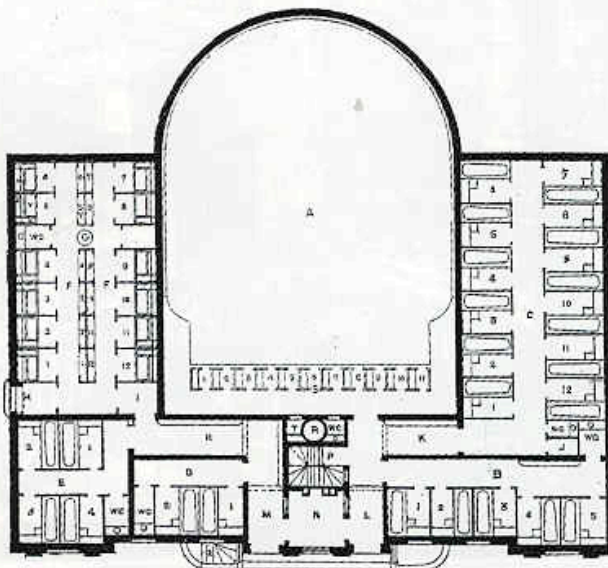


# Public Health

In every house a WC may be considered a necessity. But by English people, lavatories and baths, fitted up with hot and cold water services, would I suppose, be considered a luxury.

*The Plumber & Sanitary Houses, S S Hellyer, 1900.*

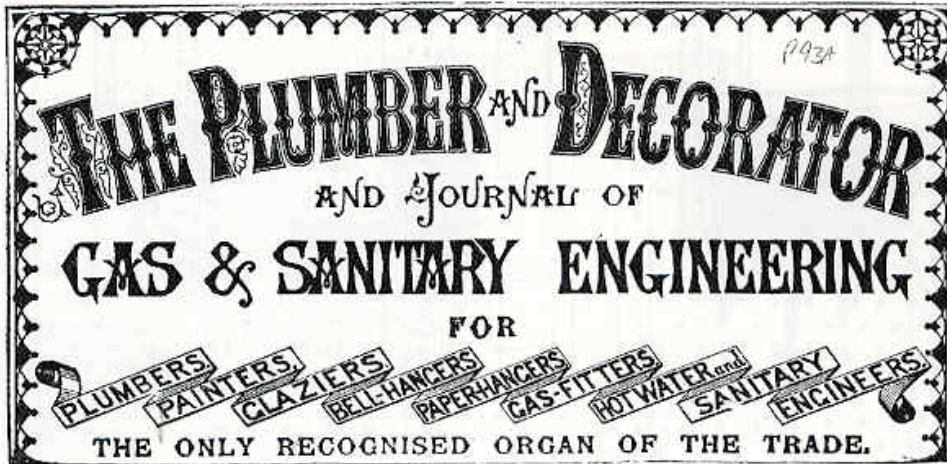


- A. Swimming-bath
- B. Five men's baths—first class.
- C. Twelve men's baths—second class.
- D. Two women's baths—first class.
- E. Four women's baths—second class.
- F F Wash-house, twelve compartments.
- G. Wringing machine.
- H. Entrance to Wash-house.
- I. Office.
- J. Soap, &c.
- K. Lobby.
- L. 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.

158. Design for Baths & Wash-houses, Bilston, Nr Birmingham. *Baths & Wash-houses: An Account of Their History*, A Ashpitel & J Whichcord, 1853, opp. p1.  
(Presentation copy CIBSE Archives).



See the privy house for easement be fair, sweet and clean,  
And that the boards thereon be covered with cloth fair and green.  
*Book of Nurture, John Russell, c1460.*



159. Trade Journal Masthead: *The Plumber & Decorator*, c1886. *Plumbing, Centenary issue, No. 67, Autumn 1986, p33.*

## Public Health

Ancient Rome (4th century AD) had 11 public baths, 144 public lavatories, 1352 public fountains and cisterns, 856 private baths, an extensive system of overhead and underground aqueducts, and public sewers. It was the Romans who installed the first piped supplies of water in Britain leaving examples of pottery pipes (Lincoln), wooden pipes (Silchester) and lead pipes (Bath). After the Romans, the larger monastic houses collected water from springs or reservoirs and distributed it through pipes, one of the most elaborate systems being that at Canterbury Cathedral (1160). London obtained its first piped water supply from a spring at Tyburn, from where it was distributed to a conduit at Cheapside (1237). Later, a waterwheel at London Bridge, drove a pump to raise Thames water into a reservoir, from where lead pipes took it into the City (1582). The New River brought additional water into London from Middlesex (1613), but a comprehensive network of water mains (and sewers) had to await Victorian times.

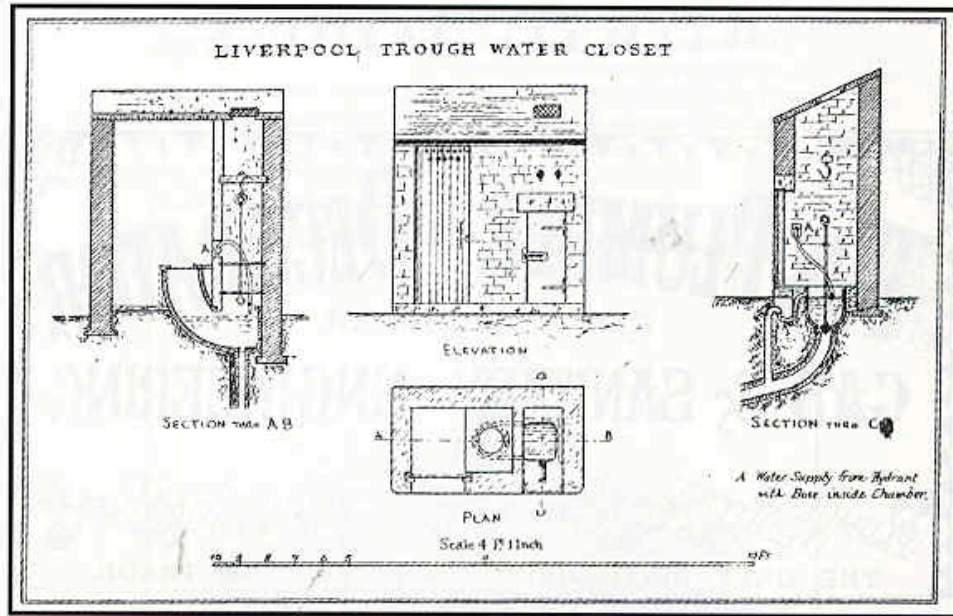
Wooden mains continued in use up to the 19th century, with lead connections into the houses. Gradually, other types of piping were employed: cast-iron (1745), steel pipes, pipes covered with a coal-tar

composition against corrosion (Angus Smith, Liverpool, 1860) and concrete (1906).

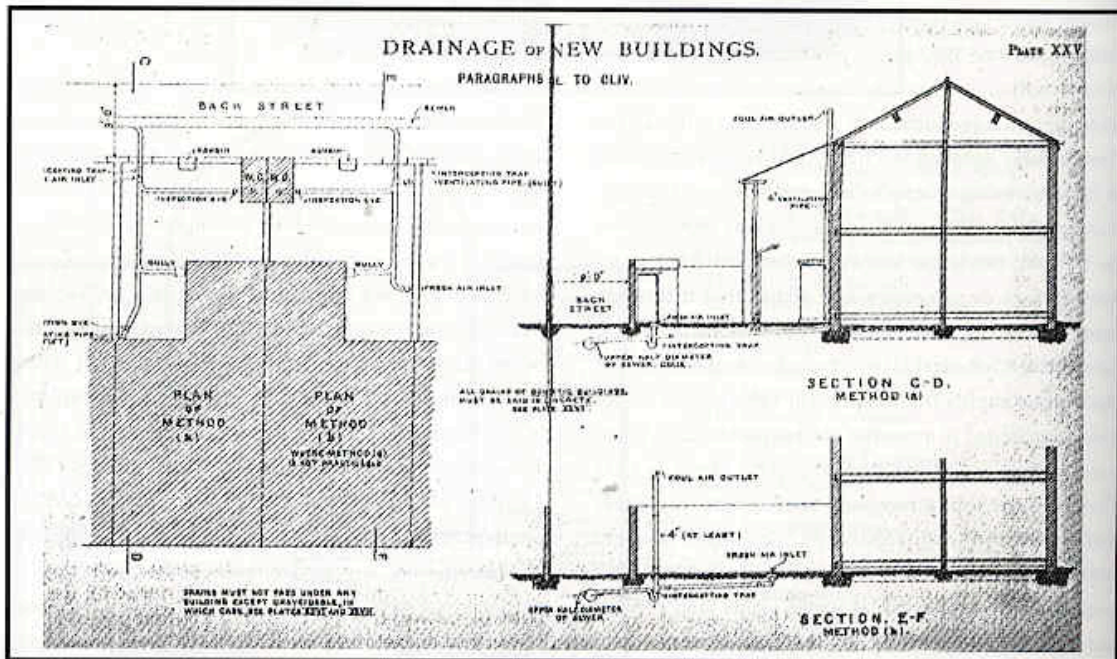
The overcrowding and poor condition of many dwellings in London led to grossly insanitary conditions up to the mid-19th century. The privy, the cesspool and the night-soil collectors took care of most sanitation requirements. It was Sir John Harington who designed the first valve water closet (1596), but it was not a success due to lack of piped water supplies and sewers. Though other designs followed, the breakthrough came when Alexander Cummings patented a closet which incorporated a water seal (1775). However, it still took around another hundred years before the use of closets became widespread and names like Jennings [162], Doulton [163], and Crapper [165] spearheaded the sanitary revolution. In London, it was the construction of the intercepting sewer systems of Sir Joseph Bazalgette (1865) which stopped the wholesale discharge of sewage into the Thames. In places like Liverpool, it was the introduction of Building Regulations [161] which improved sanitary conditions.

*Temples of Convenience, Lucinda Lambton, 1978.*



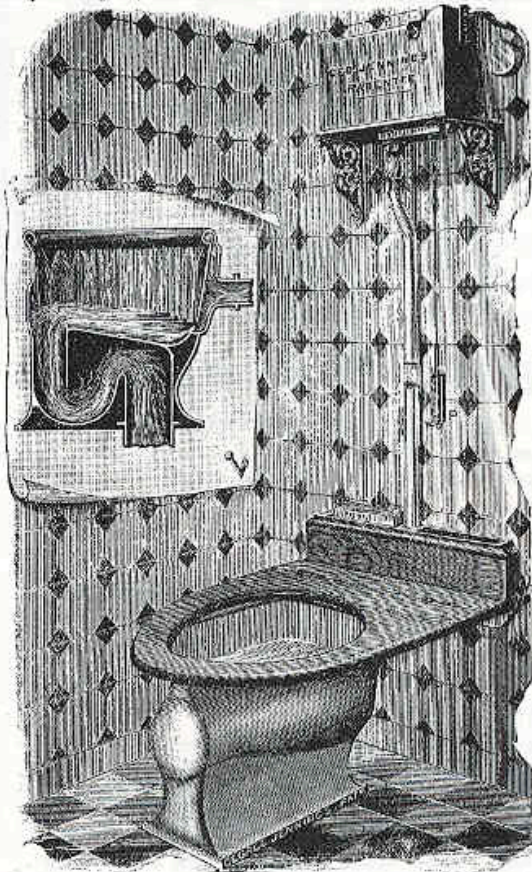


160. Liverpool Trough Water Closet. The scavengers are employed by the Corporation, and every day they visit each of the trough closets, flush it out with water, sweep it clean and leave it charged with fresh water for the next 24 hours' use. [Privy Council Medical Officer Report 12, App. A 1870]. BSE:p340.

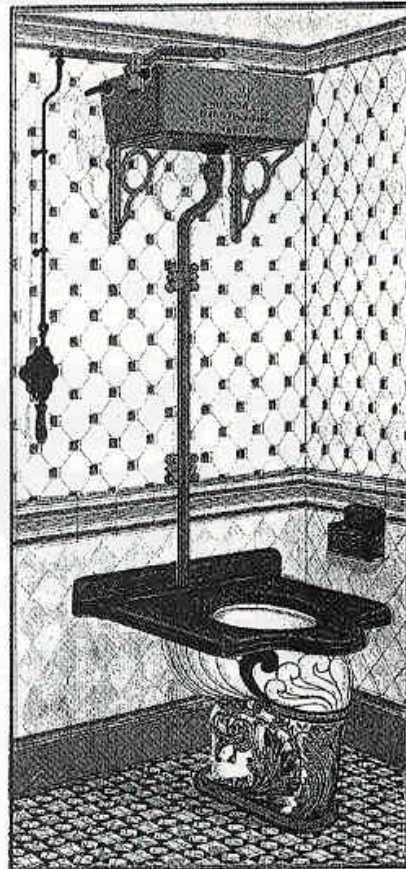


161. Drainage of New Buildings, Liverpool. Section through a small, late 19th century house in Liverpool showing how it should be drained. [A Manual of Building Regulations in Force in the City of Liverpool, W Goldstraw, 1902]. The English Terraced House, S Muthesius, 1985, plate 4.

Tho' the pipes that supply the bathroom burst  
 And the lavat'ry makes you fear the worst  
 It was used by Charles the First  
 Quite informally  
 And later by George the Fourth  
 On a journey North.  
*The Stately Homes of England, Noel Coward, 1899/1973.*



162. *George Jenning's Patent Closet. Described as a closet without woodwork (seat excepted). Standard Practical Plumbing, Vol.1, P J Davies, 1905, p203.*



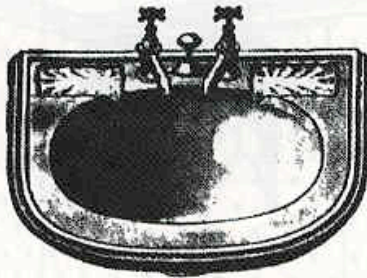
163. *Patent Vacuum Internal Closet. An overhead cast-iron cistern (chain-operated) with glazed earthenware wc bowl having a transfer applied pattern. Boxes of toilet paper were often included. Toilet rolls date from c1880. [Cat: Doulton & Co, London, 1887.] The Elements of Style, 1991, p264.*



164. *Trade Journal Masthead: The Sanitary Engineer, c1880. Later Engineering News Record, USA: Mechanical & Electrical Systems for Historic Buildings, G. N. Kay, 1991, p216.*

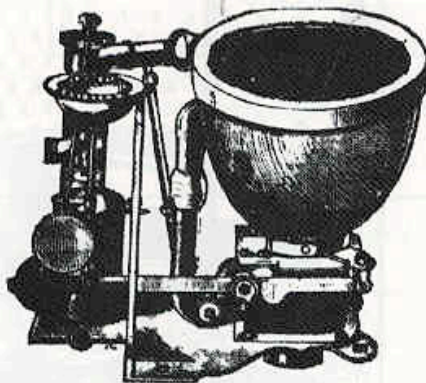
# THOMAS CRAPPER & CO.'S

## Sanitary Specialities,



### IMPROVED LAVATORY BASIN.

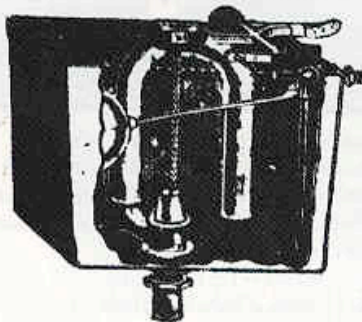
	£ s. d.
White Ware, fitted with combined Overflow and Waste, and $\frac{1}{2}$ Standard Screw-down Valves ...	2 19 6
Plated Fittings, Extra ... ..	0 8 6



### ELASTIC VALVE CLOSET.

No. 78.—Valve Closet, with white china dish with gold lines, and handle, white ware flushing rim basin, 1 in. supply valve, copper air regulator, complete as shown.

	£3 9 6
If with $1\frac{1}{2}$ in. valve ... ..	Extra 0 3 6
" Ornamental Basin ... ..	" 0 3 6
" White and Gold Basin ... ..	" 0 8 9
" Box Enamelled inside ... ..	" 0 4 9
" Box fitted with Brass Top ... ..	" 0 6 3
" Box fitted with union to connect Ventilating Pipe ... ..	" 0 3 9
" 4 in. outlet ... ..	" 0 7 9



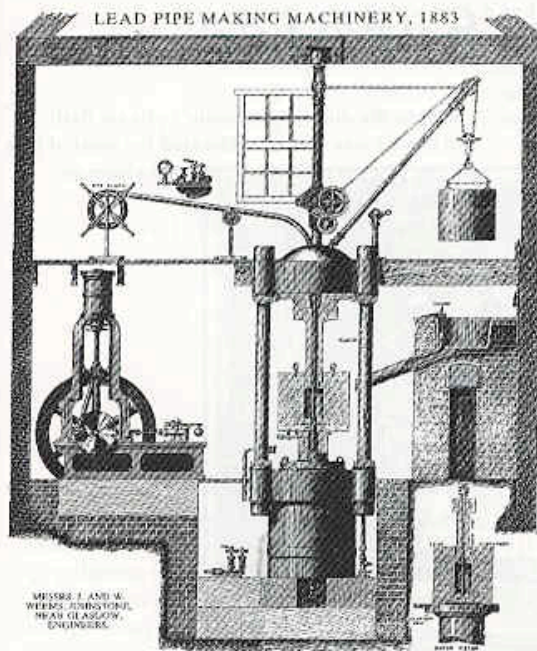
### IMPROVED SYPHON Water Waste Preventer.

	£ s. d.
Cast-Iron 2 Gallon SYPHON WASTE PREVENTER, with Tranquil Inlet Valve, and Silencing Air Tubes, and Brass Chain and China Pull ... ..	1 1 6
Ditto, 3 gallon ditto ... ..	1 3 6

**50, 52, & 54, MARLBOROUGH ROAD, CHELSEA, LONDON, S.W.**

165. Advertisement: Sanitary Specialities. Thomas Crapper & Co, Chelsea, London, undated. Probably c1900. The History of Plumbing, Parts 1-8, Plumbing & Mechanical, Vol.10, No.4, p116, June 1993.



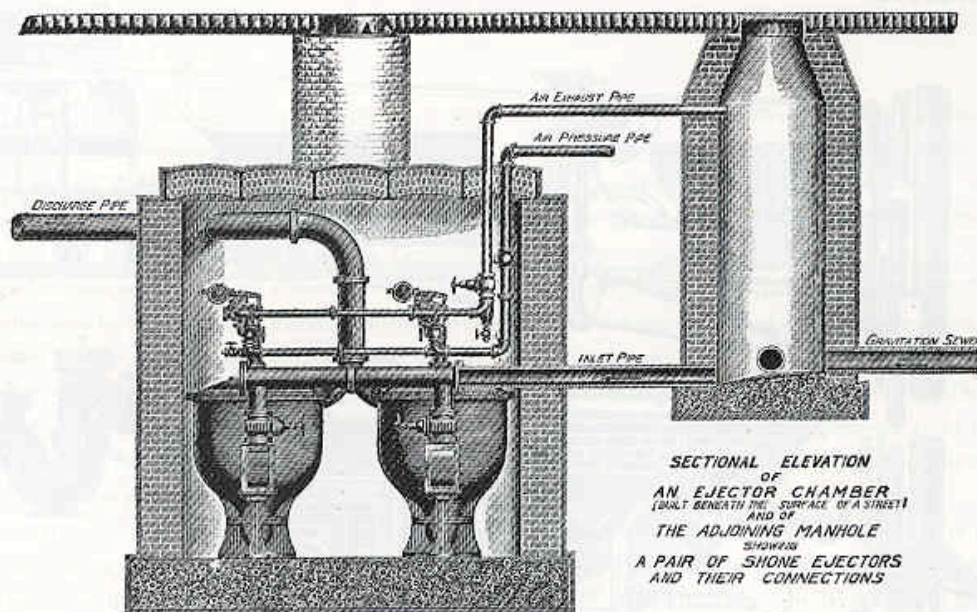


166. Lead Pipe Making Machinery, 1883.  
*The Engineer: Highlights of 120 Years, 1976, p172.*

**HOT & COLD WATER TAP,**  
 Invented by  
**LORD KELVIN.**  
 President of the Royal Society.

May be had from all Plumbers and Ironmongers  
 or from the  
**PALATINE ENGINEERING CO., Ltd.,**  
 10, Blackstock St., Liverpool.

167. Advert: Hot & Cold Water Tap, c1886.  
*Palatine Engineering Co, Liverpool.*  
*Plumbing, Centenary issue, No. 67, Autumn 1986, p40.*



168. Shone Pneumatic Sewage Ejectors. In 1886, a Select Committee of Parliament recommended that the drainage of the Palace of Westminster be pumped into the metropolitan system by Shone's ejectors and that the main sewer passing under the Houses of Parliament be reconstructed on the most modern approved principles. This was accomplished in 1889.  
*Sanitary, Heating & Ventilating Engineering, Vol.II, 1921, p49.*