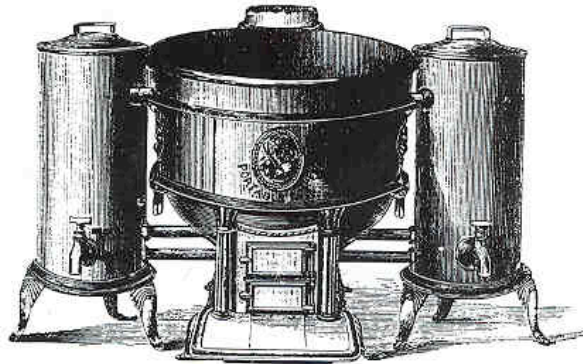


The VICTORIAN ERA



22. Public Baths, Paris. (BB, p.43).



23. (Original Caption). *Circulating Hot-Water Attachment for either or both sides of Smith & Wellstood's Prize Portable Boilers. Catalogue No.3, c.1890. (HGT Collection). These attached cisterns (holding each 15 gallons) do not interfere with the ordinary use of the boiler, and are kept in operation by one fire.*

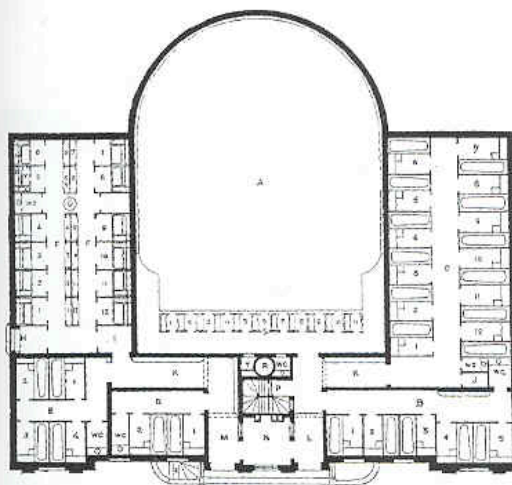
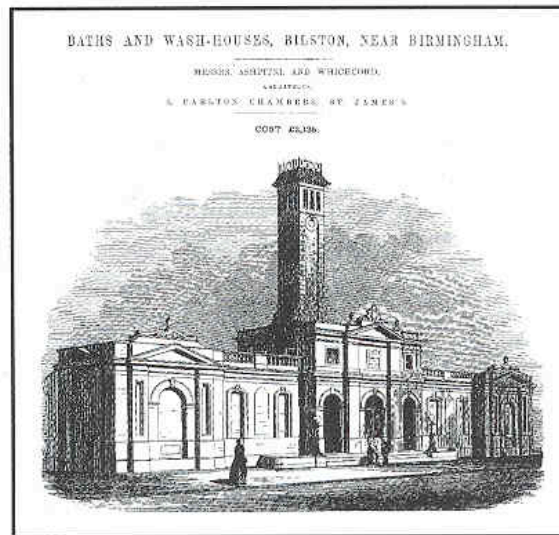
The Victorian Era

In early Victorian times taking a bath was almost unknown to much of the working classes. Where public baths existed they provided cold water only. Around the start of the 19th century, portable bathtubs could be hired in Paris from a man who toured the streets with a horse-drawn cart. His cart carried a supply of both hot and cold water. The whole family would bathe, one after the other in the same water (for refilling was too costly), and sometimes the water would be used for laundry as well.

In Britain, up to about the middle of the century, piped water was hardly ever available beyond the kitchen sink. A portable tub in the kitchen was the usual method of bathing. A few larger houses of the rich had a bathroom, but usually even this rarity had neither hot water nor drain. It was said that when Queen Victoria married (1840), there was only one bathroom in Windsor Castle. The English plumbing pioneer, Hellyer, wrote (1877), *"In every house a WC may be considered a necessity. But by English people, lavatories and baths, fitted up with hot and cold services, would, I suppose, be considered a luxury."* Lord Hamilton, writing of his visit to a large country house recalled his experience in the bathroom:

"Switching on the hot tap produced a series of sepulchral rumblings succeeded by the appearance of a small geyser of rust-coloured water, which stopped after a couple of minutes and was in any case stone cold."

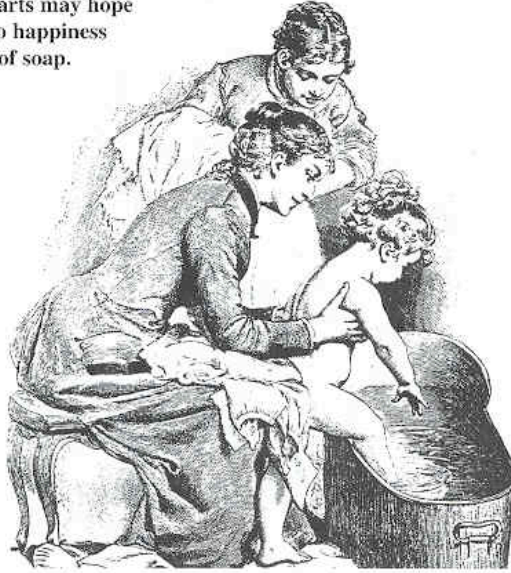
The middle part of the Victorian era saw the introduction of a wide variety of ways of heating hot water for domestic purposes. Kitchen ranges or ovens had been used to heat hot water since at least the 1790s. By the 1840s a large number were on the market. They operated on the principle, *"cold water is piped in, hot water is then piped out."* From the 1880s a variety of ingenious (and often dangerous) types of apparatus for heating bath water were introduced. There was a directly heated gas-bath with the burner underneath the bath, then a portable bath with a paraffin heater, to say nothing of the French solid-fuel water heater and bath, or the GEC electric bath installation. The latter part of the century also saw the introduction of hot water circulating boilers and the "tank" system, where the boiler flow and return pipes were connected to the storage tank. This was soon superseded by the indirect cylinder method, still in use today.



- A. Swimming-bath
- B. Five men's baths—first class.
- C. Twelve men's baths—second class.
- D. Two women's baths—first class.
- E. Four women's baths—second class.
- F. Wash-house, twelve compartments.
- G. Wringing machine.
- H. Entrance to Wash-house.
- I. Office.
- J. Soap, &c.
- K. Lobby.
- L. Men's entrance.
- M. Women's entrance.
- N. Office.
- P. Bath-keeper's entrance.
- Q. To the stokery.
- R. Chimney-shaft.
- S. Dressing-boxes.
- T. Urinal.
- V. Wash-tub.
- W. Boiling-tub.
- X. Rinsing-tub.
- Y. Drying-closet.
- Z. Dripping-board.

24. Design for Baths & Wash-houses, Bilston, near Birmingham.
 From *Baths & Wash-houses: An Account of Their History*.
 A Ashpitel & J Whichcord, 1853, opp. p.1. (Presentation copy CHG).

Clean hands and hearts may hope
To find the way to happiness
By using lots of soap.



25. Victorian Engraving. *Bath Night*. (WL, p.9).



26. Advertisement. *Pears' Soap for the Bath*, probably c.1880. (WL, p.41).

No 3 C.S.W. CATALOGUE.

SMITH and WELLSTOOD LIMITED.

COLUMBIAN STOVE WORKS.

MANY PRIZE MEDALS

AWARDED TO
SMITH
AND
WELLSTOOD

LONDON, DUBLIN, COLONIAL AND INDIAN
INTERNATIONAL EXHIBITIONS.

MANY PRIZE MEDALS

AWARDED TO
SMITH
AND
WELLSTOOD

LONDON, DUBLIN, COLONIAL AND INDIAN
INTERNATIONAL EXHIBITIONS.

GLASGOW
Offices & Showrooms,
11, Dixon Street.

DUBLIN
Offices & Showrooms,
29, Grafton Street.

HEAD OFFICES,
BONNYBRIDGE,
Scotland.

Telegraphic Addresses.

LIVERPOOL
Offices & Showrooms,
68, Bold Street.

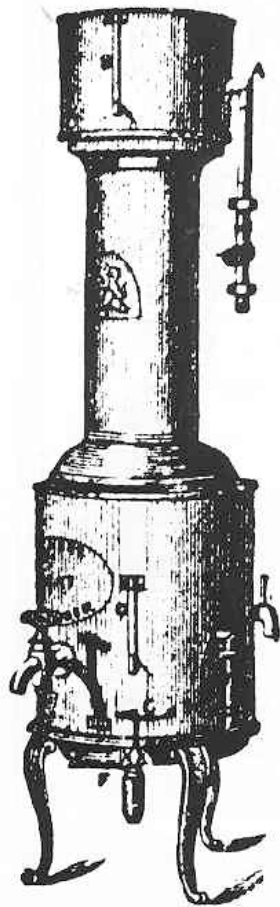
LONDON
Offices & Showrooms,
11, Ludgate Circus, &c
and
7, Upper Thames Street, &c.

"Wellstood" BONNYBRIDGE. "Ire" BONNYBRIDGE. "Wellsrood" GLASGOW. "Wellstood" LIVERPOOL.
"Wellstood" DUBLIN. ("Ludgate Circus") Wellstood "LONDON" (Upper Thames St.) "Siccar" LONDON.

27. Cover of No.3 Columbian Stove Works Catalogue.
Smith & Wellstood Ltd, Scotland, c.1820. (HGT Collection).
Shows left, a kitchen range with copper hot water cistern
and right, a portable hot water boiler.

From the geyser ventilators
Autumn winds are blowing down
On a thousand business women
Having baths in Camden Town.

Business Girls, Sir John Betjeman, 1906/1984

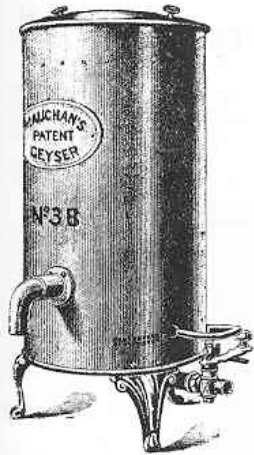


28. *The First Gas Hot-Water Geyser, invented by B W Maughan, 1868. (Gas World, 28 April, 1934).*

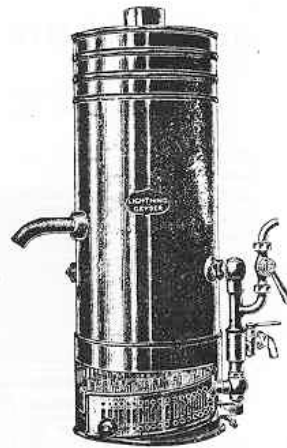
The Geyser

The generation of domestic hot water was revolutionised in 1868 when a sign-writer and decorator by the name of B W Maughan invented the first instantaneous gas water heater. He called it a "geyser," and is said to have taken the name from the Icelandic "geysir" for a spring that discharges steam and hot water. Maughan was granted British Patent No.3917, dated December 1868, for his invention.

This first geyser was followed by his improved class "B" pattern, "constructed on the direct heating or open type principle having a series of small spiral wires down which the water trickled, and was heated by an ingenious burner consisting of small brass tubes which were needle-drilled and produced a number of perfectly even flames of the luminous type." Soon, other firms started to make geysers, as the name had not been registered as a trade mark by Maughan. These included Bray, with their "Union" gas jets and then their special "geyser jets." The firm of Shrewsbury produced a closed type, floor-standing bath heater. This was followed by the popular "Lightning" geyser of the closed type by Ewarts. Later, instantaneous water heaters, invariably described as "patent" were produced by firms such as Fletcher, Davis, Calda, Fenlon, Wright and others.



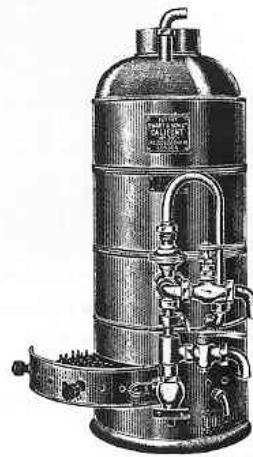
29. Maughan's Patent Gas Hot-Water Geyser, No. 3, Class B Pattern. (Gas World).



30. Ewart's Lightning Geyser. (Gas World).



31. A Closed-Type Water Heater. (Gas World).



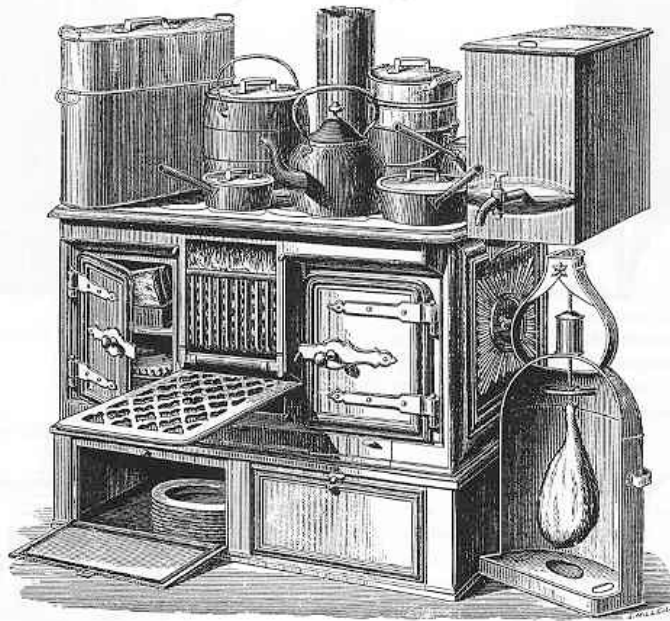
32. Ewart & Son's Patent Califont Hot-Water Geyser. (Gas World).

THE "LIONESSE" RANGE

43

AT WORK.

READY FOR FRONT FIRE ROASTING, AND SHOWING THE 25 GALLON OPEN TOP
COPPER HOT WATER CISTERN.



A 30 Gallon Galvanized Iron Hot Water Pressure Tank, ready for plumber's connections, for house or bath supply, can be sent with the Range, price, including 3 brass unions for lead pipe and pair of brass couplings for Range to suit, £3 5s additional to the price of the Range with Pressure Boiler; or if hot water supply is wanted for kitchen use only, a Copper Cistern (as shown above) is fixed to either the right or left end of the Range as may be ordered. It is connected to the Boiler in the Range, and holds about 25 Gallons; the width (over all) is then 4 feet 9 inches across the front of No. 9, and 5 feet 3 inches across the front of No. 10. Price of this attachment, all fitted, is £4 extra to price of Range with Pressure Boiler.

A suitable Screen for Front Fire Roasting and ornamental Fret Bracket or Shelf on which to set same when at work (shown above) sent when ordered.

33. Catalogue Extract. *The Lioness Range*. Smith & Wellstood No. 3, c.1890, p.43. (HGT Collection).

"SALAMANDER" BATH AND WATER HEATER.

THE most effective and expeditious thing of the kind introduced, adapted for dwelling-house bath-rooms, and very useful abroad, where at many homes the bath is placed in an out house.

Water in large quantities, for various purposes, can soon be brought to boil with this portable Stove. Any kind of Coal or smoky fuel can be used as well as Charcoal, if in use outside in the open air.

PRICE.

<i>Complete, ready for use, including</i>	
<i>a half-bushel bagful of Char-</i>	
<i>coal fuel,</i>	<i>£1 3 0</i>
<i>Without Charcoal,</i>	<i>1 0 0</i>



DIRECTIONS FOR USING.

Put a few pieces of the Charcoal on the kitchen or room fire, and when well-kindled, drop them in on the grating of the "SALAMANDER," and fill it about one-third full of Charcoal, then place the "SALAMANDER" in the bath tub (the water being in the tub); put on the Top-Flue Cover of the "SALAMANDER," and in an hour or so from the kindling of the fuel the water will be comfortably heated. Open the window of the room while the "SALAMANDER" is in use, so as to allow of free ventilation to carry off the fumes.

"SALAMANDER" IN USE.



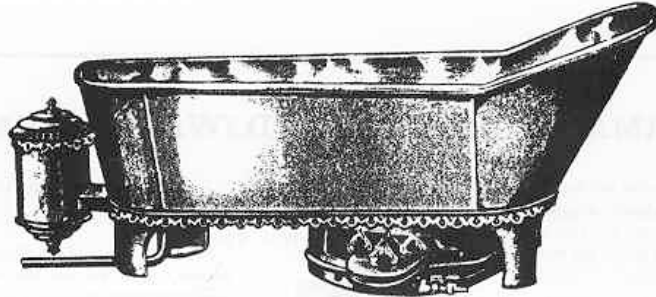
TESTIMONIAL.

GENTLEMEN—After many and expensive arrangements and attachments—with gas and otherwise—to heat the water of my bathing tub, all ending in comparative inefficiency, I am glad to say I find in your "SALAMANDER" the end of my troubles. I cannot and would not have hot-water pipes through the house; but I find the "SALAMANDER" so little trouble, and with such ready and simple action in its operation, that I am pleased to tell you so in reply to your inquiry.—Yours truly,

Spencer Avenue, London, W.

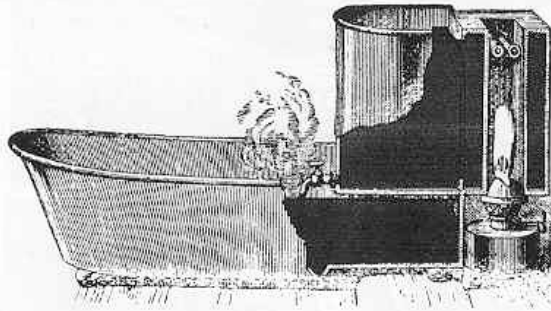
HENRY MORRISON.

34. Catalogue Extract. Salamander Bath & Water Heater. Smith & Wellstood, No.3, c.1890, p.89. (HGT Collection). The most effective and expeditious thing of the kind....



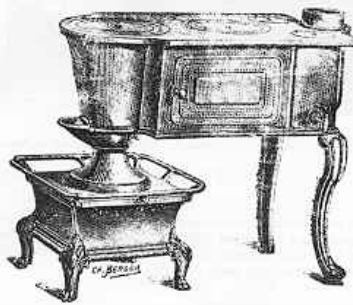
35. An Early Gas Bath, 1882. (HI, p.26).

Taking a gas-heated bath in Victorian times was not without its hazards. One might survive the flames, but it was vital to remember that the gas burner, which swung out for lighting, needed to be turned off before sitting down in the bath. A luxury feature was the towel warmer, left.



36. A Portable Bath, 1882. (HI, p.26).

The water in the tank, enough for one bath, was heated by a paraffin lamp.

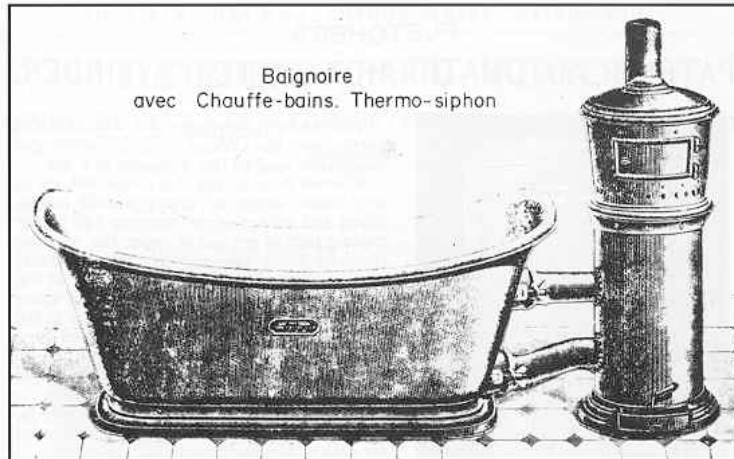


37. Combination Water Heater & Cooking Range, France, 1897. (CHG Collection).

Using solid fuel, it was condemned by the French engineer, Picard, as unhygienic, even dangerous, because of the possibility of the escape of fumes into the kitchen.

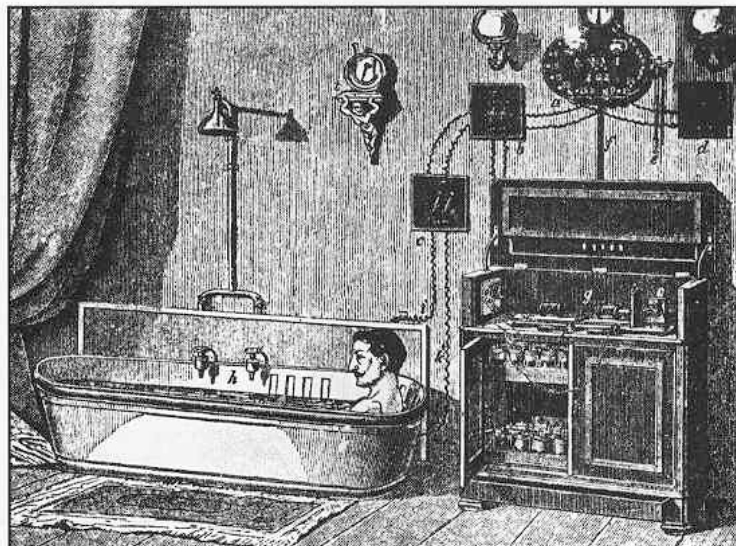
The pleasure of getting out of a cold bed and
creeping into a hot bath beats a cold plunge to death.

How to live to be 200, Stephen Leacock.



38. Solid-Fuel Water Heater & Bath, France, 1897. (CHG Collection).

The bath water was heated directly by gravity circulation through flow and return pipes plumbed directly into the bath. The heater itself consisted of a cylindrical water jacket surrounding the combustion space. Hot water was withdrawn through a tap over the bath.



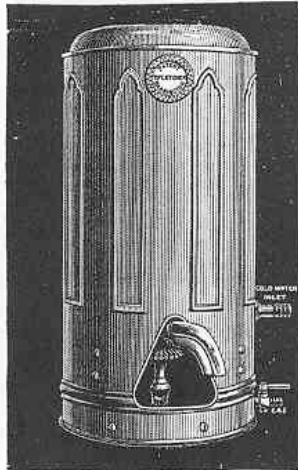
39. Catalogue Extract. Electric Bath Installation, GEC, 1886. (CHG Collection).

.....with all necessary appliances for constant and Faradaire current application.

26

THOS. FLETCHER, THYNNE STREET, WARRINGTON.

FLETCHER'S PATENT AUTOMATIC HOT WATER CYLINDER.



This entirely overcomes the difficulty of a permanent Hot Water Supply when gas ranges are used to the exclusion of a fire.

It is no trouble, can be connected up to any water supply at any pressure, is self-filling and self-acting, without any ball tap or moving part to get out of order, the only tap required being the one on the cold water service pipe, which admits cold water at the bottom of cylinder, displacing the hot water which flows off at the top, as shown in the section. The gas requires to be lighted some time before the hot water is required; but if the hot water is not wanted, it will keep hot from 12 to 20 hours after the gas is extinguished, the gas only requiring to be lighted during the time water is liable to be frequently required.

IT NEEDS ONLY A SMALL GAS SUPPLY, AND NO FLUE, and can be fixed over a sink or bowl in a housemaid's closet, scullery, lavatory, or anywhere required.

If wanted in several different parts of a house it is better to have two or more small cylinders when required, as the loss of heat from circulating pipes is serious, entailing great waste of heat and consequent expense.

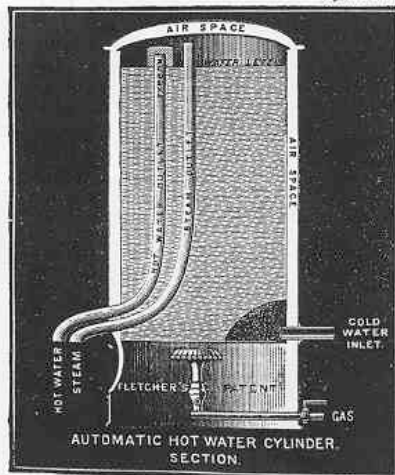
It is quite safe if forgotten for hours together, and is independent of any pressure on the water service.

If gas is being wasted it will make steam in the room, making a visible check on waste of gas, and if the gas is extinguished at night with the water nearly boiling, it will be scalding hot the morning after, the waste of heat being exceedingly small.

Price complete, with copper cylinder and panelled and polished copper, non-conducting casing, to hold 2½ Gallons, **50s.**

Size 10in. diameter, 22in. high, 9 Gallons, **70s.**, size 15in. diameter, 24in. high. Special sizes and shapes to order.

The only difference between



40. Catalogue Extract. Fletcher's Patent Automatic Hot Water Cylinder, 1886. (HGT Collection).

THOS. FLETCHER & CO., THYNNÉ STREET, WARRINGTON.

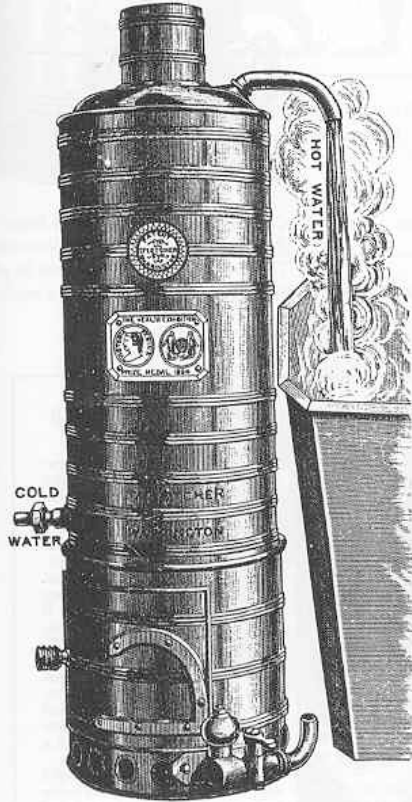
23

FLETCHER'S RAPID HEATER.

GIVING PURE WATER FOR BATHS, AND OTHER PURPOSES.

	Height.	Width.	Gallons heated per minute from 60° to 110°.	Price.	Cubic feet of gas per minute burnt.	Gas supply pipe required.
No. 5	... 32in.	... 10in.	... 1 ...	£4 5s.	... 1 ...	$\frac{1}{2}$ in. bore.
No. 6	... 32in.	... 13 $\frac{1}{2}$ in.	... 2 ...	£6	... 2 ...	$\frac{3}{4}$ in. "

Height from floor to bottom of spout, 30 inches.

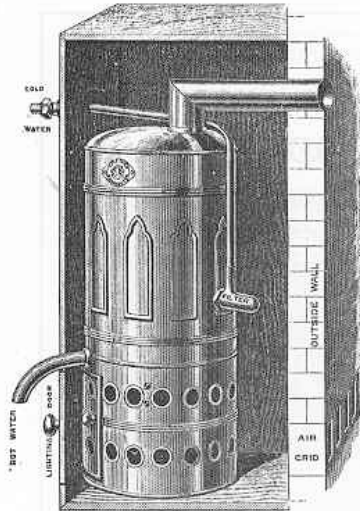


These heaters are now finished either bright or in enamel, as ordered. The latter has the advantage of requiring no cleaning.

These heaters pass the water over an enormous heating surface of copper, covered with pure tin, and deliver absolutely pure water at any temperature to near boiling point.

It must be distinctly borne in mind that no rapid heater can safely be used in small rooms without an efficient flue to carry away the burnt gases, owing to the large volume of gas burnt in a very short time. The flue must go into a chimney with a good draught. It is certain to fail, and be worse than useless, if put through a wall to the outside. The water in these heaters does not come in contact with the products of combustion. They work with a simple flow of water from a tap, requiring no pressure of water.

41. Catalogue Extract. Fletcher's Rapid Heater, 1888. (HGT Collection).

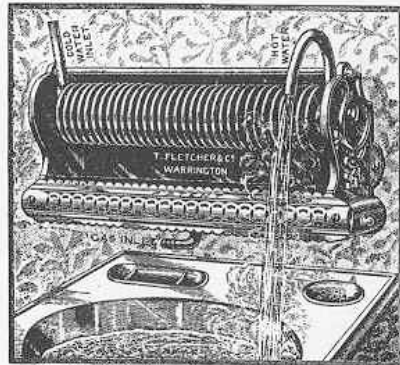


42. Catalogue Extract. Fletcher's Patent Instantaneous Water Heater, 1888. (HGT Collection).
The object of this (air grid) arrangement is to cause all winds to have equal and balanced effect on the inlet and outlet.



43. Catalogue Extract. Fletcher's Patent Radial Bath Heater, 1888. (HGT Collection).
The only bath heater which can be used in a badly ventilated bath-room or with a small gas supply.

FLETCHER'S patent INSTANTANEOUS WATER HEATER for LAVATORIES.
HORIZONTAL PATTERN.



Inlet and outlet screw in, and are interchangeable, so convenient. Price 35s.

The use of Fletcher's Patent Solid Webs for conducting the heat of the burner to the water renders it possible to construct very powerful and efficient water heaters of an exceedingly small size. This pattern is only 14in. wide, and 6in. high over all, small enough to be fixed behind any lavatory without inconvenience. It will deliver one quart of water per minute, heated from 60° to 125° F. (scalding hot). It is free from drip or mess, and is also free from smell, unless worked with an excessive pressure of gas, and beyond its intended power; in this case the tap should be turned down a little until the smell disappears.

The heater is constructed of solid copper, and is therefore not liable to injury if the gas is lighted and the water is forgotten. The water as to be used on either side as

44. Catalogue Extract. Fletcher's Patent Instantaneous Water Heater for Lavatories, 1888. (HGT Collection).



**A WARM BATH
IN
TEN MINUTES.**
Cost of Gas, 1d.

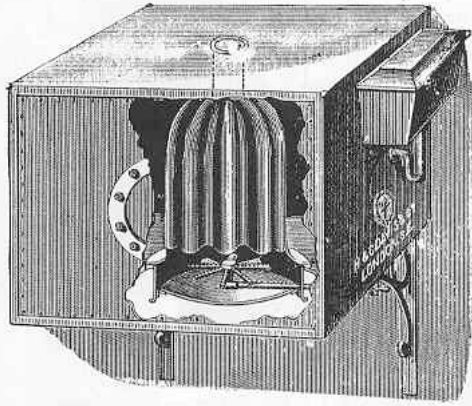
**THE NEW
"CALDA"
PATENTED.**
Gas no contact with water.

"Marvel" Gas Bath
£4 10s.

G. SHREWSBURY,
Calda Works, Station Rd.,
CAMBERWELL, S.E.
(Late 36, Gray's Inn Rd.)

45. Advert. Calda Water Heater, c.1890.
(Plumbing, No.67, 1986, p.33).


PATENT COMBINATION HOT WATER TANK.



Strong galvanised rivetted Hot Water Tank, fitted with Davis' Patent "Villa" economical Gas Boiler, so that in summer, when the kitchen range is not in use, the water can be heated by gas without in any way interfering with the usual connections.

Price, with Brackets, complete (40 gallons) ... £29 0 0
Any size to order.

46. Catalogue Extract. Davis Patent Combination Hot Water Tank
with Villa Economical Gas Boiler, c.1890. (HGT Collection).



The "Lavatory."

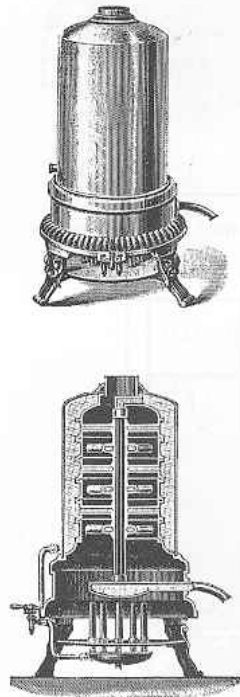
Will raise a Quart of Water in One Minute to 100 degrees.

Made in copper on a cast-iron stand, with powerful atmospheric burner, and will be found invaluable where hot water is not laid on, and small quantities are wanted at a moment's notice

Height to top of outlet, 13½ in.
Diameter at base, 8 in.

Price 30s.

47. Catalogue Extract, Davis -The Lavatory, Instantaneous Water Heater, c.1890. (HGT Collection).



48. Catalogue Extract, Davis Patent Caliente Indestructible Rapid Water Heater, c.1890. (HGT Collection). Cast copper interior and polished copper outer casing. Enamelled iron stand.



49. Design for an Automatic Hot Water Dispenser, Paris, 1893. (La Nature, 1893, p.4).

The Oldest & Largest Makers in the World. Medals awarded wherever exhibited.

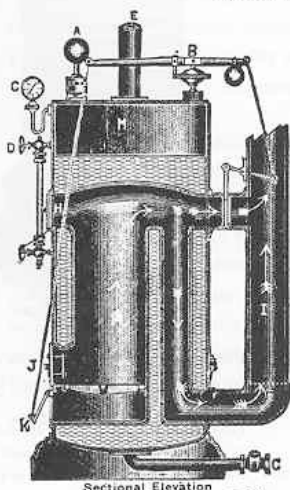
Telegrams: "Lumby, Halifax."

LUMBY, SON & WOOD, LTD.,

West Grove Boiler and Safe Works, HALIFAX,
.. ENGLAND.

**EFFICIENT, ECONOMICAL,
AND DURABLE.**

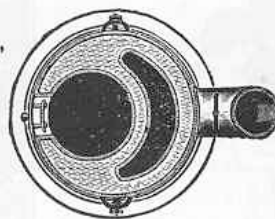
Prices and Particulars on
Application.



Sectional Elevation

The "Marlor"
STEAM
HEATER.

Reg. No. 273,408

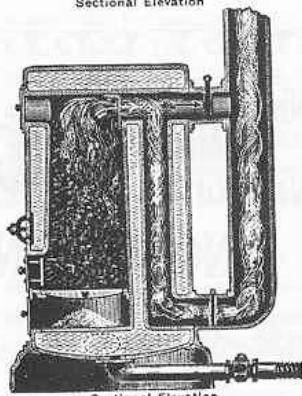


PLAN.

.. Makers of all patterns of ..
RIVETED AND WELDED BOILERS
FOR ALL PURPOSES.

The **LARGEST STOCK** in the Kingdom.

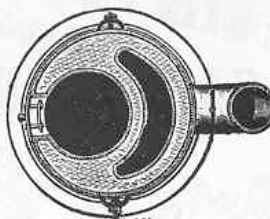
*The most complete Catalogue in the Trade
post free on receipt of Trade Card.*



Sectional Elevation

The
"Marlor"
HOT WATER
BOILER.

Reg. No. 271,532



PLAN.

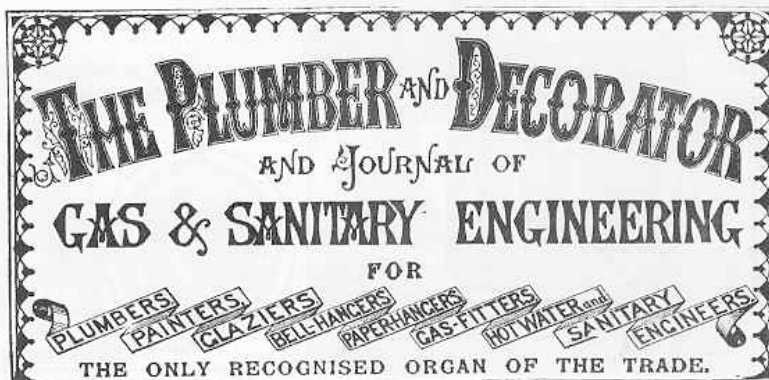
50. Advert. Lumby, Son & Wood, Halifax. (*Domestic Engineering, Chicago, Vol.12, No.6, March 1897, p.77.*)
Features the Marlor Steam Heater & Marlor Hot Water Boiler.



51. German Advert. Vaillant Gas Water Heater, 1896. (ADI, p.125).



52. Catalogue Extract. Arden Hill's Acme Instantaneous Water Heater, 1898. (HGT Collection). Heated with atmospheric burner. The fumes of the Gas Burner do not come into contact with the water, so the latter is kept perfectly pure.



53. Trade Journal Masthead. The Plumber & Decorator, c.1886. (Plumbing, Centenary Issue, No.67, Autumn 1986, p.33).

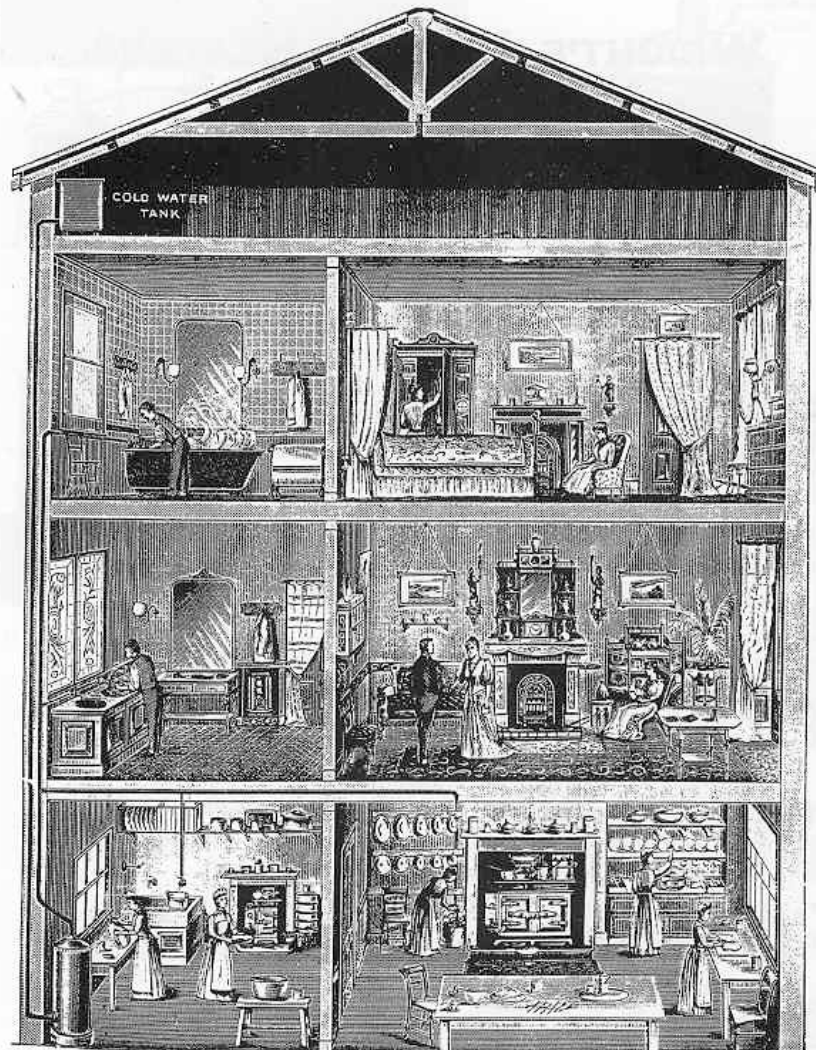
WRIGHT'S WATER HEATERS.

Water Heaters may be divided into several classes, ranging from the simplest form of boiler or hot-water cistern to the *Instantaneous* Water Heater, or the High Pressure *Circulating* Boiler, by means of which a supply of hot water may be carried to all parts of the house, and connected to Baths, Lavatories, Kitchens, &c.

For a *complete* Cooking Range it is generally desirable to have a separate Boiler for the supply of hot water, though the facilities for boiling water on the top of the "Eureka" Cooker are such that a special boiler is in many cases not absolutely necessary. In selecting a boiler for this purpose, it should be borne in mind that, while it is a most useful addition to the Range, it may, in the hands of careless servants, become an excuse for an extravagant consumption of gas. The economy of gas as a domestic fuel lies in the fact that it can be lighted in a moment and turned out the moment that it is no longer needed: hot water is useful at all times, and there is a temptation to keep the gas burning all day in order to have a supply of hot water at any time.

It may be taken as a rule that the more rapidly the heating of the water is accomplished the more need there will be for ventilation of the room in which the boiler is placed. This should be specially borne in mind in fixing these apparatus in Bath Rooms, where frequently the ordinary ventilation is very deficient. Wherever it is possible a pipe should be fixed to carry to the nearest chimney the products of combustion. This is easily done by any plumber at the cost of a few shillings. It is not, as a rule, satisfactory to carry the flue through the wall into the open air, as arrangements of this kind are peculiarly liable to "back draughts."

In the following description of Water Heaters will be found examples suited for almost every purpose, and a little thought will soon determine which is the most suited for the particular requirements of each purchaser.



55. (Original Caption). Sectional Drawing of House, showing the distribution of Hot Water in various rooms, by means of Wright's High Pressure Circulating Gas Boiler. From a catalogue of 1898. (HGT Collection).