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# EARLY HISTORY OF EDMUNDSON'S & CORNWALL ELECTRIC POWER COMPANY

*We have been approached by family of two engineers, Leo Hards and James Tripp, who worked for the Cornwall Electric Power Company in the early days, and in the process of research the following articles have been "unearthed" from our archives. Grandson Colin Hards has been particularly keen having made the journey from Norfolk to our Archive in Bristol and has joined the Society. It was thought that the information would be of interest to our membership and also very entertaining.*

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**EARLY DAYS of EDMUNDSONS**

**by L. A. HARDS**.

(Extracted from Edmundson's Monthly – Dec.1940)

*(This article dealing with the early days of Edmundsons was started by Mr. Hards, but not completed at the time of his death. In view of its interest, one regrets that it was not completed.)*

I do not know the date when Edmundsons opened their first premises in London. I suppose it must have been sometime in the early eighties. I believe that Edmundsons of Dublin was started by members of the family who came from Newcastle, and that the original members of this family were not Irish but English north country from somewhere near Newcastle. They were followed by the Wighams, who were the leading members of the firm, when I first joined it. They were related to the Edmundsons I believe by marriage, and when they joined the business they did a great deal to develop it. There was Mr. John R. Wigham, father of Mr. J. C. Wigham (the Corporation's original Managing Engineer) and Mr. Henry Wigham. Mr. Henry was not so much interested I think in the London business as he was in going to meetings in London of the Society of Portends, or what we English people usually call Quakers. Mr. John R. was more interested in the business. There is no doubt that these gentlemen, who were much respected by all who came in contact with them, had by their energy and persistence developed a very substantial business in Dublin. Amongst other things they became interested in the installation of private gas plants for large private houses. By their success they were encouraged to open a branch in London, of which they made Mr. F. E. Gripper the Manager. Mr. Gripper was, I believe, a native of Nottingham, and was also a Quaker by extraction. He was a very capable, reliable and hard working man, and did a great deal to develop the business of private gas installations in large country mansions in England. This was of course before the days of electric lighting. Mr. J. R. Wigham was also interested in lighthouses and did a great deal of work in connection with lights round the Irish coast, both lighthouses and floating lighted buoys.

During this period there had been some development in electric lighting. Swan, the photographic chemist, had invented the first real practical carbon filament lamp. The first lamps were made of platinum wire, but these were impracticable for general use. What was wanted at the time was a filament of some high resistance, which could be heated to a high temperature in a vacuum, the light produced depending largely on the temperature at which

the filament could be maintained without destruction. This was provided by a carbon filament and a great deal of ingenuity was expended on the provision of suitable pumps to obtain a sufficiently high vacuum, as the smallest amount of oxygen would sooner or later destroy the filament. Another trouble was the sealing of the leading in wires, and it was found that the most suitable metal for this purpose was platinum, which apparently has the same co-efficient expansion as glass. At first only lamps with short filaments were made and only suitable for very low voltage supplies. Edison was working on the carbon filament lamp in America, and took out a very large number of patents, but I believe that Swan of Newcastle produced the first practical carbon filament lamp, an illustration of which was recently given in the Electrical Review. Prior to this the means of electric light was by the arc lamp, which was much too powerful and expensive for domestic and ordinary shop lighting. It was quickly seen that although arc lighting was installed in many of the large shops and in railway stations, in the incandescent lamp, a suitable means of domestic lighting was now available.

The Swan Co. was formed in England and the Edison Co. in America. There was very soon litigation over various patent rights, and the upshot was a combination in England, and the formation of the Edison and Swan United Electric Light Company that is in existence to-day as a large lamp manufacturing concern. Edmundsons were closely in touch with the Swans and it was, I suppose, partly owing to this that they became agents for the Edison and Swan lamps in London, at their office in Great George Street, Westminster.

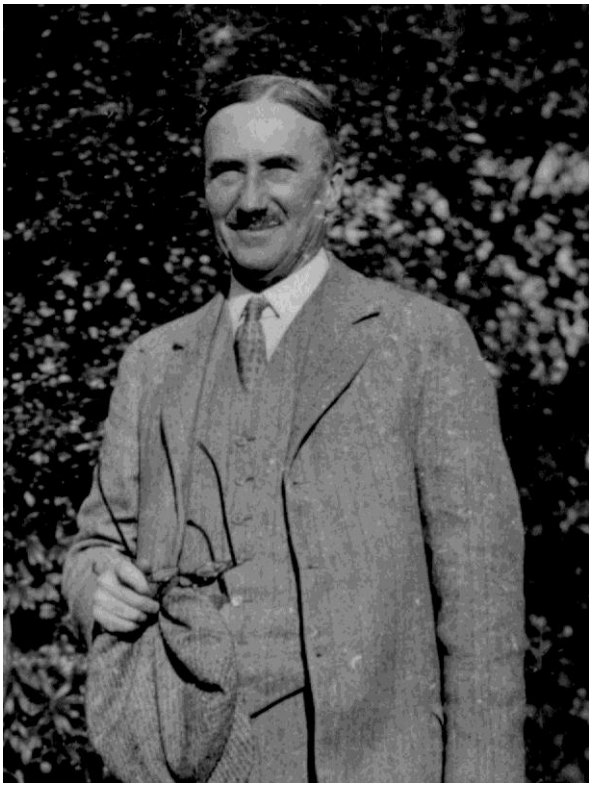
It was now becoming fashionable for big country houses to install the electric light, and Edmundsons began to get enquiries about the electric light from a number of the country houses where they had installed gas. They had the reputation of being a very reliable and trustworthy firm, and when they informed old customers that they were in a position to provide and install complete installations, the old customers were only too pleased to put the matter in their hands. In most cases I believe that after they had given an estimate of the costs they either received the order without much, if any, competition, or the matter was turned down if the customer found the estimate to be more than he was prepared to pay. There is no doubt that the firm were very much trusted, and from what I know of the Wigham family and Mr. Gripper, this trust was entirely justified.

I do not remember the date when Edmundsons was floated as a Company, but I believe a large number of customers took shares. No very big dividends I think were paid, but the shareholders received a steady 7 per cent for a number of years. This was very reassuring as it indicated that Edmundsons were not making huge profits at the expense of the customers, quite apart from appearing to be a reasonably safe investment at a time, when many firms in the electrical industry were paying no dividends at all. The ground was also prepared for the time then the Company wanted more capital to deal with their electricity supply business. There were of course other people in the installation business, and sooner or later this was likely to fall off and competition to become more severe.

When this occurred, Mr. Gripper began to turn his attention to small town lighting. The first town to which he gave attention was Shrewsbury. I do not know how the Electric Lighting Order for this small town came into his hands, but probably on the recommendation of one of the many friends, who had had work done by Edmundsons. Places like Bristol, Bath and Cheltenham, by this time had a supply, but promoters were not then attracted by towns, so small as Shrewsbury. In any case, Edmundsons Directors were long-sighted enough to see that even towns of this size had a future for electricity supply, although actually it was some considerable time before the returns justified the capital outlay.

In those days there was considerable difference of opinion as to the best and most efficient method of supply. Choice had to be made between the so called alternating current system and the direct current system, in conjunction with lead storage batteries, for use at time of very light load in the day or after 11pm at night. Many of us in those days were in favour of the so-called D.C. system, although even then the A.C. was much in use in America. One weak feature was that in the early days there was some difficulty in operating A.C. machines in parallel. It was something like a three-legged race if the two competitors failed to keep in step. Such troubles were frequently as much due to the uneven turning movements of the prime movers or engines as to any weakness on the electrical side. Nobody bothers about such difficulties nowadays as electrical generating plant is far more robust and reliable than it was in those days, but we can remember the time when extinctions in the West End of London were of frequent occurrence owing to various troubles and plant failures to the London Electric Supply Corporation, whose earliest generating stations were at the Grosvenor Gallery in the West End, later removed to Deptford. I remember well the first 10,000volt main being put into operation between Deptford and the West End. High voltage in those days was considered to be about 3,000 volts, so that in this 10,000volt transmission, at that time England led the world in high pressure supply, and it was considered a very bold experiment on the part of Ferranti, who was the leading man in the design and use of A.C. machinery in those days. I also remember that there was one surprise for the engineers, when this 10,000volt main was first made alive, in the fact that in London the main at the end remote from this generating station showed a rise of pressure over that at Deptford. The story was that Dr. S. Thompson was called in and sat down in the engine room scratching his head to find out the cause of these phenomena. It was found to occur at very light load and to be due to the electrostatic capacity of the main, which any young engineer of today would know without having to think much about it.

In any case it was decided to adopt the D C 3 wire system at Shrewsbury, and the same system was adopted for all Edmundsons other towns at a later date, although in some cases such as Twickenham, Cornwall and Guernsey, I always thought that the A.C. system should have been adopted from the commencement. Anyhow they are practically all A.C. now, and I do not think that what was done in the early days was very far wrong - - - - - .



***Mr Leo Hards***

**THE OBITUARY OF**
**MR. LEO ARTHUR HARDS, M.I.E.E.**

*Extracted from Edmundson's Monthly Dec. 1940, the introduction reads* - It is with deep regret that we record the death of Mr. L. A. Hards which occurred on Sunday, the 1st September, 1940, following a long period of ill health.

Mr. Hards joined the firm of Edmundson & Company several years prior to the formation of Edmundsons Electricity Corporation in 1898. He was first on H.O. Engineering Staff, but when the Salisbury Undertaking was acquired, he was appointed Manager and superintended

the erection of the plant and the layout of the mains in that town. Subsequently he returned to H.O. and was there during the period when Edmundsons were opening up Supply Undertakings in Provincial towns.

It was in the year 1907 that Mr. Hards left Head Office to take up the position of Manager and Engineer to the Urban Electric Supply Company's Cornwall Branch, which at that time gave supply (generated at Cam Brea) to the Urban Districts of Camborne and Redruth and the Parish of Illogan. Later, when the Cornwall Electric Power Company was started, with its larger scope throughout the county, Mr. Hards naturally became Manager and Engineer.

In addition to other electrical and engineering qualifications, Mr. Hards was an expert on Electric Tramway Systems and he was responsible for the layout of the tramway track and system between Camborne and Redruth in Cornwall, and in the town of Glossop, both being owned by the Urban Co.

He was always greatly interested in tariffs for electricity supply, particularly the Two-Part Tariff, even in the early days of the industry.
(It was in 1910 that the Two-Part Tariff was adopted in the Edmundson Group.)

He was a member of the Council, and at one time President of the Cornish Mining and Metallurgical Engineers. He was a Governor of the School of Metalliferous Mining, Camborne. Apart from his engineering activities, Mr. Hards was interested in politics and was Vice-President of the Camborne Division Unionist Association. He was a sidesman at All Saints Church, Tuckingmill, and was an original member of the Tehedy Park Golf Club.

Notwithstanding his bad breakdown in health in 1934, Mr. Hards retained his cheerful optimistic nature, and his passing is deplored by his many friends. He leaves a wife and two sons, both of the latter being absent at the time of his death, one on a tea plantation in India, and the other, Mr. Tom Hards, of Head Office Engineering Department, in Iceland on active service.

**JAMES TRIPP MEMORIES written in 1956**
**"Back in The Old Urban Days"**

This remark is still heard at times especially from the few veterans who are left with us. It was back on one of those days – actually January 4th 1908 – I remember boarding one of the tramcars at Camborne, and instead of alighting in the usual way outside the offices at Carn Brea, I fell off into the road with a thump!

It happened to be a very wet morning so with a new suit absolutely "gaggled" with mud and with bruises here and there on different parts of my person, I began from school my new job of work as a short-hand typist with anything but a happy feeling. Anyway I had the sympathy of the shift engineer, the switchboard attendant and the stoker (we were generating at Carn Brea), who were good enough to take me to the boiler room to dry off, but never to "dry up"!

The clerical staff at that time consisted of the chief accountant, who was known as the cashier, two ticket clerks to the tramway department, the wages and purchases clerk, one wiring blotter clerk and not forgetting myself, the typist. What a difference between the clerical staff of today and that "huge" staff of half a dozen in 1908.

It might be interesting to our female friends, the present day typists, to make a remark on the system which was then operating. Copies of letters were made by placing the original letter in a "copying letter book", together with a damp cloth and then passed through a press. Several of those cloths were kept in a tray filled with water and one had to be careful not to get the cloth too wet before using, otherwise the copy and even the original letter would be blurred to such an extent that the job would have to be done a second time. I believe that this system is still carried out in some offices, especially in solicitor' offices, but this is a very slow process compared with the present system of carbon copies.