of the Professor's arms was across my leg. It might have weighed a couple of hundredweight, and it caused an enormous bruise.

This time we did not get up, and for fully ten minutes we were alternately drawn ruthlessly to earth by an overwhelming gravity, and then mercifully released and allowed to breathe.

Meanwhile we caught glimpses of what was happening where the four houses had stood. I say *had* stood.

Only the upper storey existed now. They had not fallen over, but had sunk to earth evenly, and the terrified inhabitants of the one occupied house were running hither in all states of semi-attire. The terminals of one unbroken conductor were near this spot, and consequently they were suffering from the fact that *gravity was still being drawn from the ground where they were.* The effect of this was that as ever and anon they were pulled to earth obediently, and lay there for a moment after the pull had ceased, they were lying in the exact spot where their clothes would begin to disintegrate.

The consequence may be imagined.

These happenings came to an abrupt close. There was another violent earth-pull. The shed crashed to the ground. A momentary shock as though a thousand tons were upon us. Then all was over.

We rose to our feet. Several people were lying on the ground by the roofs of the houses—all that was left!

"It's a good thing that the sub-soil is clay about here," remarked the Professor.

"Why?" I queried, rather astounded at the remark.

"Because the normal cohesion is restored, and those people with hands and feet and knees and other portions of their anatomy in the earth, would have to be freed with hammer and chisel if it were stone! As it is they will be alright, and I shall send them full compensation—anonymously, of course."

His nose was bleeding; so was mine. His glasses were gone—broken. He was black and blue upon face and hands—and no doubt elsewhere as well.

"What are you going to tell people—what is the explanation to be?" I queried as we scrambled towards the road.

"Nothing. We are victims of an earthquake—like the rest." He smiled grimly. "Now for a hat, a bath, a meal, and—a shave." He paused aud sighed: "A shave."

We walked towards the village.

"It might have been really serious," he said thoughtfully. "As it is, it is merely expensive—very expensive."

"Serious?" I echoed. "I call it serious."

"No, no, Delaney. Hardly serious—only expensive."

"Well," I answered, falling in with his manner, and trying to forget my swollen features and aching limbs, "at any rate, you will agree that it is *a matter of much gravity.*"

He stopped abruptly on the dusty road, and looked at me severely.

"As a rule, I deplore puns—I deplore them." Then he chuckled. "But this one really has a point—er—to be paradoxical—a broad point."

We resumed our weary way to the nearest inn.

WE RESUMED OUR WEARY WAY TO THE NEAREST INN.

THE ORTHOPÆDIC DEPARTMENT.

By R. C. ELMSLIE, M.S., F.R.C.S.

THE surgery of deformities is as old as surgery itself, but the name orthopædics is of comparatively recent date. In 1741, M. Andry, Professor of Medicine in the Royal College, and Senior Dean of the Faculty of Physick at Paris, published a work, the English translation of which, published two years later, was entitled: *Orthopædia; or, the Art of Correcting and Preventing Deformities in Children.* In the preface to this work, Andry says: "As to the title, I have formed it of two Greek words, viz. Ὀρθὸσ, which signifies straight, free from deformity, and παιδιον, a child. This derivation of the name of this special branch of surgery needs emphasising, inasmuch as many, even in the medical profession itself, seem to associate the name with the Latin *pes*, a foot, and to consider that the prime function of Orthopædics is the treatment of affections of the feet. Andry further likens his title to those of two previous works, one published in 1584 by Scévole de Sainte-Marthe, entitled *Pædotrophia*, and dealing with the manner of suckling infants, and the second published in 1656 by Claude Quiller, entitled *Gallipædia*, and consisting of a poem dealing with the method of getting beautiful children, a subject which has lately again come into prominence under the name of "Eugenics."

Andry's book is of interest at the present day for several reasons. Its author was a physician and no surgeon. The work itself was intended to be a popular one; it dealt chiefly with the prevention of deformity and with the more trivial defects, and paid very little attention even to such surgical methods as were in vogue in the eighteenth century. Consequently, although it gives little or no clue to the developments of orthopædic surgery which took place in the following century, it is an excellent introduction to the preventive methods which are now becoming important as the result of systematic examination of children in schools and consequent endeavours to prevent the development of certain deformities whose origin is largely due to mechanical factors.

Much of Andry's advice will bear repetition at the present day. In speaking of the care of the clavicles, of the shape of the chest and of stooping, he calls attention to the necessity for securing that "When Children are in Gowns, they should be so made that the Openings of the Sleeves may allow them sufficient Liberty to turn the Arms outwards," and again that "Parents ought above all Things to give their Children new Stays frequently, and not grumble at the expense. A pair of too tight Stays in eight Days' time are capable of spoiling the body entirely, especially if they press upon the forepart of the Chest." There are also