

Specification of John Linton : utilizing sewage.

Contributors

Linton, John.

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A.D. 1865, 12th OCTOBER. N° 2626.

S P E C I F I C A T I O N

OF

JOHN LINTON.

—
UTILIZING SEWAGE.
—

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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Price 1s. 6d.

1866.

THE UNIVERSITY OF CHICAGO

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A.D. 1865, 12th OCTOBER. N° 2626.

Utilizing Sewage.

LETTERS PATENT to John Linton, of Number 5, Ousegate, Selby, in the County of York, Mechanical Engineer, for the Invention of "THE UTILIZATION OF TOWN SEWAGE FOR AGRICULTURAL PURPOSES, AND ALSO TO PREVENT THE POLLUTION OF RIVERS AND STREAMS, AND THE MACHINERY AND APPARATUS FOR EFFECTING THE SAME."

Sealed the 10th April 1866, and dated the 12th October 1865.

PROVISIONAL SPECIFICATION left by the said John Linton at the Office of the Commissioners of Patents, with his Petition, on the 12th October 1865.

I, JOHN LINTON, of Number 5, Ousegate, Selby, in the County of York, Mechanical Engineer, do hereby declare the nature of the said Invention for "THE UTILIZATION OF TOWN SEWAGE FOR AGRICULTURAL PURPOSES, AND ALSO TO PREVENT THE POLLUTION OF RIVERS AND STREAMS, AND THE MACHINERY AND APPARATUS FOR EFFECTING THE SAME," to be as follows:—

My Invention consists in a series of moving filters revolving round a number of circular, octagonal, hexagonal, or four-sided wheels, which give a diagonal motion to the filters, causing them to move in the direction from C to D, as shewn on the Drawing Sheet 2. The arrangements and construction of this part of the Invention are as follows:—A number of filtering boxes or sieves are to be attached to any requisite number of endless chains, marked E on plan, Sheet Number One, which are to be put in

Linton's Method of Utilization of Town Sewage for Agricultural Purposes.

motion by steam or other motive power. The endless chains and filter boxes or sieves are propelled either by circular, octagonal, hexagonal, or four-sided wheels fixed on the shafts marked B, Sheet Number One. The frames of the filter boxes or sieves are constructed of iron or other metal, with an open space at the bottom and also at one end, into which space is introduced the filtering sieves, constructed of two parts of fine woven wirework or other material, leaving a space between the two parts of wirework or other material to contain a sufficient portion of filtering materials, composed of sand and charcoal, or any other material suitable for the purpose; the filter sieves are fixed in the filter boxes with set screws, so as to be easily removed, with a strip of thin india-rubber between the filter and the frame for the purpose of making the joined parts watertight. The outfall sewer is divided into as many branches as there are separate chains of filters; each branch is fitted with a valve, which is opened or shut by a chain attached to a lever and balance weight. The sewage is conveyed direct from the outfall sewer into the filters at C, on Sheet Number Two; on its passage from C to D sufficient time is allowed for the liquid sewage to pass through the filters, leaving the solid matter in the sieves until it is discharged on to the mixing stage; the filtered water is run off either by its own gravity or it is raised by steam or other power and discharged into the nearest river or stream. The solid matter deposited on the mixing stage shewn on Sheet One is then incorporated and thoroughly mixed with house ashes, sweepings from the streets, refuse from flax, spent tan, sawdust, dried and ground clay, warp, or any other refuse suitable for the purpose, in the proportion of one-third sewage to two-thirds of town refuse, with a small portion of gypsum or other deoderizing powder; it is then mixed with a sufficient quantity of liquid sewage to make it into a manure for agricultural purposes; it is finally stored in a covered building until required for use.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Linton in the Great Seal Patent Office on the 11th April 1866.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN LINTON, of No. 5, Ousegate, in the Parish of Selby, in the County of York, Mechanical Engineer and Surveyor to the Local Board of Health for the District of Selby, send greeting.

Linton's Method of Utilization of Town Sewage for Agricultural Purposes.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twelfth day of October, in the year of our Lord One thousand eight hundred and sixty-five, in the twenty-ninth year of Her Reign, did, for Herself, Her heirs and successors, give and grant unto
5 me, the said John Linton, Her special licence that I, the said John Linton, my executors, administrators, and assigns, or such others as I, the said John Linton, 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,
10 exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "THE UTILIZATION OF TOWN SEWAGE FOR AGRICULTURAL PURPOSES, AND ALSO TO PREVENT THE POLLUTION OF RIVERS AND STREAMS, AND THE MACHINERY AND APPARATUS FOR EFFECTING THE SAME," upon the condition (amongst others) that I, the said
15 John Linton, 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 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
20 immediately after the date of the said Letters Patent.

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

25 My Invention consists in a series of moving filters revolving round a number of circular, octagonal, hexagonal, or four-sided wheels, which give a diagonal motion to the filters, causing them to move in the direction from C to D, to be constructed as follows:—A number of filtering boxes or sieves are to be attached to any requisite number of endless chains,
30 marked E on the plan and elevation, which are to be put in motion by steam or other motive power applied to the crank at X. The endless chains and filter boxes or sieves are propelled either by circular, octagonal, hexagonal, or four-sided wheels fixed on the shafts marked B. The frames of the filter boxes or sieves are constructed of iron or other material, with
35 an open space at the bottom and also at one end, into which space is introduced the filtering sieves, constructed of two parts of fine wove wirework or other material, leaving a space between the two parts of wirework or other material to contain a sufficient portion of filtering material, composed of sand and charcoal, or any other material suitable for the purpose. The

Linton's Method of Utilization of Town Sewage for Agricultural Purposes.

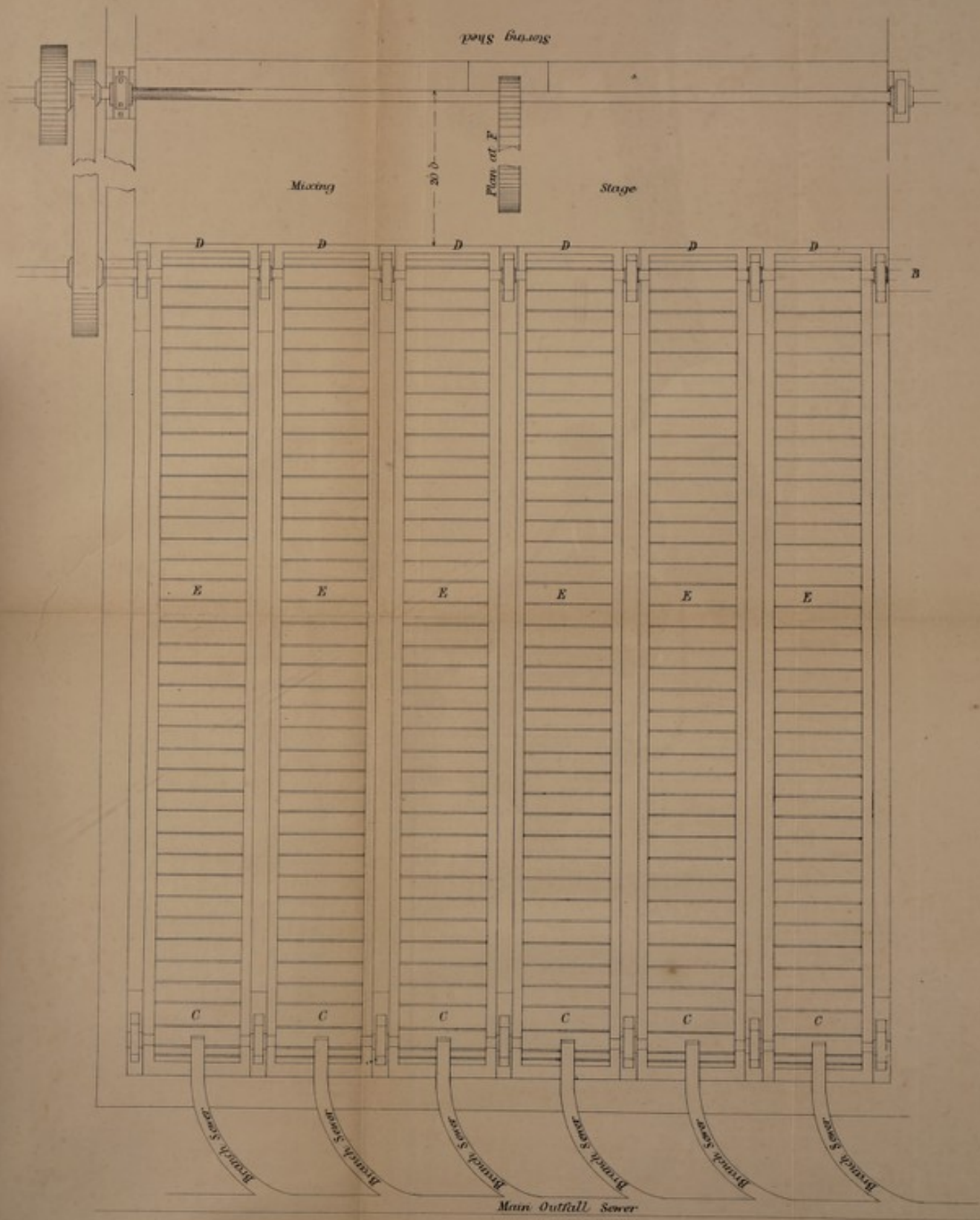
filter sieves are fixed in the filter boxes with sett screws, so as to be easily removed, with a strip of thin india-rubber between the filter and the frame for the purpose of making the joining of the two parts water-tight. Every separate chain of filters may be disconnected by moving the levers marked S, which uncouples and throws the driving wheels out of gear, as shown 5 at R on the Drawing. The outfall sewer is to be divided into as many branches as there are separate chains of filters; each branch is fitted with a valve H that is opened or shut by a chain attached to a lever and balance weight. The sewage is conveyed direct from the outfall sewer into the filters at C; on its passage from C to D sufficient time is allowed 10 for the liquid sewage to pass through the filter, leaving the solid matter in the sieves until it is discharged on the mixing stage. The filtered water is run off either by its own gravity, or it may be raised by steam or other power and then discharged into the nearest river or stream. The solid matter deposited on the mixing stage is to be incorporated and thoroughly 15 mixed with house ashes, sweepings from the streets, refuse from flax, spent tan, sawdust, dried and ground clay, warp, or any other refuse suitable for the purpose, in the proportion of one-third of solid sewage to two-thirds of town refuse, with a portion of gypsum or other deorderizing powder; it is then mixed with a sufficient quantity of liquid sewage to make it into 20 a suitable manure for agricultural purposes; it is finally stored in a covered building until required for use.

In witness whereof, I, the said John Linton, have hereunto set my hand and seal, this Tenth day of April, in the year of our Lord One thousand eight hundred and sixty-six. 25

JOHN LINTON. (L.S.)

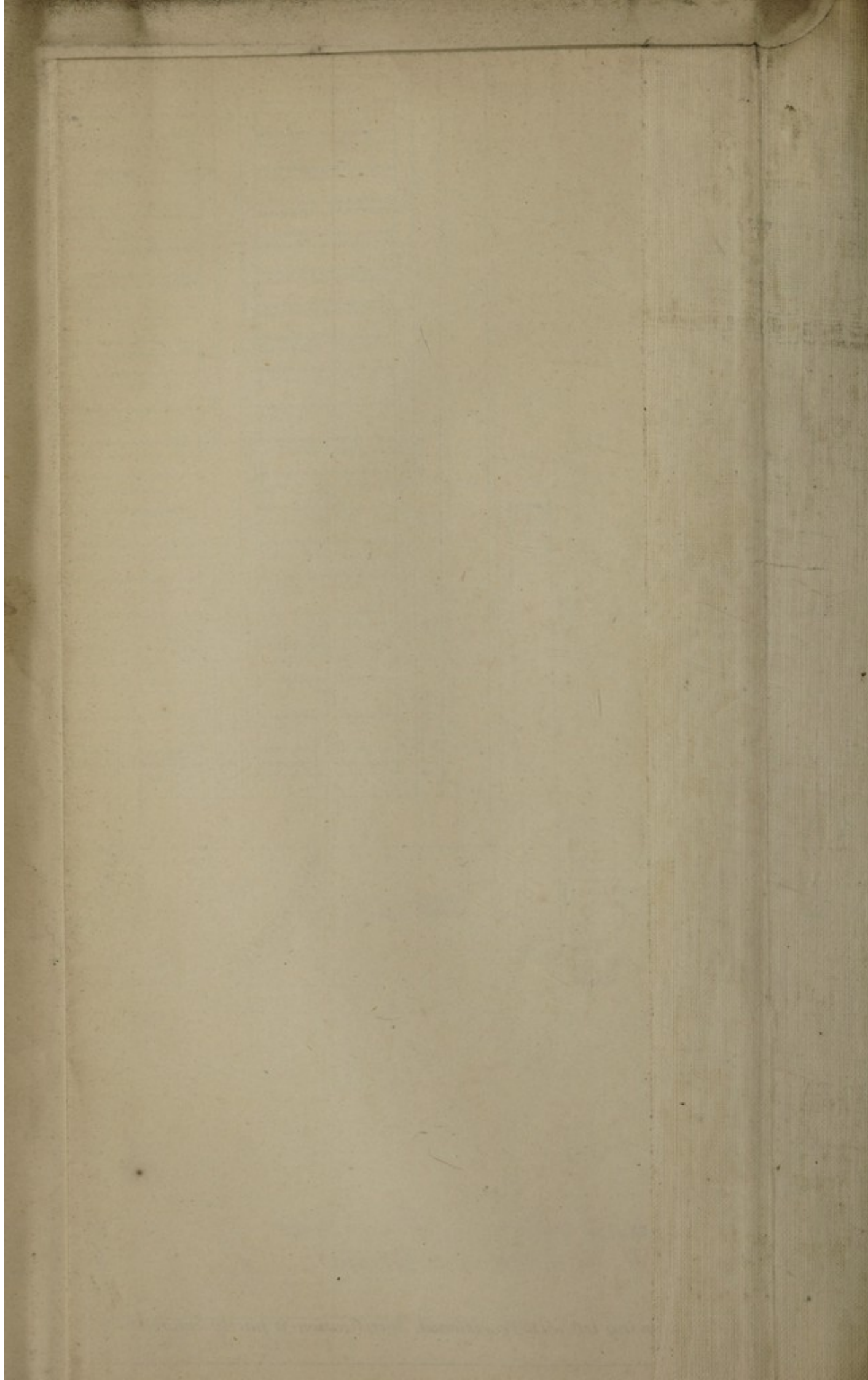
LONDON:

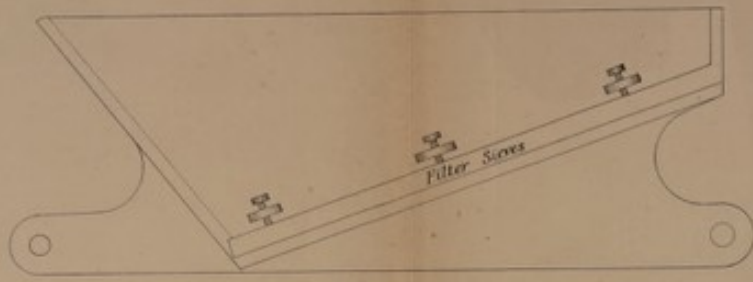
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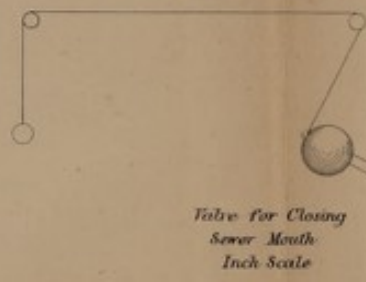
The drawing left with Provisional Specification is partly colored.

Drawn on Stone by Malby & Sons.

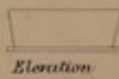




Section Through
Filtering Boxes - 1/2 Full size



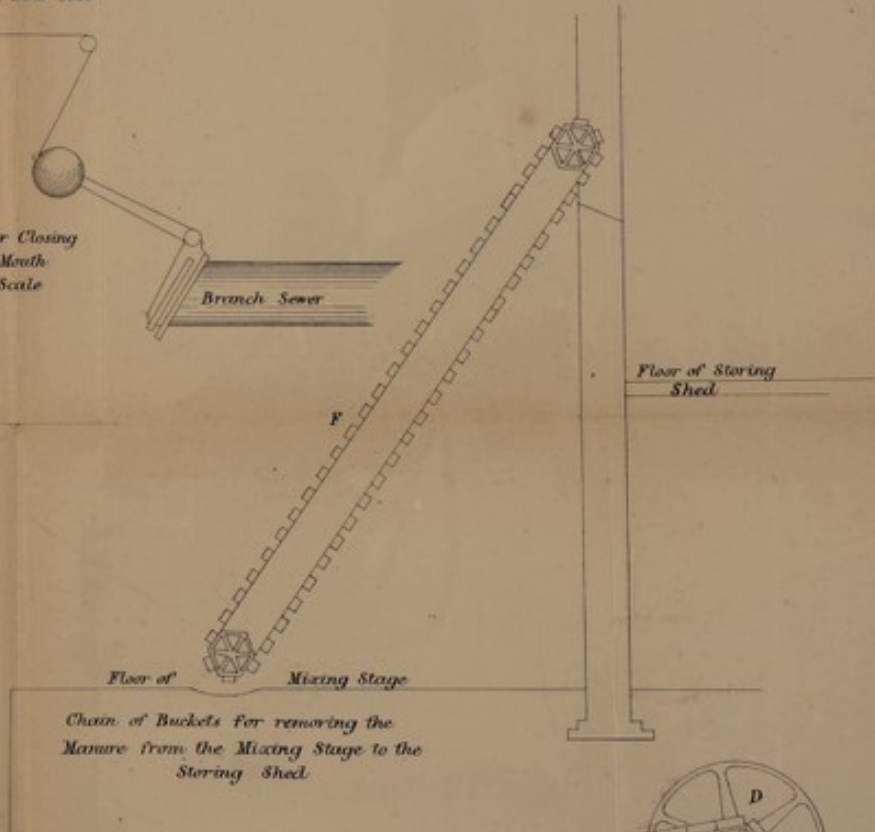
Valve for Closing
Sewer Mouth
Inch Scale



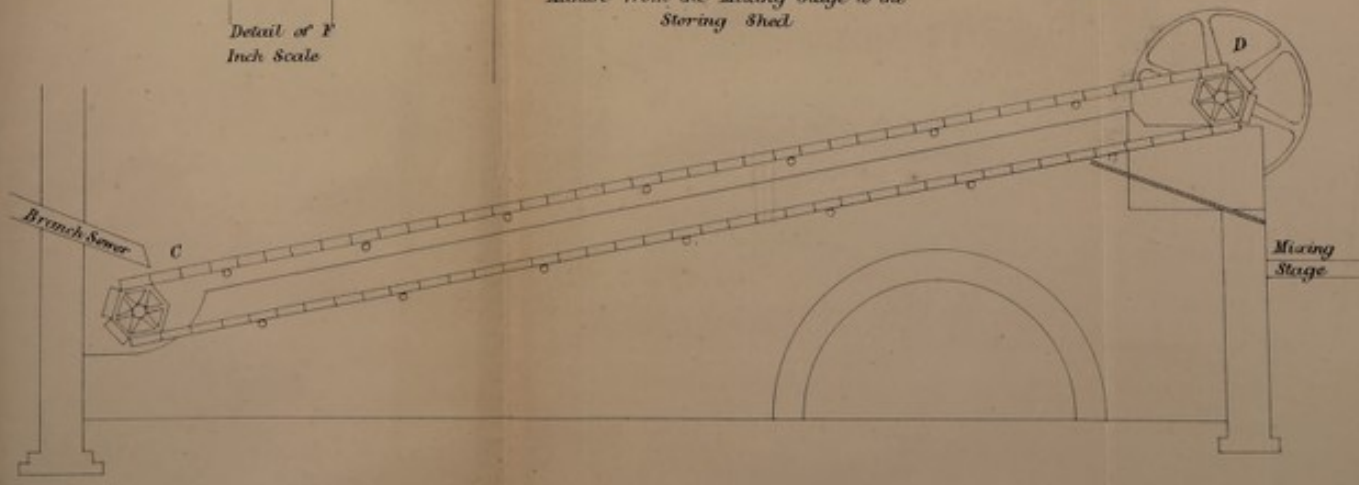
Elevation



Detail of F
Inch Scale

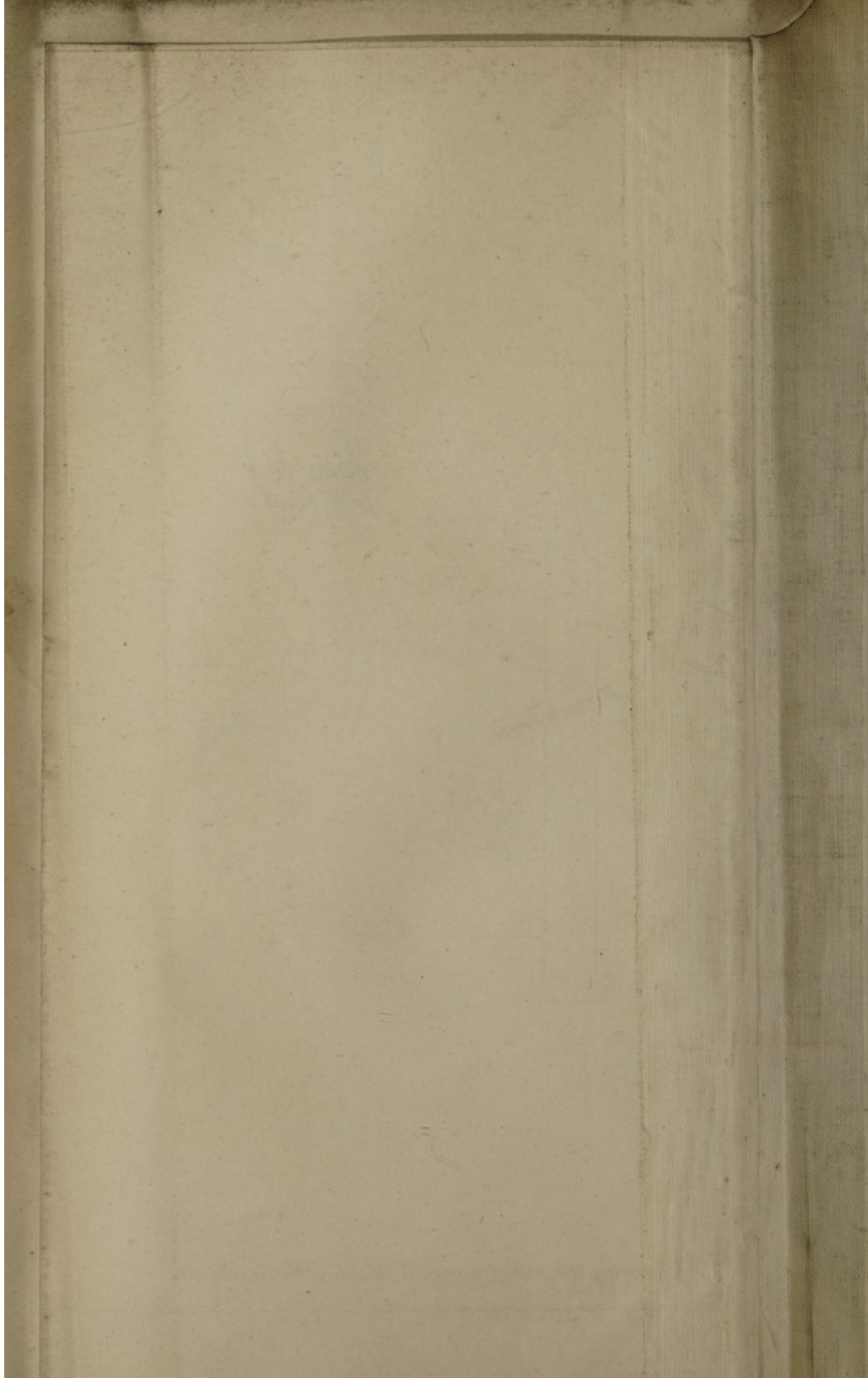


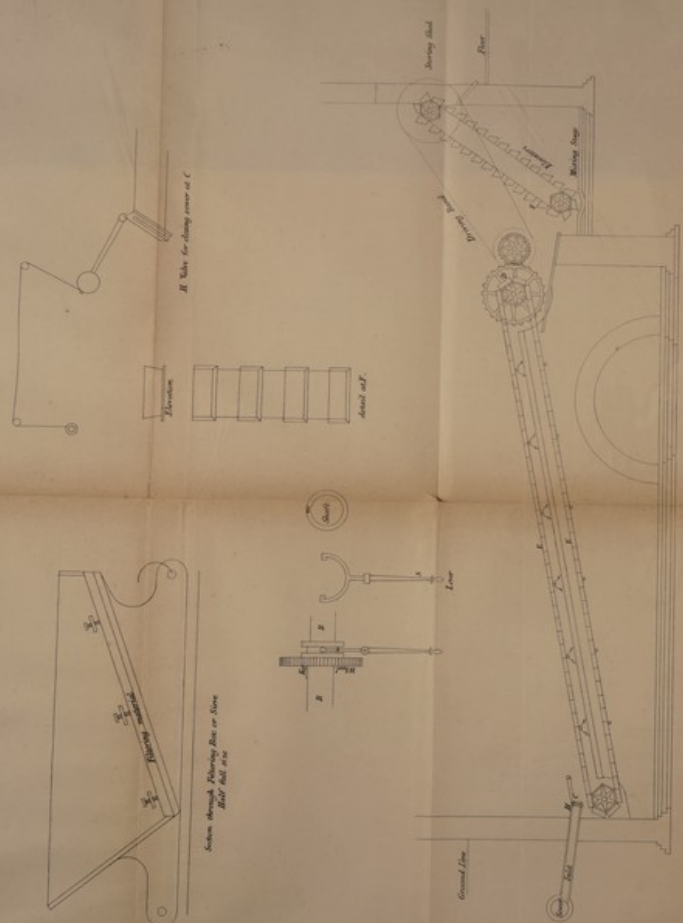
Chain of Buckets for removing the
Manure from the Mixing Stage to the
Storing Shed



The drawing left with Provisional Specification is colored.

Drawn in Stone by Malby & Sons.

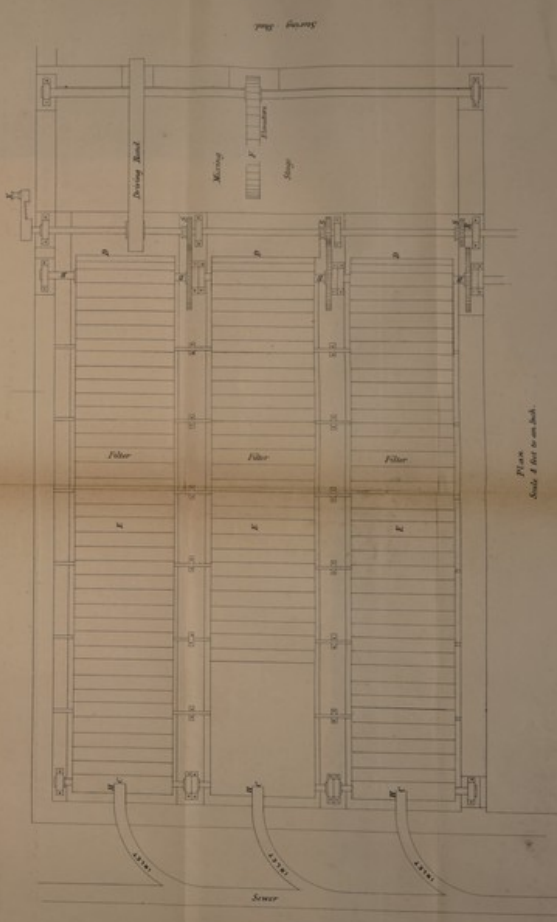




H. Ribs for clamping cover at C

Section through Filtering Box or Stone

Exhaustion



Plan of filter in one bed

The filter drawings are purely colored.

Leviss Patent for Filtering Box and Sewer

Drawn and Engraved by Henry Johnson

