In 1966 Haden held an exhibition at their Tavistock Square offices in London to celebrate the 150th Anniversary of the founding of the Company. The following is a typed transcript of interviews held at that event supplemented by a few illustrations from the CIBSE Heritage Group Collection. One sad fact is that many of the exhibitions items were borrowed from the Haden Archive at the Wiltshire Record Office, then in Trowbridge, and were not returned. Their whereabouts is unknown.
Transcript of a tape-recorded conversation between Mr. R.L. Cox, Hadena's historian, and a visitor to the exhibition of documents, drawings, photographs and models held at 200 Stock Exchange, London in 1966 to commemorate Hadena's 150th Anniversary.


Chairman's Introduction

My name is Alan Pullinger and I am the present Chairman and Managing Director of Hadena. 1966 has marked the 150th Anniversary of the foundation of our company and among the ways in which we have commemorated this important milestone in our history is the staging of an exhibition at our Head Office in London of a number of the company's historical records, such as old ledgers, drawings, photographs and models covering between them the whole 150 years of our growth, from the original partnership of the two brothers, George and James Haden, in a small millwrighting business in Trowbridge, Wiltshire, to the position we occupy today, a public company of national consequence, possibly the largest in the world engaged solely in the field of engineering services for buildings.

This exhibition is of particular interest to me for I was born and bred in Trowbridge and I am among the few remaining members of the firm who started their working life there, in my case 50 years ago. As a boy I knew many of the Hadena family and as a young man when I first started I wasted many a happy hour talking to the workmen there and listening to their stories, told in that splendid Wiltshire dialect; indeed, I would be rather tempted to give you a sample of it now, but I think that this is rather too formal an occasion for that.

The man whose patient and painstaking research has made this unusual historical portrayal possible is R.L. Cox, for some years Hadena's chief combustion engineer and shortly to retire after nearly 40 years with us.

There now follows a recording made by him in conversation with one of the many people who visited the exhibition during the year. As he moves around, looking at the exhibits, he recounts the absorbing history of the events of the last 150 years.

Visitor

What strikes me immediately, Mr. Cox, as we enter the exhibition is the very professional air about it all. I mean particularly the layout and the use of colour. Did you get outside help for it?

R.L. Cox

Yes, we employed an exhibition designer. He first of all told us what he had in mind and then constructed a realistic model of the show. He arranged it so that we could look through a hole...
in one of the side walls and see all the exhibits in miniature laid out and illuminated. Of course this sold us the idea and we gave him this room on the 3rd floor of number 7, Tavistock Square, which as you know is our Head Office, and built inside is another room constructed of plywood panels mounted on a framework. The ceiling is formed by stretching muslin cloth over it so that all natural light is excluded and that enabled him to control his artificial lighting to produce a most effective result.

Visitor

Yes. I must say that the way the brightly illuminated exhibits show up against the black mat, black walls and ceilings with the judicious use of scarlet surfaces is all most dramatic. Is this particular tone of red your company colour?

R.L. Cox

Yes. It occurs on all our literature and the painting of our lorries and our nameplates erected on buildings on which we are working.

Visitor

How did you cope with ventilation? It seems that this room is completely enclosed.

R.L. Cox

Oh, we just put a couple of propeller fans in the windows which look out on Tavistock Square and these blow air in the space surrounding this inner room. Some of it then passes through the muslin ceiling and the rest through the glass-topped bench of exhibits here.

Visitor

Are the exhibits arranged in chronological order or at random?

R.L. Cox

Well, generally speaking they are in chronological order, and you will notice that I shall take you round the room in an anti-clockwise direction, but making a diversion from time to time to examine drawings and models that are placed elsewhere.

Visitor

What interests me is that you have been able to produce so many letters and drawings and models and so on. Were they all locked away in a strongroom somewhere, or did you have to go out into the highways and byways to find them?

R.L. Cox

No, I'm afraid there was no question of finding them all neatly bundled up in a safe waiting for us. Nobody had ever made any real attempt in the past to collect all these things and catalogue them. But our Chairman wanted to prepare a history of the company in time for our celebration of the 150th year of our foundation in 1965, and he had a few documents and drawings, and we felt that it should be possible to accumulate much more evidence of our past, given time and the co-operation of older members of the staff and perhaps some that have retired.

Well, this was all happening about the middle of 1963 when there seemed plenty of time to carry out research and to do the writing, but as events turned out, it was none too long and old documents and odd bits of information kept on turning up right to the last moment.
The first job to do was to compile what had been called Hadyn Historical Notes. These summarized all the evidence of our past under different headings, in more or less chronological order, then these voluminous notes formed a basis for the written history. You probably know that this was embodied in our Celebration Brochure entitled Hadyn 150 Years, and dealt with in greater detail in the issues of the Hadyn house magazine in 1966.

Visitor

But how did you actually set about unearthing additional information in the way of documents and drawings? How did you know where to start?

R.L. Cox

Well, of course my first thought was to go to the Hadyn family. I was with Mrs. Hadyn one day and we spent all the afternoon and some of the evening going over family letters, newspaper cuttings and photographs, and I was able to borrow quite a number of these. The next important find was almost accidental.

At lunch one day here our Company Secretary, who had heard of my research efforts, quite casually mentioned an old safe where he thought there were quite a lot of old documents, but he said it had not been opened for years. Well, after lunch we went down and discovered it behind a barrage of broken office furniture and bundles of paper. Inside were a number of leather-bound Boardroom minute books, dated from the time when we were incorporated as a public company in 1919, but which are even more valuable were over 50 letters written by various members of the Hadyn family. Most of them came from George, one of the two founders, and were dated between 1610 and 1622. That is, from the time that he finished his apprenticeship to Boulton & Watt, and during the six years following the founding of the company. They're intensely interesting you know, not only from the point of view of our company's history, but as an intimate record of the life of an artisan living during the industrial revolution. They throw some light on living conditions during the last few years of the Napoleonic wars. Well, now shall we go around the exhibition?

I think it is a good idea to begin with portraits of all the Hadens, starting from the senior of our two founders, that is George Hadyn. Now I bet he was a tough old boy, and if you read his letters you will agree that he was the driving force in the partnership. His young brother James has more the look of an asthmatic about him. All the same, he was a very hard worker and seems to have been responsible for developing the heating side of the business.

Visitor

Here's George's son, the first George Nelson Hadyn, and here are his two sons William Nelson and Charles Ingham Hadyn. You will no doubt remember them, as they died in the late 40's.

Visitor

Yes I do, and here I think I recognize William's son George Nelson the second. Am I right in saying that with his retirement you lost the link with the family name, although not with the family itself?
The Haden Family

George 1788-1856  James 1790-1871  George Nelson Senior 1817-92

R.L. Cox: Yes, that is so, although we still have a member of the family in the company.

Now, John Paterson succeeded Nelson Baden as Chairman of the company in 1930, and this is his portrait here.

Visitor: Oh yes, I knew Mr. Paterson. If I remember rightly, he was appointed Manager of your Bournemouth Office very young. He must have been in his early 20's at the time. He became a Director, I should think about 1936 and then in 1940 George Nelson Baden made him Assistant Managing Director. I should think he will be particularly remembered for the leading part he played in setting up the Industry's Heating and Ventilation Research Association, with headquarters at Bracknell in Berkshire. He was its first Chairman. I remember he retired from the Chairmanship of Baden in 1958 and was succeeded by Mr. Pullinger whose photograph I see looking over my shoulder, you have got on the wall to catch one’s eye as one goes out of the exhibition.

R.L. Cox: Yes, and it's an extremely life-like photograph. I know that whenever I leave this room, it suddenly seems to be sitting there.

Now, although all the portraits start with the founders of the company, when writing the history we thought it appropriate to go back to a previous generation because the evidence in letters and diaries etc. points to the fact that the father of our two founders who was also named George Baden had quite an influence on his sons, and I think George - that is our George, the founder - must owe a lot of his education and his tenacity, and all those qualities which helped him to start and to build up the business, to him, so I have introduced quite a lot of documents belonging to the father; we call him George Baden the elder.

Now the oldest document we have is this diary which he kept for over a year when he was about 15. You will see here that it starts in July 1771 and finishes in September 1772, and you will note that even at that age he was very meticulous; there is a line for every day of the week, every week of the year, and I think almost without exception an entry for every day. He records the number of hours he worked, which appears to be 12 a day, and exactly what he was doing. Some of the entries are very interesting. Here you see he is working so many hours on posts and rail, presumably round a field, so many hours on making a coffin, and he even mentions fetching the horses and so on. He must have been employed mainly, I think, on working in wood as we have some of his cabinet maker's templates here.

Visitor: I think you said at this time he was only 15. He later took up engineering didn't he? Perhaps we shall come to that later.

R.L. Cox: You will see in a kind of pigskin cover with a metal clasp, and he started it when he was about 16 years of age, and in it records the details concerning his family, particularly those about births, deaths and marriages, and the way in which he was employed and
wages he got, and then he goes on to record the employment of
his children. Look at this page about Mary. She started as a
domestic servant and I should imagine for—oh yes, here it
says two guineas a year, and you will see that with each year
passing she gets about a guinea more. There is a particularly
interesting entry here, where she starts with the famous James
Watt at four guineas a year.

I think George senior must have had a flair for getting money
towards for him because there are pages here recording his
investments and his loans, and the interest he got on them,
and on this page you can see where he has recorded the total
capital he possesses at the end of each year, right up to
1809, when the diary finishes. Incidentally, all the correspon-
dence between himself and his family ceases in that year, so
we can only assume that was when he died.

Now here's an interesting page. It deals with the question of
wages, and shows that George our senior founder was apprenticed
to Boulton & Watt for five years in 1804 and James, his brother
two years younger, was apprenticed in the same year. George got
eight shillings and James six shillings. Now it doesn't say
whether that was per week, month or year, and we were a little
bit puzzled as to what it meant, but we consulted an authority
on this subject and he thinks it's pretty certain that it must
have been eight and six shillings per month.

Visitor

Boulton & Watt you said. I suppose that was James Watt and
Matthew Boulton, was it?

E.L. Cox

Yes, that's right. We are rather proud of this connection
with James Watt. You possibly remember that he came down from
Scotland in 1774 bringing with him his patented steam engine.
Now Matthew Boulton of the famous Soho Works in Birmingham had
purchased a share in the patent and was prepared to develop the
game business. Watt is of course invariably known as the
man who invented the steam engine, but of course that is not
really true. The Newcomenman atmospheric steam engine was
already working in many parts of the country, but it was a most
inefficient piece of apparatus and only provided reciprocating
power for pumping water; in fact, there were quite a large
number operating down in Cornwall in the tin mines by the time
that Watt got to work on his engine, but there is no doubt that
Watt did an awful lot in the way of improving it. He fitted an
external condenser which improved the efficiency of the engine
beyond recognition, and he adapted it for rotating motion. In
fact the industrial revolution could not have progressed without
abundant power and this, James Watt's engine, gave it.

Now, how the Haden family came to be connected with James Watt
we can only deduce from the fact that he lived in the same
village, Handsworth. It was a separate village in those days,
but of course it is part of Birmingham now, and we know that
James Watt did have a house in Handsworth, so that probably
George Haden senior carried out work in his house. Anyway he
was taken on by Boulton & Watt and eventually held the position
of foreman in what is known as the Copying Machine Company shop.
James Watt
You see, the firm of Boulton & Watt were a little unusual - they were a mile in advance of their time in as much as they diversified their business and formed separate little companies, and the Copying Machine Company was rather a baby of James Watt's, so I suppose he made our George Haden senior his Foreman. It naturally followed that George would get his three sons, one of whom doesn't appear in our history, apprenticed to the company, and in addition, as I have already said, his daughter Mary went into service with James Watt.

Now I think that Watt must have had a very high opinion of George Haden senior because, looking through James Watt's will at Somerset House, we found a codicil to it, and he wrote this in his own hand only a week or two before he died in July 1819. I think that if a man was ill as that could take the trouble to single out a few of his associates, and incidentally there are several of them mentioned as well as George Haden, I think that it does mean that he valued their services very much indeed. Here's a copy of the codicil and you can see that it says "To Mr. Geo. Haden Snr. of the Copying Company Warehouse, Soho £21".

Well now, so much for the old man. Let's talk about his two sons. George, so far as we can see, specialised in dealing with the beam engines. There is no direct evidence as to what James did, but I think his education in the works was of a more general nature. George must have done very well because as soon as he came out of his apprenticeship he was sent to Manchester. Here's a letter - look, June 12th written in Manchester - June 12th 1810 and it would appear from this that this was his first assignment. He wasn't in charge because he mentions the man that he was working with. He was rather overcome by the appearance of Manchester, and its dirt and grime, tall buildings and he was particularly upset by the wickedness of the population. Here I might say that the whole family had a very religious background, but it seems to have been unduly concentrated in George junior, as you will notice if you read through some of these letters. They are written, particularly the first page of every letter, in a very religious strain. Long before he gets down to any news whatsoever. Now James, he wrote less - at least fewer letters are retained - and he doesn't seem to follow quite that line, and his letters are in a much lighter vein altogether and he does not seem to be depressed unduly by the sins of the world and that sort of thing.

Nevertheless, George was I should say somewhat of a prep to James because it is evident from his letters that James did refer to him when he wanted a decision made about his own future. And in a similar way you know, George duly referred a lot of his major decisions, particularly those that were in connection with his starting of his own business in Trowbridge, he referred a lot of those to his father, so there was a strong tie between the whole family.

While there isn't time to look through all these letters because there are 40 odd of them, they do really make a fascinating story
and incidentally they take into the history of the time because as you will appreciate in 1810 we were right in the middle of the Napoleonic Wars and his letters throw light on the poverty and the hunger that existed among the working population. Incidentally he calls them the 'deserving poor'. Of course nowadays this extreme distinction between classes of society has been smoothed out, in fact almost obliterated, but in those days, although George was a man working with his hands, he did not regard himself just as an ordinary workman - he was a workman of a certain class. You see, he distinguished between himself and the 'deserving poor'.

Because the fact that he and his father, his brothers and sisters could write showed that they were educated and were on a different level from the 'deserving poor' who were generally illiterate and merely performed functions that did not require much brain power and education.

Yes, George junior was a man who realised that his father had got out of the rut and he could probably build on that and get even higher himself. Boulton & Watt set him on to quite a number of important jobs and I think that one of the biggest was when he was only about 26. It was quite an important installation of two beam engines in the Cranston Hill Waterworks near Glasgow. He was working there for about a couple of years and this large and excellent drawing here, look, of the two engines with their boilers and pumping gears is said to have been drawn by him. I very much doubt it, because these engines would have been made by that time, or soon after, the time he finished his apprenticeship and I know quite well from his letters that he just hadn't got any time for drawing, once he had got out on to the erection site, and it's more likely that this was done at the works and was a guide to erection. Anyway it's an excellent drawing, isn't it?

Visitor

Oh, it's a beautiful drawing, and it's very much of the style of what we call today a record drawing - a record of what was actually being installed, rather than a working drawing, a drawing symbolising what has to be installed and something that the Erector would work from during an installation.

R.L. Cox

Yes, and there are of course a lot more drawings here, as you see, and the strange thing about them is that there are given no scale or any dimensions, or at any rate only occasionally. Now this I think is a most interesting photostat of a drawing that is in the Birmingham Reference Library (where incidentally they have a complete set of Boulton & Watt drawings - I think a drawing of pretty well every engine that they made); here is a photostat of a sketch that must have been made by George Haden himself, when he was working on one of the Cranston Hill engines, because if you look at it you will see a suction pipe going down to a foot valve, then if you look at the main drawing you will see that it corresponds to the same item, and at the top of the sheet it says "drawn by George Haden 1812". Now I have compared that writing with that in his letters and there is no doubt that he wrote it himself so presumably he drew the sketch. On the back of this
Lorge drawing of the engines he has also written "Cranston Hill Waterworks, Glasgow - two engines in one house erected by Mr. George Hedden at the age of 26 years 1814-15, the severest winter ever known". I think there is a letter from him in which he says they were driving horses and coaches on the ice over the River Clyde about that time.

Visitor

This you say was his first major job, in fact the first job that he himself had had charge of.

R.L. Cox

Well, I'm not sure that it was the first job for which he was solely responsible, but it was certainly the most important that he had undertaken and by now he was becoming so useful to Boulton & Watt that they led him a pretty hectic life in Scotland. In many of his letters he complains that he is worked to death having to go out in all weathers and from one job to another, and he began to realise his value to the company and became dissatisfied because they didn't seem to show any signs of improving his position or his wages and he wrote to his father about this on several occasions. It is noticeable that he always liked to have his father's approval of any step he intended to take, particularly I suppose because he didn't want to upset the company as it might disturb the relationship between his father and James Watt.

However, he was getting exasperated when in 1814, or 15, a firm of cloth manufacturers called John & Thomas Clarke of Trowbridge, Wiltshire, asked James Watt to visit them. By the way, Trowbridge was then pretty well the heart of the west of England cloth industry. Clarke's had no doubt heard of the improvements in output that could be affected if they had more power in their factory. They must have heard of what was happening to industry in the Midlands, for instance, and so they wrote to James Watt and asked him if he could go down and see about putting an engine in their works.

At this time the works must have been operated entirely on manual or horse-power, but anyway James Watt didn't go down. He sent George Hadon who I suppose took particular of what was wanted, had a look round the town and thought it was rather a nice place to live, and as there were also by then quite a number of cloth mills I suppose he thought "Well, if I could settle down here, and as engineers anywhere near by because it is very much a country district, it is known I could earn quite a good living as a millwright". Anyway the upshot of this was that he went on, because he became more determined to leave the company, and I suppose they knew his value, they played him rather cautiously. There is a letter that George wrote to his father relating a conversation that he had with Watt at the inn in Trowbridge. It think it was fairly early in 1815 and he concludes by saying that Watt indicated that something was likely to happen. Well that something was no doubt a proposal that he, George, would settle in business as a millwright in Trowbridge on his own account and also act as agent for Boulton & Watt engines.

Now to start with he brought in his brother James and there's a letter that describes the journey that they made - I think it was in November of 1815 - to Trowbridge from Bath where George had
Soho Manufactory, Birmingham in 1781

Soho Foundry in 1820
bought a horse so he put it 'in order to save' - presumably to save the cost of coach travel, which he knew he would be engaged upon in his business from time to time. Now those of us who know the district can imagine George and James setting out from Bath taking that lovely journey through the Avon Valley to the little town of Bradford-on-Avon and on to Trowbridge, where they obtained some rooms and an old woman to look after them. There is a most amusing letter from James, I think it was written in December 1815 describing all the little bits of furniture and crockery they had, the barest minimum.

Now George had been courting a girl in Handsworth called Ann Nelson for some time and presumably he was only waiting until he got sufficient money to support her. Anyway the next letter we find was dated January 1816 and it is quite clear that she has married him by then, for the letter she wrote from Handsworth before going down was addressed 'My dear husband'. However, things didn't go too well at first and we very soon find that James is writing from New House in Oxfordshire. That was apparently a piece of property that the son of Matthew Boulton had bought as he was about to be married, and he employed James Hadon for I think it was about a year, when business began to pick up, because Ann, the wife of George, wrote home to his father saying that George was very, very busy and they were anxiously awaiting the arrival of James to help support him in the business.

Now, if you will look at the drawings along the wall here, you will see the scope of their work, which all came under the heading of millwrighting. They are very fine drawings I think - I don't believe George did them all, if he did any, because he was far too busy and you will notice that on some of the drawings it gives the name of the draughtsman who lived at Bradford-on-Avon, the little town nearby.

Well, most of the work concerned water wheels, which was the power unit for a lot of the mills in the district particularly in the valleys, and you will see that they are driving machinery connected with cloth working. Here we have things like the patent traversing broad gig mills. Now there's a very old machine of this type in the works of John Thomas Clarke of Trowbridge for whom we installed their first steam engine. By the way, I haven't shown you that, have I? Here it is. It's a model that we have borrowed from Clarke's Mill and the model itself was made, as you will see, in 1877, whereas the engine I was talking about was installed in 1815. But you will notice, over there in the corner, there is a drawing or a copy of the actual drawing of the engine that George Hadon installed in Clarke's Mill and if you compare that drawing with this model you will see that they're almost identical, so that we have every reason for believing that this model here is of the original engine that was installed for Clarke's by George. Well, if it wasn't, it could have been the second or the third, because there were about three engines put in there round about 1815 to 1830 or 40, and we do know from Clarke's records that Hadons did pretty well all the maintenance work there.