

## **Specification of John Towle : treating sewage.**

### **Contributors**

Towle, John.

### **Publication/Creation**

London : Great Seal Patent Office, 1874 (London : George E. Eyre and William Spottiswoode)

### **Persistent URL**

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A.D. 1873, 15th OCTOBER. N° 3331.

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SPECIFICATION

OF

JOHN TOWLE.

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TREATING SEWAGE.

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LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.



103

THE UNIVERSITY OF CHICAGO



PH.D. THESIS

BY

ROBERT M. HARRIS

IN THE DEPARTMENT OF CHEMISTRY

CHICAGO, ILLINOIS

1954

UNIVERSITY OF CHICAGO PRESS





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A.D. 1873, 15th OCTOBER. N° 3331.

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### Treating Sewage.

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LETTERS PATENT to John Towle, of the Town and County of Oxford, one of Her Majesty's Justices of the Peace of the City of Oxford, for the Invention of "IMPROVEMENTS IN THE MEANS EMPLOYED FOR TREATING SEWAGE."

Sealed the 20th February 1874, and dated the 15th October 1873.

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PROVISIONAL SPECIFICATION left by the said John Towle at the Office of the Commissioners of Patents, with his Petition, on the 15th October 1873.

I, JOHN TOWLE, of the Town and County of Oxford, one of Her Majesty's Justices of the Peace of the City of Oxford, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE MEANS EMPLOYED FOR TREATING SEWAGE," to be as follows:—

My Invention which relates to improvements in the means employed for treating sewage consists in filtering the liquid sewage through beds of town refuse contained in pits or receivers having perforated floors, and placed over a pumping well or receptacle for the filtered sewage.

In carrying out my Invention the towns should be mainly sewered with pipes by which the sewage is conducted into, say, two such pits or receivers, capacious enough to receive the whole refuse of the town



*Towle's Improvements in Treating Sewage.*

during, say 24 hours, and sufficiently deep to afford a considerable thickness of refuse for the sewage to percolate through. The two pits or receivers are provided with perforated floors as before mentioned, but it is not absolutely necessary that the pumping well should be directly under the receivers so long as the under chamber can discharge its contents by pipe communication to the pumping well. These chambers are filled and emptied alternately, and are constructed at such a level as to allow the outfall pipes to thoroughly empty themselves over the top of this compost. I pump the sewage when filtered into a tank placed at a sufficient height to convey the contents where desirable by means of pipes to which suitable hose and stand pipes can be attached for distributing the sewage.

**SPECIFICATION** in pursuance of the conditions of the Letters Patent filed by the said John Towle in the Great Seal Patent Office of on the 3rd March 1874.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN TOWLE,** of the Town and County of Oxford, one of Her Majesty's Justices of the Peace of the City of Oxford, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifteenth day of October, in the year of our Lord One thousand eight hundred and seventy-three, in the thirty-seventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Towle, Her special license that I, the said John Towle, my executors, administrators, and assigns, or such others as I, the said John Towle, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN THE MEANS EMPLOYED FOR TREATING SEWAGE,**" upon the condition (amongst others) that I, the said John Towle, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the



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*Towle's Improvements in Treating Sewage.*

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said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

5 NOW KNOW YE, that I, the said John Towle, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

10 My Invention which relates to improvements in the means employed for treating sewage consists in filtering the liquid sewage through beds of town refuse contained in pits or receivers having perforated floors, and placed over a pumping well or receptacle for the filtered sewage.

In carrying out my Invention the town should be mainly sewered with pipes by which the sewage is conducted into, say, two such pits at  
15 least, but not confined to any number, or receivers capacious enough to receive the whole refuse of the town during, say 24 hours, and sufficiently deep to afford a considerable thickness of refuse for the sewage to percolate through. The said pits or receivers are provided with perforated floors as before mentioned, but it is not absolutely necessary  
20 that the pumping well should be directly under the receivers so long as the under chamber can discharge its contents by pipe communication to the pumping well. These receivers or upper chambers are filled and emptied alternately, and are constructed at such a level as to allow the outfall pipes to thoroughly empty themselves over the top of this  
25 compost. I pump the sewage when filtered into a tank placed at a sufficient height to convey the contents where desirable by means of pipes laid on the siphon principle, to which suitable hose and stand pipes can be attached for distributing the sewage, similar to taps in a main for watering the streets or dousing a fire.

30 In witness whereof, I, the said John Towle, have hereunto set my hand and seal, this Third day of March, in the year of our Lord One thousand eight hundred and seventy-four.

JOHN TOWLE. (L.S.)

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LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1874.



Witness's Deposition in the case of

and invention, and in what manner the same was to be put in  
and cause the same to be put in the Great Hall of the Court within six  
calendar months next and immediately after the date of the said letters  
patent.

10 Now know ye that I, the said John Fowler, do hereby declare the  
nature of the said invention, and in what manner the same is to be  
performed, to be particularly described and ascertained in and by the  
following and several parts, that is to say:

15 My invention which relates to improvements in the means employed  
for raising sewage consists in fitting the liquid sewage through holes  
of iron tubes contained in pits or receivers having perforated bottoms  
and placed over a pumping well or receptacle for the liquid sewage.

20 In carrying out my invention the town should be mainly served  
with pipes by which the sewage is conducted into one or two pits at  
least, but not confined to any number of receivers, and these receivers  
may be of the form of a tank, or a deep to afford a considerable thickness of water for the sewage  
to percolate through. The said pits or receivers are provided with  
perforated bottoms of large diameter, but it is not absolutely necessary  
25 that the openings should be directly under the receivers so long as  
the water can find its way to the bottom of the pipes communicating  
to the pumping well. These receivers or pits should be filled and  
emptied alternately, and are constructed of such a level as to allow the  
collected pipes to themselves empty themselves over the top of this  
30 chamber. I found the sewage when allowed into a tank placed at a  
sufficient height to convey the contents when desired by means of  
pipes laid on the upper surface, to which a valve has been fitted  
and is intended for distributing the sewage, either to take in a main  
for raising the sewage to a higher level.

35 In witness whereof, I, the said John Fowler, have hereunto set  
my hand and seal, this 13th day of March, in the year of our  
Lord One thousand eight hundred and seventy-four.

JOHN FOWLER (Sd)

LONDON:  
Printed by George Fisher, at the office of the  
Registrar of the Society of Authors, No. 1, Broad Street.