

he is delighted to read a few paragraphs later: "I have already criticised the failure of physicists to pay sufficient attention to physiology. *Per contra*, I much doubt if there are many physiologists who really understand the remarkable juggling feats of König, Helmholtz, Abney and other physicists."

These are pretty sharp stimuli, and if we would do honour to their author, we cannot do better than respond as he would wish. There is no very obvious sign in 1948 that all the remaining colour vision problems are about to be solved; our aim must be to fill the gaps with experiment rather than theory, and to make sure that our experiments are designed on sound principles such as Sir John Parsons would approve.

THE FIRST IRISH OCULAR PATHOLOGIST

Arthur Jacob—(1790-1874)

BY

L. B. SOMERVILLE-LARGE

DUBLIN

It is fitting that Arthur Jacob, the first Irish ocular pathologist, be recalled in this number of the Journal.

Although I can find no evidence in Jacob's biographies, or in his own numerous papers, that he ever actually practised any branch of medicine other than ophthalmology, he, like most of the medical giants of his age, was far from being satisfied by a mere speciality. He founded two ophthalmic hospitals, and took a leading part with others in founding both a medical school and a general hospital. He was joint founder and sole editor for 21 years of a medical journal. For 41 years he was a Professor of Anatomy and Physiology. Scientifically, he will be remembered as the first to describe the nervous layer of the retina (*membrana Jacobi*) and the rodent ulcer of the lids (*Jacob's ulcer*), and in the field of medical politics as a tireless fighter for medical reform, a dauntless champion of doctors' rights and a fearless opponent to all forms of quackery.

The details of his life need not detain us. Born in 1790 near the town of Maryborough (now Portleix), in Queens County (now Leix), the son of Dr. John Jacob, surgeon to the Queens County Infirmary, and grandson of Dr. Michael Jacob (Ballinakill), he came of a stock that had been in the midlands of Ireland for some centuries. The family was English and Jacob appears to have been a direct descendant of the Jacobs who had lived in Kent in the

13th century. The Irish branch was granted land in County Wexford in 1669, and one of the family fought in the Battle of the Boyne (1690) for King William ("of glorious, pious, and immortal memory"). Arthur Jacob served his apprenticeship with his father in Maryborough and under Abraham Colles (of fracture fame), in Steevens's Hospital, Dublin, proceeding to Edinburgh to graduate M.D. in 1814. Following graduation he travelled 960 miles on foot throughout England, visiting medical institutions, and ended by crossing to France and walking to Paris. He was proud of this characteristic feat, and it is a pity he left no account of it. Napoleon's escape from Elba (1815) hastened him back to London, where he spent some months in the departments of Sir Astley Cooper, Sir Benjamin Brodie and Sir William Lawrence. By attending Lawrence's clinic at the "Dispensary for Curing Diseases of the Eye and Ear" in Charterhouse Square, later the Royal London Ophthalmic Hospital, he became the first of many Dublin oculists to enjoy the "Moorfields outlook" in ophthalmology. A personal friendship developed between Jacob and his three famous teachers, and continued until the time of their deaths, Lawrence being one of the few ophthalmologists whose work he consistently praised.

Arthur Jacob from Dublin was thus attending England's first eye hospital in the same year as were Edward Delafield and John Kearney Rodgers from New York. There is no evidence that they got to know each other, but it is at least an attractive guess and made especially so by their subsequent rôles as founders of eye hospitals.

On returning to Dublin Jacob became an anatomical demonstrator to James Macartney, F.R.S., "the greatest anatomist and physiologist that Ireland has produced," and at that time Professor of Anatomy in the University of Dublin. While there he added much to the anatomical museum which Macartney later sold to Cambridge University. It is worth noting that Jacob's work for the museum was that illustrative of the absorbent system, his interest in this if not started was no doubt stimulated by his period in London with Sir Astley Cooper, then deeply engrossed in the subject. After two years' work with Macartney, Jacob wrote his famous description of the nervous layer of the retina (1819). In 1817 he commenced clinical ophthalmic work in Sir Patrick Dun's Hospital. In 1826 he was appointed Professor of Anatomy and Physiology to the Royal College of Surgeons in Ireland, and was on three occasions elected its President. After forty-one years' whole-hearted devotion to the interests of the College he resigned, and while still actively fulfilling his professorial duties, retired to Barrow-in-Furness in Lancashire, where he died five years later

(1874) at the age of eighty-five. He became Member of the R.C.S.I. in 1816, and in 1863 had the M.D. (Hon. Caus.) granted him by Dublin University.

MEDICAL FOUNDATIONS

The 19th century was in Dublin, as elsewhere, a period of hospital foundations. Seven institutions were started in the city between 1814 and 1872 for the cure of diseases of the eye. Arthur Jacob founded two of them and his son (A. H. Jacob) one. When only twenty-seven years of age, and after little more than twelve months' residence in the city, Jacob founded in Kildare Street Dublin's second ophthalmic hospital—"The Charitable Institute for the Cure of Diseases of the Skin and of the Eye" (1817). This foundation was but three years after Dublin's first ophthalmic hospital had been opened by Commander Ryall, and twelve after Mr. Saunders had founded England's first ophthalmic hospital, later to become the Royal London Ophthalmic Hospital. Jacob thus was early in the field with his first eye hospital, beating Delafield and Rodgers foundations of New York's first eye hospital (the New York Eye Infirmary) by three years. The "skin" side of the institution was not handled by Jacob but by his dermatologist chief Professor Macartney, and was discontinued after a few years when the name was changed to "The Institute for the Cure of Diseases of the Eye." In the same year, 1817, Jacob and Macartney were "given permission to see eye and skin cases respectively in one of the empty wards" of Sir Patrick Dun's hospital. This appears to be the first purely ophthalmic appointment to a general hospital in Dublin. Jacob carried out operations for cataract in his Institute, but does not appear to have done any teaching there. He closed this hospital after six years to found, with the great Dr. Graves and others, the Park Street Medical School. This became one of the most famous of Dublin's private Medical Schools. A contemporary account of the school from the *Lancet* of 1825 on the occasion of Jacob's giving the opening lecture recalls it vividly: "Tossed to and fro, like a ship in a gale, we ascended to the theatre, and soon found ourselves seated amidst a dense multitude, where we could easily perceive that neither elbow room nor liberty of conscience was to be expected . . . a neat theatre, originals and imitations both in abundance; here lay a fish that would have made a gourmand's teeth water; there a copper-plate, almost making the shadow as real as the substance itself; while between them rose skeletons in the naked majesty of bare bones and pride of varnish."

Jacob left Park Street Medical School two years after its foundation on his appointment of Professor of Anatomy and Physiology

to the R.C.S.I. (1826). In the same year he was elected to the full staff of Sir Patrick Dun's Hospital, which post he retained for the next 27 years. As, however, this hospital was wholly medical and as Jacob's appointment was a "surgical" one, it is unlikely that he did more than act in a consultant capacity—and perhaps see out-patients there. Certainly three years after his appointment he founded his second eye hospital—"The Ophthalmic Hospital," 1829, in Pitt Street (now Balfe Street). Here Jacob gave "clinical instruction" and "taught operations" for the modest fee of three guineas for three months. This little hospital was maintained and run solely by Jacob and has the distinction of being the only hospital in Dublin that during its entire existence was exclusively devoted to diseases of the eye. After some years as Professor of Anatomy and Physiology, Jacob, feeling the College was handicapped by the fact that many of the Staff were unattached to any teaching hospital, joined with his colleagues as the prime mover in the foundation of the City of Dublin Hospital (1832). There he had beds and taught clinical ophthalmology for twenty-four years. This, the last of his foundations, was the only permanent one and remains to-day as "The Royal City of Dublin Hospital." On its opening Jacob closed his Ophthalmic Hospital in Pitt Street.

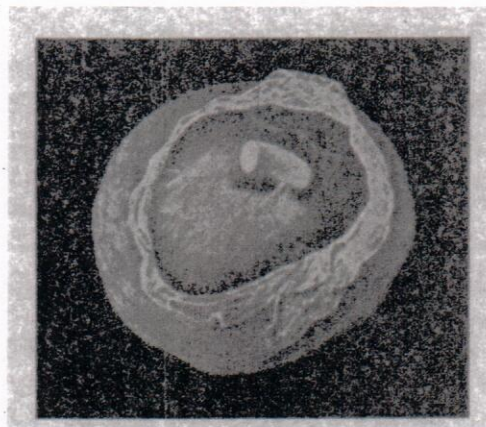
MEDICAL EDITOR

Jacob's contribution to foundations for the practising and teaching of ophthalmology, extensive as they were, are overshadowed or indeed wholly forgotten by his work as a fighter for medico-political reform. He became in 1837 assistant editor to the Dublin Journal of Medical Science but had to relinquish this post probably due to his personal attacks on medical colleagues. Two years later he founded with Henry Maunsell the "Dublin Medical Press," and remained its editor and inspiration for 21 years. This Journal later moved to London, and it still flourishes under the changed name of "The Medical Press and Circular." Although we know that robust language was at that time common in medical controversy, the force of Jacob's editorials and medico-political articles make strange reading to us a century later. He assails a professorial rival with "the chronic medico-literary diarrhoea under which the learned Professor has so long laboured," "the heterogeneous discharges with which he inundates the journals," "the foetid ichor which distills from such a quill." The editor of the Lancet (1841) is no less outspoken. "Messrs. Jacob, Maunsell, Porter, all the rag, tag and bobtail of the College School, hatched in corruption, though they still linger about the dunghill that gave them birth." In the heat of medico-political conflict to-day it is

well to remember that our medical forebears thought equally strongly a century ago. It is also of interest when reviewing the momentous medical changes of to-day to recall that Jacob in "The Medical Press," although strongly advocating the central control of local charities was anxious to retain the element of "charity," and foresaw danger in establishing a "centralised iron-bound medical service." The Medical Press keenly supported the Medical Act of 1858, but resented the improved status it gave to apothecaries. All Jacob's fights for reform were for his profession and his College. He took up arms immediately if he considered that either were attacked or the smallest disrespect shown to them. Any suggestion of professional quackery or advertisement called forth his most vitriolic utterances, and amongst these he powerfully denounced the practice of "going snacks," the attractive term then used for what we now call "fee splitting." In 1839 he went so far as to print a list of doctors, many of them high in the profession, whose names appeared in commendation of proprietary articles. His literary output was immense. During the 22 years of this editorship none of the weekly editions of the Dublin Press failed to carry something from his pen. Jacob's medico-political speeches and papers, though perhaps failing from their very vehemence to carry conviction, can certainly never be said to make dull reading.

MEMBRANA JACOBI

Jacob read his "Account of a Membrane in the Eye" before the Royal Society in 1819. At that time anatomists described the retina as consisting of two parts, "the medullary expansion of the nerve, and a membranous or vascular laver." the former being



"Membrana Jacobi"—the figure illustrating Jacob's original description in the eye of a sheep—*Philosophical Transactions*, 1819.

next the choroid and the latter next the vitreous. Jacob wrote: "It is not the nervous layer which I detach . . . because I leave the retina uninjured." Again he states that this membrane "besides being attached to the retina is also attached to the choroid coat." He therefore considered it to lie between the choroid and the retina. What, however, he described and illustrated and what is named after him, "membrana Jacobi," is not the retina but what we now know to be only its neural layer. If we were to replace the inaccurate clinical term "detachment of the retina" by "detachment of Jacob's membrane" we would be anatomically correct. To the end of his life Jacob himself never seems to have realised the true nature of his important discovery.

His method of demonstrating this membrane was to fix the posterior half of the eye to a piece of glass covered with an inverted glass sphere, the whole was filled with water so that the eye floated and the sphere acted as a magnifying glass. The preparation was then capable of being passed around the class for examination. That it was not wholly successful is suggested by the semi-serious account of one of Jacob's students in the Park Street Medical School (*Lancet*, 1825). "In some papers published in one of the periodicals, Jacob lays claim to the discovery of an undiscovered something in the eye; but not a creature we believe gives credit to the assumption. We were ourselves present when he attempted to describe this 'mare's nest,' but neither we, nor any of those around us, could see the imaginary creature." However, the anatomical world could see the "imaginary creature," and Jacob's discovery had world wide recognition.

His anatomical dissections of the eye were very delicate, and in a period with few optical aids it is intriguing to consider what part his undoubted myopia may have played both in these and in his interest in the study of the minute. In 1823 he read a paper entitled, "Inquiries respecting the Anatomy of the Eye," before the Medico-Chirurgical Society of London. Here he described and produced illustrations of the membrana pupillaris. In one case that he illustrated he had succeeded in injecting a single vessel of this membrane at the 9th month of gestation. His observations led him to refute the then prevailing theory (of Blumenbach) that this membrane disappeared by a rent taking place in its centre and the vessels contracting to the iris, his contention being the now accepted one that the membrane "loses its vascularity, becomes exceedingly thin and is finally absorbed." By removing the cornea he demonstrated what we now know as Descemet's membrane to have no resemblance to the cornea itself ("no two membranes can perhaps be more dissimilar") but to be of "precisely the same nature as the capsule of the lens."

He left his entire anatomical museum containing some beautiful paintings of the iris on ivory to the R.C.S.I.

JACOB'S ULCER

"Observations respecting an ulcer of Peculiar Character which Attacks the Eyelid and Other Parts of the Face" appeared in the Dublin Hospital Reports for 1827. Here, Jacob describes with



"Jacob's Ulcer" and Jacob's cataract needle, from the original illustration. (*Dublin Hospital Reports*, 1827).

comprehensive accuracy the condition now known as rodent ulcer (Jacob's ulcer). Time has added little to his original description, "the characteristic features of this disease are the slowness of its progress, the peculiar condition of the edges and surface of the ulcer, the comparatively inconsiderable suffering produced by it,

its incurable nature unless by extirpation, and its not contaminating the neighbouring lymphatic glands." He mentions local and general treatment only to condemn them, and his finding that early surgical removal offered the only hope of cure held for the best part of a century. Jacob was jealous of this paper and never failed to draw the attention of subsequent "discoverers" of this ulcer to it.

AS A SURGEON

As a surgeon Jacob is best remembered by his treatise on "The Removal of Cataract as Performed with a Fine Sewing Needle through the Cornea." Although this was published in 1850 he had previously written both of his cataract needle and the operation he recommended in 1827 (Dublin Hospital Reports). The needle is an ordinary round sewing needle (No. 7 in size), bent at the point. This bending Jacob did himself, and he states that five or six needles in a hundred would stand the bending without breaking. Makers' attempts to reproduce his needle he despises—however, it is illustrated in Weiss' catalogue of 1865—and he recounts in detail both how to bend it and how to fit it to a handle. Of the value of both needle and operation he is characteristically dogmatic. He writes that some despise the needle "because it has not the imposing appearance of a finely polished blade with ivory handle and silver ferrule," but warns those "fond of improving surgical instruments to suit their peculiar notions" that it must be exactly to his specification. He concludes, "of the superior qualities of this needle I have not the slightest reason to change my opinion. It is, I am satisfied, by many degrees the best for the purpose." Alas that time has proved him wrong. Of the operation for cataract extraction, then coming into vogue, he states that although "malicious persons will say that I advocate this operation (of needling) because I cannot perform that of extraction," it is "on account of its hazardous nature a disgrace to surgery." Few of us would disagree with him in those pre-anaesthetic days.

His dramatic description of an eye operation as carried out 120 years ago, recalling as it does so clearly the character of the surgeon, must be given in his own words. "I seat the patient in a chair and make him sit straight up or inclining, according to his height. If very tall I raise myself by standing on a large book or two, or on anything which answers the purpose to be found at hand. In my own place of business I find old medical folios answer the purpose well; operating chairs, although very imposing and calculated to produce effect, I have not adopted, not finding myself at ease with such things. When he is seated I lay the patient's

head against my chest, and placing the middle finger of my left hand on his lower and the forefinger on his upper eyelid, and gently holding the eye between them, I strike the point of the needle suddenly into the cornea, about a line from its margin, and there hold it until any struggles of the patient, which may be made, cease. There must be no hesitation here, for if the cornea be touched without fixing the point of the needle in it, the eye will turn rapidly and the surface will be scratched. I advise the operator to pause here for a moment, holding the eye firmly and steadily on the point of his needle, and if necessary to say a word of encouragement or remonstrance to the patient." How vividly one sees the patient "struggling" on the point of the needle while seeking composure through the surgeon's "words of remonstrance." Jacob broke the lens up strongly, and he states that absorption took place remarkably quickly, patients sometimes being able to read within ten weeks. It is interesting to note that he cites the frequent occurrence of post-operative vomiting lasting often for 24 hours, and attributes it to the action of the broken lens on the iris. Jacob did not coddle his patients, "the less of bed the better, and the sooner the drawing room is made the place of convalescence, the better also." Whatever time may have decreed in respect to his needle and operation, we can endorse his conclusion, "the truth, perhaps, has never been told with respect to the result of cataract operation and perhaps never may be told."

Jacob has left us accounts of two other operations—for trichiasis and entropion. That for trichiasis appears to be original, although perhaps the credit should go to the patient. He "drilled a needle into the root of the inverted eyelash and then held a lighted taper to it until the part into which it was inserted was burnt to whiteness." For entropion he advocated the horizontal splitting of the tarsus and then everting it with sutures as described by his contemporary, Sir Philip Crampton. Jacob vividly demonstrated one such case pre-operatively to his students, "observe her scalded turned-in lids, depressing countenance, with profuse tears warning me that I have to encounter a struggle in which physical force must be relied on more than persuasion." No wonder.

Jacob was a conservative surgeon. He disapproved of paracentesis (for inflammatory conditions), and strongly criticised iridectomy, an operation he never seems to have carried out. For the "muscle-cutting candidates for fame" he had nothing but scorn, assisted perhaps by the fact that Sir William Wilde wrote approvingly of it. In acute dacryocystitis he recommended opening the sac through the conjunctiva rather than through the skin.

VARIOUS PAPERS

In 1843 Jacob criticised "an attempt to make the study of pathology into a distinct department . . . but why or wherefore no one can tell . . . it is the province of the anatomist, physiologist, the teachers of medicine and surgery and the clinical teacher." However, he not only was zealous in carrying out post-mortems, but in 1846 wrote a long paper entitled "On Diseases of the Eye as a Guide in the study of Pathology." In this he points out that due to the transparency of the cornea, the exposed condition of the conjunctival vessels and the easily seen delicate iris tissue, morbid processes are well observed and studied in the eye. In these, he writes, the "accurate observer has living proof of what he supposes may be going on in other places under similar circumstances, but which he cannot demonstrate until death enables him to expose the parts." A century later we find ourselves returning to Jacob's pathological concept of the living tissue undergoing morbid changes.

In the "Cyclopaedia of Practical Medicine" (1834), Jacob contributed long articles on "Ophthalmia" and "Amaurosis." When considering "Egyptian Ophthalmia" he mentioned that so heavily infected were the troops lately returned from the Middle East to Ireland that a special ward was opened for them in Steevens' Hospital under Mr. Colles. On "Amaurosis" he contributed over 18,000 words, and it must seem strange to us, living in an age that takes for granted visual examinations of body cavities, that neither here nor in his account of the membrane that bears his name, nor in his writing on retinitis, did he ever consider the possibility of actually seeing the fundus of the eye.

Helmholtz made his fundamental discovery in 1850 and Jacob's contemporary in Dublin, Dr. H. Wilson (the natural son of Sir W. Wilde), published his book, "Theory and Practice of Ophthalmoscope" in 1868, yet I can find no suggestion that Jacob himself ever saw the ocular fundus. His first comment on the ophthalmoscope was in 1855, "not one man in 20 will be able to manage this instrument," and a year later he writes, "all we ask about the ophthalmoscope is that performers on it will not require us to believe all they say as to what they see through it." Jacob's famous rival, Sir William Wilde, showed an equal lack of enthusiasm, and he also never appears to have seen the human fundus.

In 1848 Jacob published his only book, "A Treatise on the Inflammation of the Eyeball." In spite of Mackenzie's classical text-book this uninviting, poorly printed, unillustrated pocket-sized volume seems to have had a real popularity in Dublin. There is reasoning in it beyond its time. Jacob repeatedly insisted that in

"iritis" all the uveal tract must be considered to be involved. He denounces wholesale cupping and, in opposition to Mackenzie, denies that inflammation takes place in the lens. He draws attention to social conditions among the poor ("badly fed, improperly clothed and miserably lodged") as a cause for ocular inflammation. And flies in the face of accepted custom by criticising the well to do who follow "the usual unhealthy practice of sleeping in a bed hung round with curtains to exclude light and confine foul air," in bedrooms, "more like the crowded storerooms of furniture dealers than apartments provided for human beings." Jacob would assuredly be in the forefront of social medicine to-day.

Jacob's mechanical bent is shown by a paper on a "Proposed Improvement in the Construction of the Cistern of the Portable Barometer" (1826). Instruments incorporating this suggestion were constructed. He also wrote and illustrated "A Description of an Apparatus for Injecting the Absorbent Vessels" (1825), a mechanical problem that intrigued him for many years. Comparative anatomy always interested him. One summer he heard that a dead whale, found floating off the West coast of Ireland, had been seized by the officers of the Admiralty. Although "probably six weeks dead and the weather being warm it provided a most uninviting subject for dissection"—he dissected it while floating and brought back specimens for his museum. Another time he made haste to buy a whale that had been washed ashore on Killiney Strand, near Dublin, and dissected it there. He wrote on the "Intra-orbital Cavities in Deers and Antelopes," on "The Mammary Gland in Cetacea" and on Sun Fish, as well as accounts of these whales.

Jacob was so keen a clinical observer that one is hardly surprised to find him passing beyond the merely physical. In a long paper with a resounding Victorian title, "An Essay on the Influence of the Imaginations and Passions in the Production and Cure of Diseases" (1823), he embarks on psychology and boldly advocates "that the power of the imagination and passions extensively influences the ordinary operations of the animal economy, and that the same influence is not only capable of producing diseases but of contributing to their removal." We are only now commencing to realise the truth of his assertion—"I fear, however, that our knowledge of the animal economy is far too limited to enable us to decide what diseases may or may not admit of cure from an impression of the mind." It is characteristic of Jacob's scientific approach that, unlike most of his medical contemporaries, he is not prepared just to sneer at the cures that he quotes in this paper as resulting from charms, amulets, and such like, but is prepared to give the whole subject serious consideration. This interesting

contribution is a clear call, made 120 years ago, for psychological investigation.

THE MAN HIMSELF

Arthur Jacob lived in a large five-storied Georgian house in Ely Place (No. 23)—a quiet street of good houses and wealthy inhabitants. His house was half way between his two centres of interest—his hospital (The City of Dublin) and his College (The Royal College of Surgeons), a pleasant walk of half a mile from each. No doubt this assisted him in his almost invariable custom



Arthur Jacob's house—23, Ely Place.

of commencing hospital work at 8 o'clock in the morning. All his life he was a man of great physical energy, nothing else could have permitted him to get through his hospital work, his "punctual and energetic professional duties," "his extensive private practice," and his large weekly literary output. His son tells us that his custom was to retire to bed after dinner (a 6 o'clock meal in the Victorian era), for a few hours' sound sleep, then to arise and "after tea" to spend most of the night reading and writing. Dr. Van Loon, physician and friend to the artist Rembrandt, is stated to have said that he could judge of a patient's character by the books at his bed side. Jacob's library of some 1,500 books he left to his college. It is not all composed of scientific volumes. There are also many books of travel (although once settled in Dublin Jacob never seems to have gone farther than London and that only very seldom), and many on the scientific aspects of agriculture (although as far as we know he never farmed), but perhaps stranger still are numbers of volumes of poetry, including the *Odyssey* and the *Iliad*. Something can surely be judged of a man by the library he makes, and on this assumption a surprisingly gentle side of Jacob is revealed.

The photograph reproduced is from a portrait done when Jacob was in the middle thirties. The *membrana Jacobi* was discovered, and Jacob's ulcer described. He sits at the corner of a table, sleeves rolled back, scalpel in hand, just about to divide an eye and mount it under the glass sphere that stands ready—thus to demonstrate his discovery. In the official portrait of him painted 35 years later for the Royal College of Surgeons he sits in much the same position in a similar chair at the corner of a similar table, his hair still curls and his very spectacle frames seem similar, but the face is lined and stern and the attitude uncompromising. At about the period of the younger portrait he is described by one of his students: "A gentleman of duodecimo stature so neatly habited that the affectation of the *simplex munditiis* could not disguise the assured indifference to toilet arrangements and exterior appearances. He was harnessed in a pair of spectacles so admirably fitted . . . that one might have mistaken the whole optical apparatus as the natural production of the parts . . . over the springs of this beautiful piece of mechanism hung two luxurious ringlets of beautiful auburn hair. . . . Around the medley of organs . . . there breathes a halo of kindness and conciliatory effulgence of good nature." We must agree that this account suits the portrait, but as the years passed much of the "halo of kindness" passed also, and he became as brusque and cantankerous in his manner as he became intolerably critical in his writing. Of a retiring disposition, a burner of the midnight oil and one who shunned even

the mildest convivialities, Jacob was undoubtedly an introvert. Although his aloof manner may have denied him many personal friends, his unselfish character earned him a score of sincere



Arthur Jacob—circa 1830.

admirers. He suffered from an ever present fear of showing the smallest suspicion of self-aggrandisement. This, as well as his intolerance of manner, is seen in his retort to the friends and colleagues who sought to honour him by a presentation. Knowing his feelings in this matter they were at some pains to decide on

something that he might accept. Finally, a medal was decided upon with Jacob's portrait on the obverse and suitably inscribed on the reverse. A gold one was struck for himself, a silver one for his brother (Dr. John Jacob of Maryborough), and bronze ones for the members of the presentation committee. These completed, the committee waited on the professor to request his acceptance (1860).



The Medal presented to Arthur Jacob.



Arthur Jacob's ink-bottle.

His reply is quoted by his son in "The Medical Press" (1874)—
 "I cannot accept of this or any other testimonial, but if at my death you still think that I deserve it, you may nail it on my coffin." History does not relate how he was persuaded, but persuaded he was, and a year later he attended a dinner held in his honour at the Royal College of Surgeons, when the medal was formally presented to him. His portrait was also ordered to be painted by the Council, and it hangs there to-day in the Examination Hall. His bust, too, is granted an honoured place in the college.

There is, however, another more personal reminder of Arthur Jacob's 44 years' work in the college. It is a mis-shapen penny ink bottle now mounted in silver and with an inscription which tells us it was his. If it shows the parsimonious character of the user it also shows the sincere respect of those that came after him. Men only do these things in memory of those they honour.

Jacob married Miss Sarah Coote Carrol in 1824, the same year as the Park Street Medical School was founded. He had five sons. The eldest (John Alexander) went into the church, the second (Samuel) became an oculist in Melbourne (Australia), the third (Arthur) was a civil engineer in Bombay and later in Barrow-in-Furness, the fourth (Archibald Hamilton) succeeded his father as oculist in Dublin and editor of "The Dublin Medical Press," and the fifth became an engineer in Travancore, S. India.

There can be no doubt that the ophthalmological tragedy of the 19th century in Dublin was the personal animosity of Arthur Jacob and William Wilde. Two dominant, energetic, and essentially intelligent men of wholly different character. The Wildes, Sir William, Lady Wilde (Speranza) and their son Oscar were spectacular extroverts. Wilson has shown us that Wilde himself was a *bon viveur*, kept a generous table, and rejoiced in the company of authors, scientists, nobility and peasants alike. He was 25 years younger than Jacob and died but two years after him, so that during almost his entire active life Jacob edited "The Medical Press." Yet the older ophthalmologist hardly ever mentions his brilliant young contemporary, and then only to condemn his work. Wilde writes a long, detailed, and most instructive report on the condition of the "Union Poor House Hospital" in Tipperary. This calls forth from Jacob an editorial headed sarcastically "Wilde's Pastoral," severely critical because Wilde outlines the treatment of ophthalmia to the local medical officer and thereby offends Jacob's idea of professional dignity. Again an American doctor visits European clinics and Jacob sneers, "in Dublin he is sure to dine with Dr. Stokes and sup with Surgeon Wilde." (We cannot refrain from envying this American wanderer). He never

mentions the internationally known eye hospital (St. Mark's Ophthalmic Hospital), founded and run by Wilde, nor does he give any notice to Wilde's innumerable scientific articles. Wilde, when editor of "The Quarterly Journal of Medical Science," deals more kindly with Jacob "if we were writing as historians simply and not in our editorial capacity, we might offer some remarks of the tone and style of 'The Dublin Medical Press'—but under existing circumstances we deem it more proper to refrain."

For forty years these two men dominated the ophthalmology of Dublin, and who can doubt that had they but combined in its organisation and scientific advancement the gain to the nation's medical life would have been great indeed.

Without the enthusiastic assistance of Professor Widdess, M.A., Librarian and Lecturer in Biology at the Royal College of Surgeons in Ireland, and of Miss O'Brien, Assistant Librarian at the Royal College of Surgeons, the writing of this paper would not have been possible. To both I tender my sincere thanks. I am also indebted to Prof. Moorehead, who very kindly advised me over Jacob's association with Sir Patrick Dun's Hospital. Dr. Greene, of Norwich, a descendant of Arthur Jacob's was good enough to supply me with the photograph of Jacob's portrait that is in his possession. Mr. W. R. Jacob (London), Mr. R. F. West (London), Mr. Prior-Kennedy (Darlington), and Mrs. Kennedy (Tullamore) have all put me in their debt by personal communications on their ancestor. I am greatly obliged to Miss Thompson who went to much trouble to produce these excellent photographs.

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