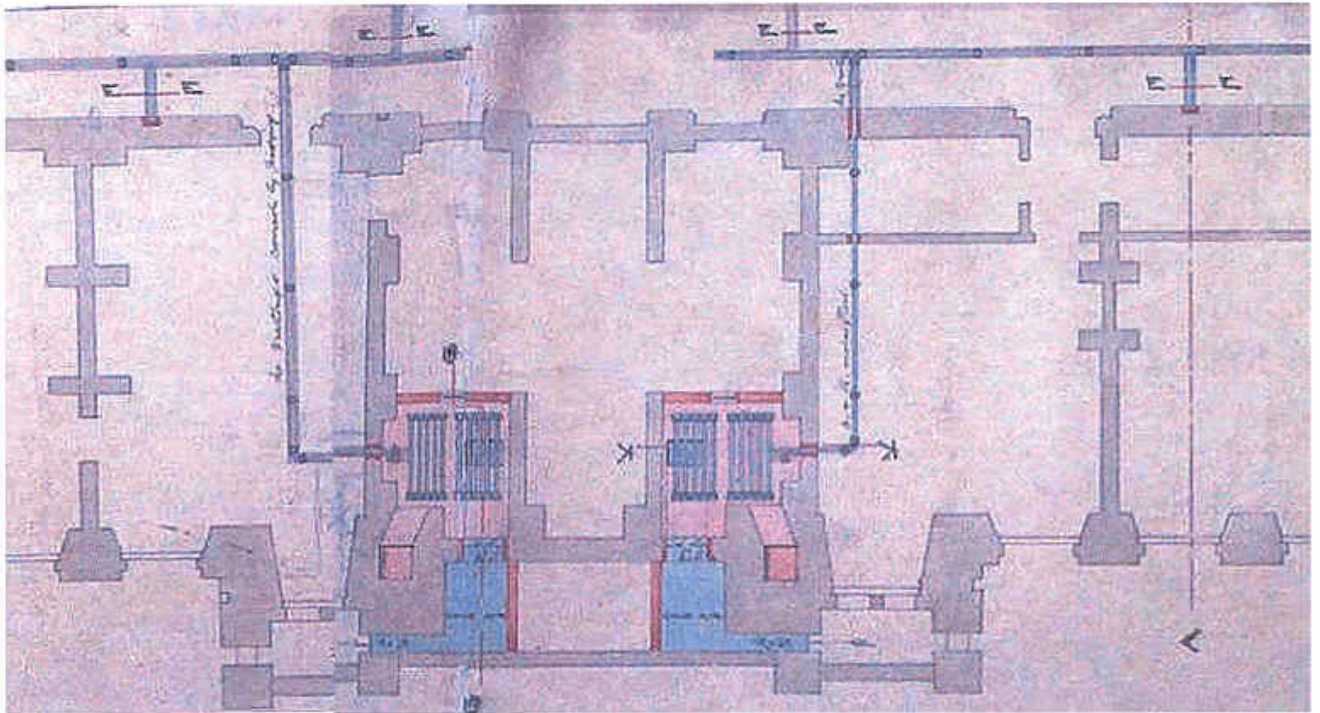
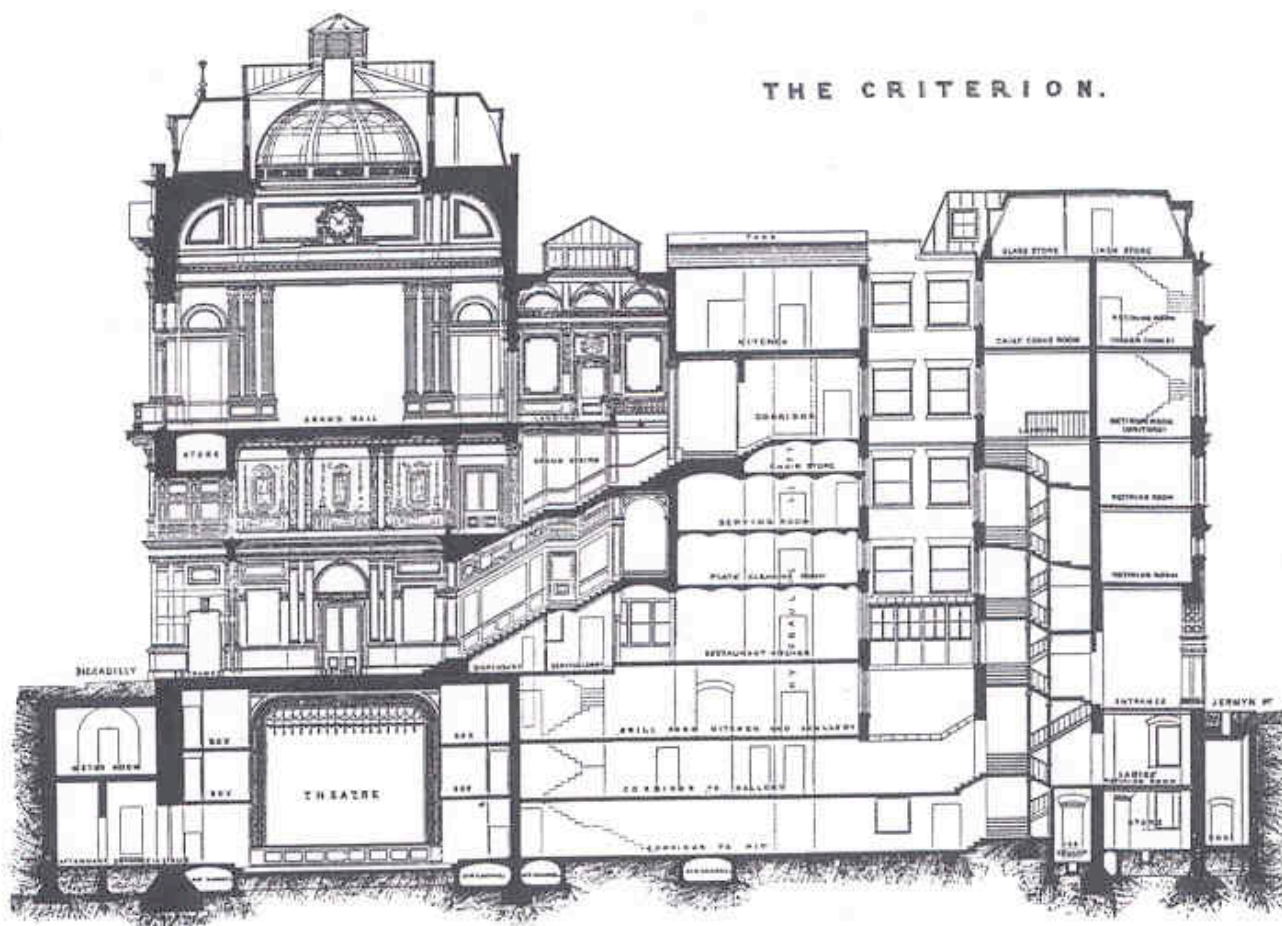


Drawings

Architectural plans and sections and views of buildings are a useful source of background information when investigating historic building engineering services. However, there is no substitute for finding either the original services scheme drawings or good, clear copies of them. Unfortunately, engineering drawings, either in original or copy form, are extremely rare.

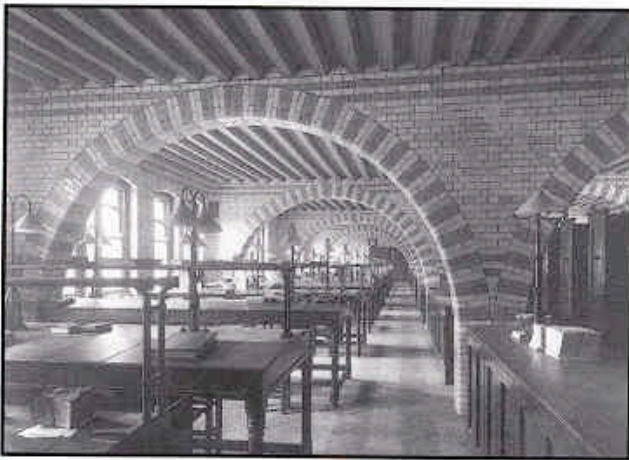




The Criterion Theatre & Restaurant London, 1870-4. Wilson Phipson provided warm air ventilation for the basement theatre, the system being upgraded in 1884.

Opposite

- Top Chamberlain Square, Birmingham, c.1900, showing the Council House (centre) and the Town Hall (right), both Phipson projects [Birmingham Public Libraries]
- Btm Detail from the Phipson drawing (from cover of this book) showing the heating & ventilating scheme for the Birmingham Council House, 1875 [BLRC.45/2]



*Prudential Assurance, Holborn Bars, London, 1905 [RCHM]
 Above Clerks Office, Woods Hotel block
 Clerks Office, Greville Street block
 Right Cashiers Office*

Record Photographs

Contemporary photographs of building interiors may reveal, on close inspection, details of buildings services, such as radiators, heating pipework and lighting arrangements. Modern photographs may help understand the building and show features such as windows and courtyards which influenced lighting and ventilation systems design.

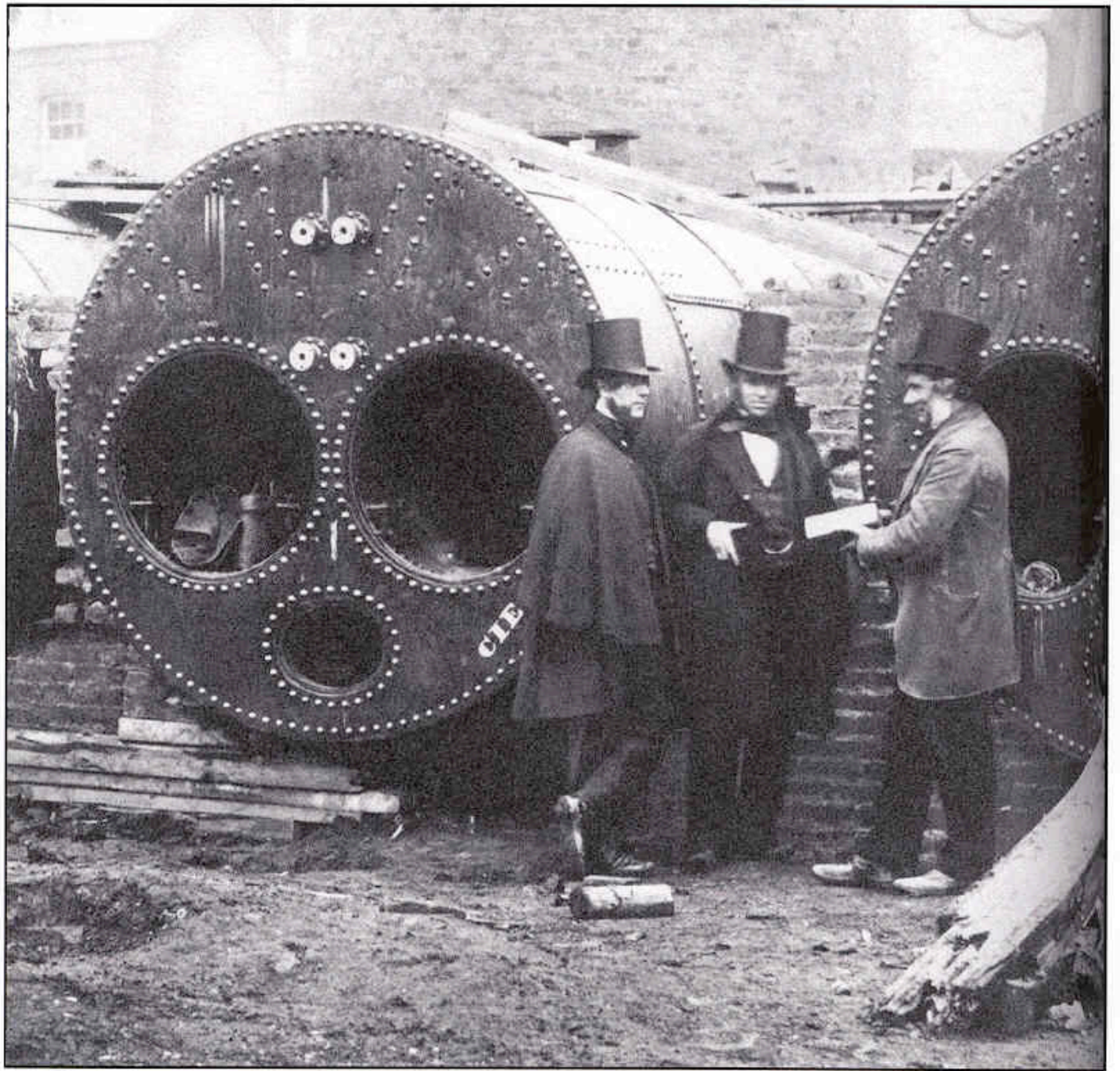
Opposite page

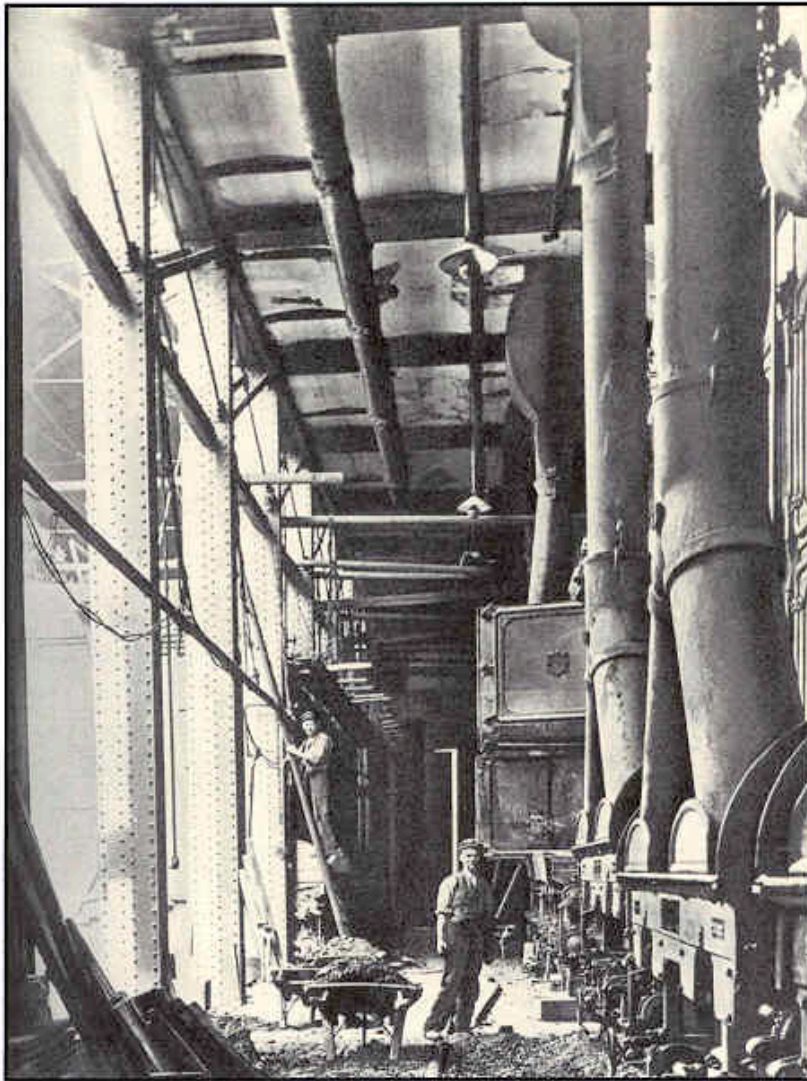
Top l-r *Royal Holloway Sanatorium, Egham, 1879-84 [NMR BB83/5908]
 Natural History Museum, S Kensington, 1870-81 [PRO 30/1007]*

Botm l-r *Royal Holloway College, Egham, 1879-87
 Liverpool Royal Infirmary, 1885-9. Note the circular radiator
 [Liverpool RO]*

Wilson Phipson was the engineer for the projects on both pages.

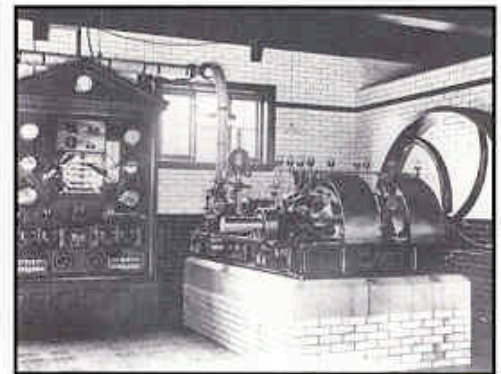




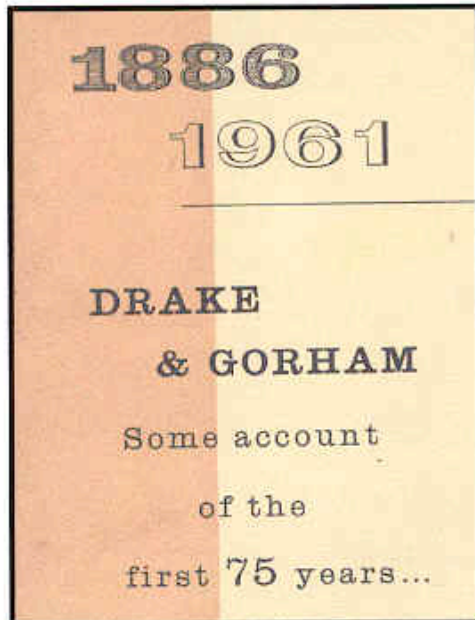
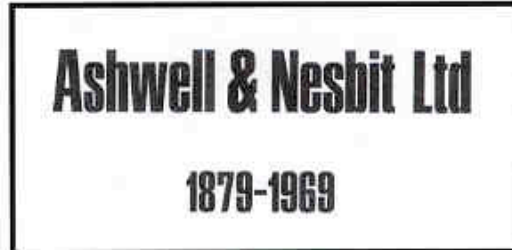
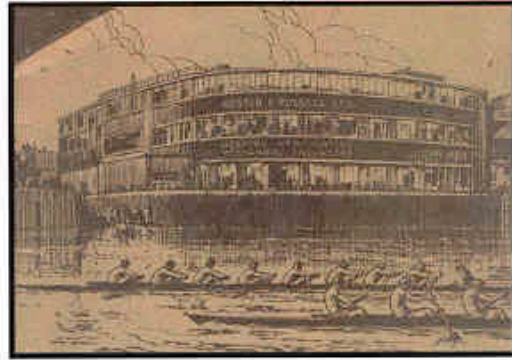
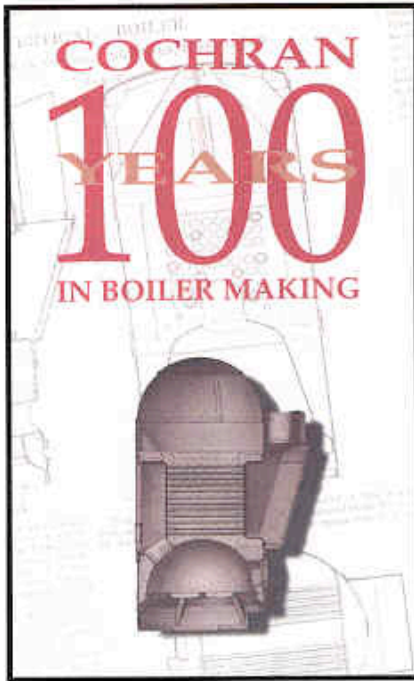


Opposite page
*Engineers supervising the installation of
boilers for the International Exhibition,
London, 1862 [V&A Museum]*

Left
*Boiler house of the City of London
Electric Lighting Company, Bankside,
London, c1890s [Guildhall Library]*



*Electricity generating plant at
Paddockhurst, Sussex, c.1897
[Country Life]*



Company Histories

The published history of a company can be a rich source of information on its products, people, its clients, projects and all sorts of activities.

UK companies engaged in building services with their history in print include Fred G Alden, Ashwell & Nesbit, Cochran, Colt Group, Drake & Gorham, Drake & Scull, Garton & King, Gas Light & Coke Company, Haden, How Group, Rosser & Russell, John Thompson, and J Roger Preston & Partners. Information on other organisations is available in books which are semi-biographical, relating the story of the founder and the company itself: *Henry Lea* (Hoare Lea & Partners), *Oscar Faber*, and *Mr Copperad* (Basil Tanner).

Similarly, there are American books covering companies working in the UK market. Examples include Honeywell, Johnston and Lennox, all of which have issued centenary publications. Biographies include those on Willis Carrier, John Gorrie, Joseph Nason and Warren Webster.



George Haden



James Haden



Trowbridge Works



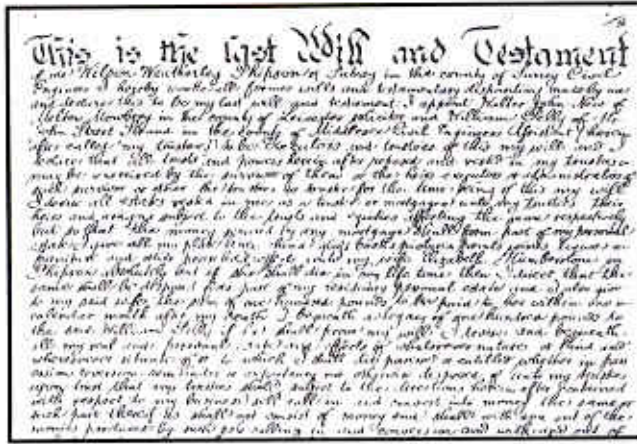
HADEN 1816-1991

Haden celebrate this year the foundation of their Company 175 years ago, when in 1816 George and James Haden first started work on their own in the town of Trowbridge, Wiltshire. The Industrial Revolution had gathered momentum during the latter half of the 18th century and by 1816 it was well advanced, so that men were able to exploit the inventions of earlier generations by applying them to quite new uses, a formula for success that the Company follows to this day.

The two brothers were very different in personality. From his letters to his father George appears as somewhat pious but he was the more dynamic of the two brothers, and probably the better business manager.

James, a bachelor, was possibly of a less dedicated temperament, although like George he worked extremely hard.

*Part of the introductory page of "Haden: A Short History of The Company, 1816-1991."
However, the picture is not of the Haden Trowbridge Works, but is of the Boulton & Watt
Soho Manufactory, Birmingham, the mistake probably due to the fact that G & J Haden was
originally established as the West Country agent for Boulton & Watt steam engines.*

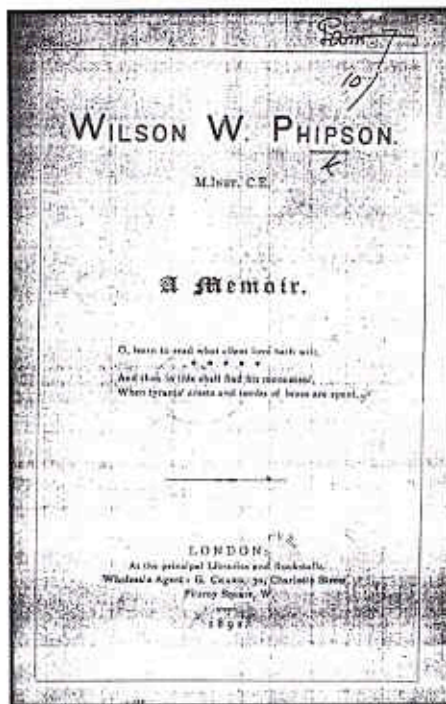


Extract from the last Will & Testament of Wilson Weatherley Phipson of Putney in the county of Surrey Civil Engineer...
 Probate granted 5 November 1891

The Life of an Engineer

Additional information on a particular building, its services or the system itself can sometimes be established by investigating the life history of the building services engineer.

Documents which may assist include birth, marriage and death certificates, census records, and membership applications to professional institutions. Knowing key dates can lead to published papers, newspaper cuttings, obituaries, last Will & Testament and memorial booklets. These may provide information on projects, contacts, family and personal life, staff and business associates.



Memorial Booklet (A Memoir) of Wilson W Phipson
 Published 1892 [British Museum Library]

In the case of Phipson, his Application for Associate Membership of the Institution of Civil Engineers in 1868 was supported by J W Bazalgette (who designed London's intercepting sewer system) and by the architects Thos Henry Wyatt and M Digby Wyatt. His application for transfer to Member (opposite) lists his heating & ventilating projects, including Royal Albert Hall, Glasgow University, Alexandra Palace and the Criterion Theatre. His obituary [Proc.ICE, 108, 1891-2, pp.406-7] expands on this. His memorial booklet is particularly informative. His Will empowers his assistant William Pelly to be paid £4 per week to complete his contracts. But it is known that the business was taken over in early 1892 by the firm of Ashwell & Nesbit, heating contractors of Leicester and London.

Business Associations

One method of researching building services systems of historic interest and locating additional information is to find out as much as possible about the business relationship between the parties involved.

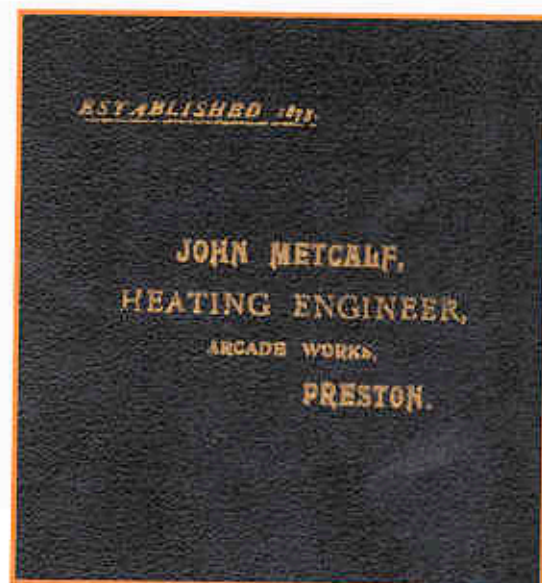
For example, the client may have required a particular type of building to operate his business, say, banking. He may have regularly employed a certain architect, who then became accustomed to his client's requirements. In turn the architect may have engaged a particular services designer. The designer may have favoured a particular form of heating, say, hot water and preferred certain boiler or radiator manufacturers, or one installer in preference to others. There may be a link to a builder, and so on.

Where information is lacking on the system under review then following business association links may at least open up some avenues of research and probable results.

By way of example, Phipson worked for the architects John Gibson, T Marsh Nelson and Alfred Waterhouse. When starting out Phipson worked with Nelson (a friend of his Father) on Rothschild's Piccadilly mansion (1862), Rothschild's Bank in St Swithin's Lane (also 1862) and then the Junior United Services Club in Regent Street (1868). Gibson was Architect to the National Provincial Bank of England and Phipson designed services for their banks at Bishopsgate in London (1863-5), Newcastle-upon-Tyne (1872) and Piccadilly, London (1877). He also worked with Waterhouse in London on the Natural History Museum (1877-80), The National Liberal Club (1885-7) and the Prudential in High Holborn (1878-91); also on the Liverpool Royal Infirmary (1866).

We also know that Phipson tended to use certain suppliers: Fraser & Fraser for boilers, Benham for kitchen equipment and Longden for radiators.

Other associations may be geographical or religious. G & J Haden began in Trowbridge in 1816 and went from installing steam engines to making heating stoves and then installing heating systems. Many early installations by Haden were for West Country churches, and several others were by the Bristol-based contractor Vincent Skinner (1880). John Metcalf, established as a heating engineer in Preston (1873) heated numerous Catholic churches, convents and schools throughout the country. It is possible to compile a database of such links.



Catalogue of John Metcalf, Preston, c.1900

NOTICE OF REMOVAL.

SKINNER & BOARD,

Horticultural Builders, Ironfounders,

AND

Hot-Water Apparatus Manufacturers,

STOKES CROFT, BRISTOL.

(Patentees "Venetian" Orchard Houses).

January, 1894.

DEAR SIR OR MADAM,

We beg most respectfully to inform you that in consequence of the death of our senior partner, Mr. VINCENT SKINNER, we have removed our business from above address to more extensive and central premises situated in

RUPERT STREET, BRISTOL.

We shall be most happy to receive the continued favour of your esteemed orders, which shall have our usual prompt and careful attention.

We beg to enclose herewith our circular of Hot-Water Heating and Horticultural Building, and to submit to your notice our New Patent "Venetian" Orchard House, which we are now erecting, and for which we are receiving the highest commendation, both for its simplicity and adaptability for all kinds of fruit culture.

We shall be most happy to quote you for the same, to any dimensions, or for any other kind of Horticultural Building, or Hot-Water Heating you may require.

Yours faithfully,

SKINNER, BOARD & Co.

1816/27 1033

Removal notice issued by heating engineers Skinner Board of Bristol in 1894

LONGDEN & CO.
PHOENIX FOUNDRY, SHEFFIELD.

SOLE MAKERS OF
THE "SUNBEAM" PATENT RADIATORS.

Prepared either for steam or hot water.
All joints are screwed.
No India-rubber or other packing used.
10,000 Radiators of our make in use in Great Britain.
Made in circular and other forms.



Trade **SUNBEAM.** Mark

LONDON OFFICE: 447 OXFORD STREET, W.

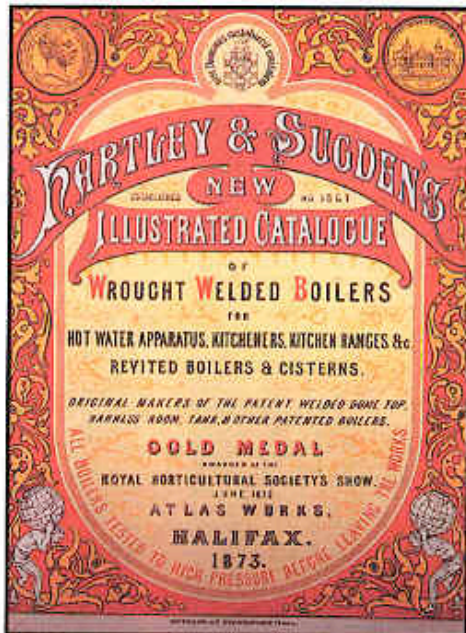
These Radiators are used in the following places:—
New Town Hall, Sheffield; National Portrait Gallery, Edinburgh; Natural History Museum, South Kensington; New Assize Courts, Birmingham and Nottingham; Guildhall, Gloucester; Hove Town Hall; Ventnor Royal Hospital for Consumption; Polytechnic Institute, Regent Street, London; St. Paul's Schools, West Kensington, London; Costa's Memorial Church, Paisley; and many other public and private edifices.

Opposite page
Top *Useful Hints on Ventilation, 1850*
Btm *Practical Ventilation and Warming, 1881*

Left and below
Longden & Co, Sheffield, Radiators, 1897
Hartley & Sugden, Halifax, boiler catalogue, 1873
Lumby, Son & Wood, Halifax, boilers, 1890

Textbooks, Catalogues & Advertisements

Contemporary books dealing with building services, written by experts in their field, together with manufacturers' catalogues and trade advertisements are an important tool in identifying systems and equipment.



HARTLEY & SUGDEN'S
NEW
ILLUSTRATED CATALOGUE
OF
WROUGHT WELDED BOILERS
FOR
HOT WATER APPARATUS, KITCHENERS, KITCHEN RANGES &c
REVIVED BOILERS & CISTERNS.

ORIGINAL MAKERS OF THE PATENT WELDED DOMED TOP
BARRAGE ROOM, TANK, & OTHER PATENTED BOILERS.

GOLD MEDAL
AWARDED AT THE
ROYAL HORTICULTURAL SOCIETY'S SHOW
JUNE 1873

**ATLAS WORKS,
HALIFAX.
1873.**

ALL BOILERS TESTED TO HIGH PRESSURE BEFORE LEAVING THE WORKS.

LUMBY, SON, & WOOD, LIMITED,
FABRICATORS AND MANUFACTURERS OF
WROUGHT WELDED AND RIVETED BOILERS,
For the Water Heating Apparatus, Kitchen Ranges, &c.
FIRE & BURGLAR-PROOF SAFES.



Patent "Gold Medal" Boiler,
The most Economical and Efficient boiler.



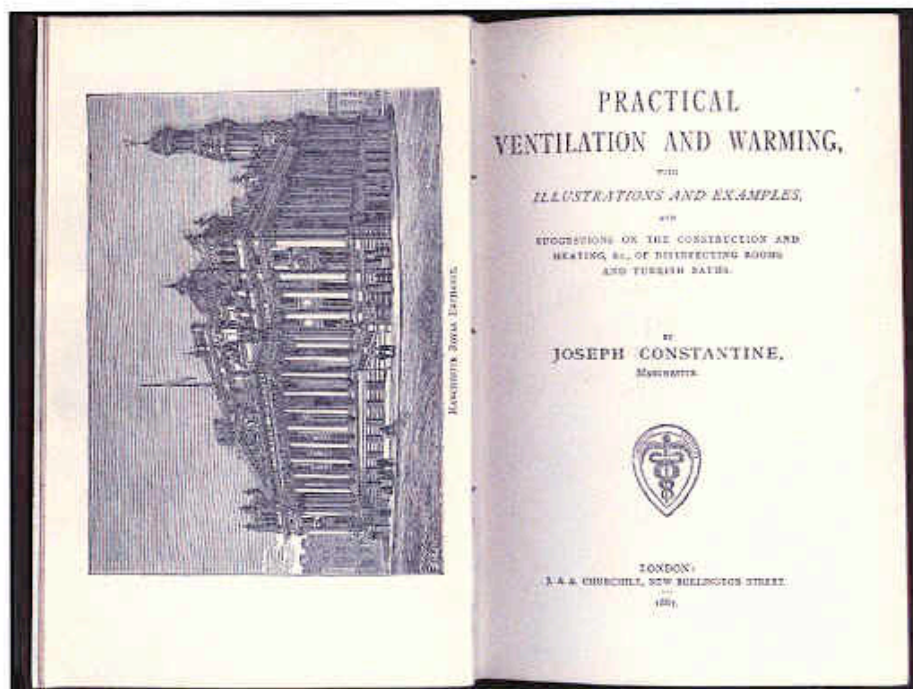
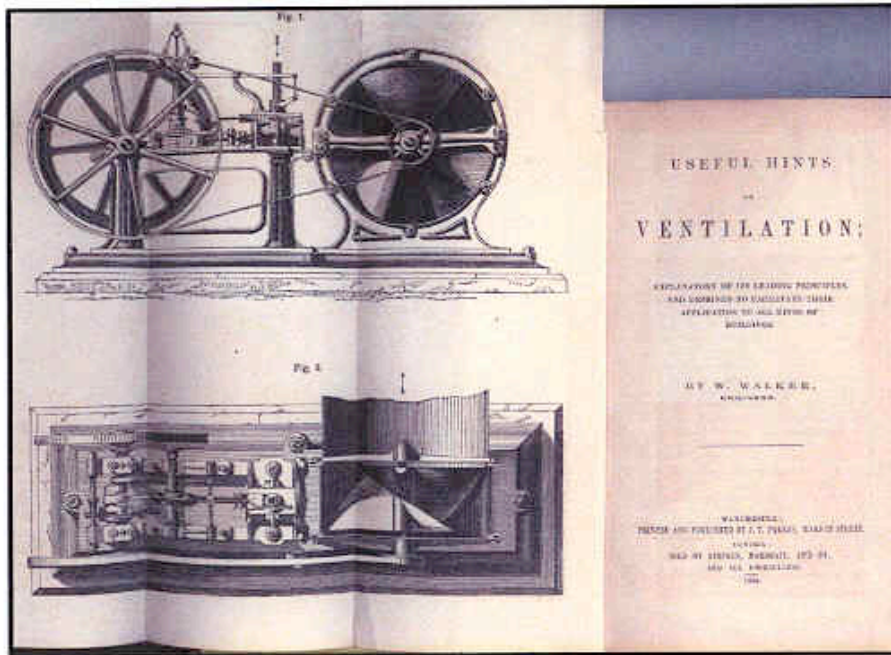
"Furnace" Boiler,
For building the walls of Greenhouses.



The "Colossal" Boiler, considered the best Boiler of the British Patent.

Gold Medal for Boiler, Paris, 1875. Gold Medal, Paris, 1878. Gold Medal for Boiler, 1878. Gold Medal, Paris, 1889
(The only Gold Medal ever awarded to an International Catalogue.)
The Oldest & Largest Makers in the World. Medals awarded whenever exhibited.

**WEST GROVE WELDED BOILER & SAFE WORKS,
TOWNSEND-
"LUMBY," HALIFAX. H. A. J. & P. A. X.**





Catalogue of Mackenzie & Moncur, Heating & Ventilating Engineers, 1900

Mackenzie & Moncur catalogue page showing engines, fan, boiler and kitchen equipment

