

## **Specification of Frans Julius Fahlman : disinfecting faecal matter.**

### **Contributors**

Fahlman, Frans Julius.

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A.D. 1871, 11th *MAY*. N° 1269.

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

OF

FRANS JULIUS FAHLMAN.

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DISINFECTING FŒCAL MATTER.

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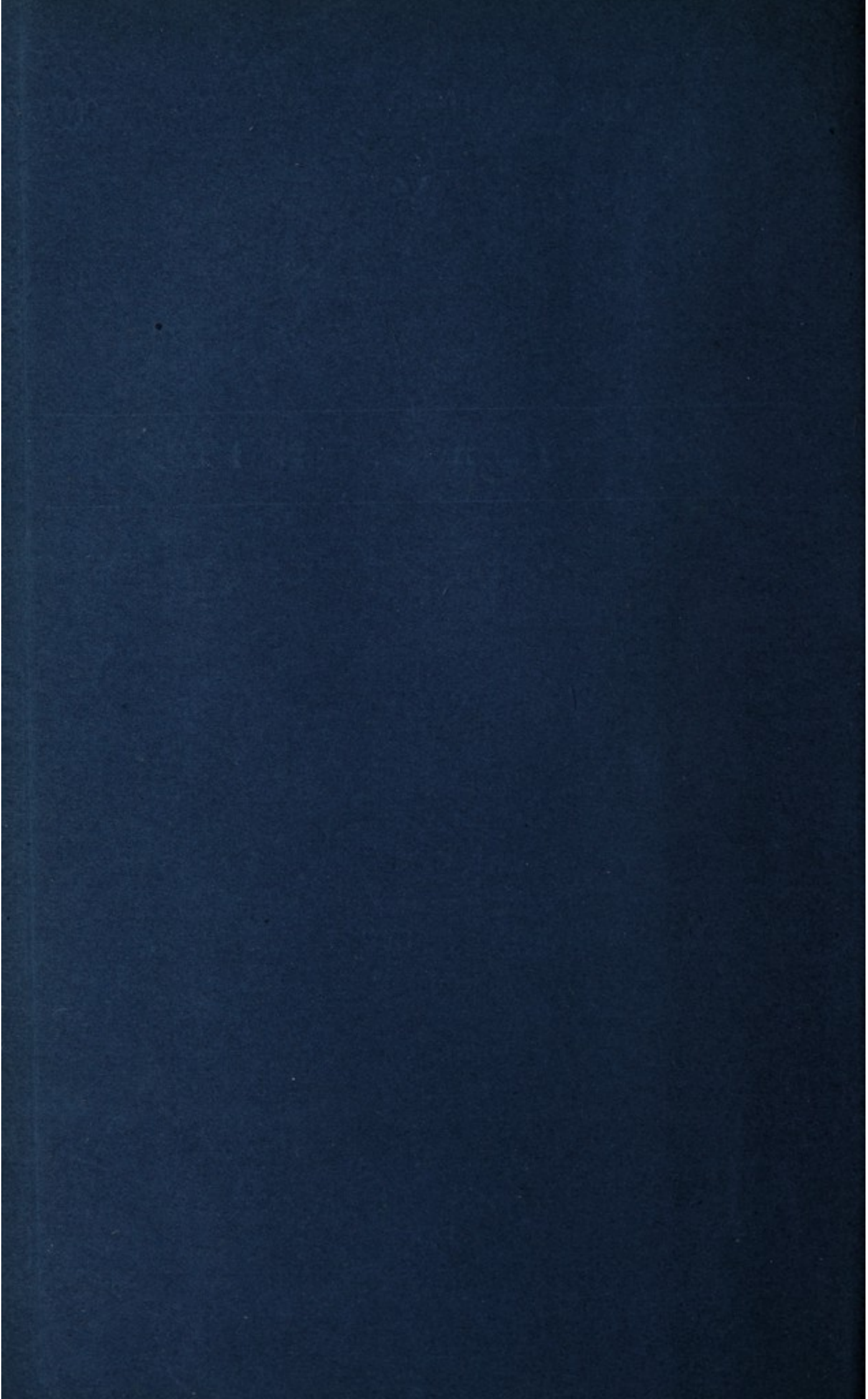
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1871.





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A.D. 1871, 11th *MAY*. N° 1269.

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**Disinfecting Fœcal Matter.**

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**LETTERS PATENT** to Frans Julius Fahlman, Swedish-Norwegian Vice-Consul at Iliza, Balearic Island, Spain, at present in Stockholm, on leave of absence, for the Invention of "**IMPROVED SYSTEM OF DISINFECTING FŒCAL MATTER, AND APPARATUS EMPLOYED THEREIN.**"

Scaled the 7th November 1871, and dated the 11th May 1871.

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**PROVISIONAL SPECIFICATION** left by the said Frans Julius Fahlman at the Office of the Commissioners of Patents, with his Petition, on the 11th May 1871.

I, **FRANS JULIUS FAHLMAN**, Swedish-Norwegian Vice-Consul at Iliza, 5 Balearic Island, Spain, at present in Stockholm, on leave of absence, do hereby declare the nature of the said Invention for "**IMPROVED SYSTEM OF DISINFECTING FŒCAL MATTER, AND APPARATUS EMPLOYED THEREIN,**" to be as follows:—

The disinfection of fœcal matter in this system operates at the time 10 of its evacuation by means of the urine of the person using the privy or commode. For this purpose before the urine is received into the receptacle of the excrement it passes through a quantity of any suitable

*Fahlman's Improved System of Disinfecting Fæcal Matter.*

disinfecting matter placed in a pipe through which the urine traverses before it is precipitated on the solid excrement.

The apparatus consists of a small vessel for receiving the urine, which vessel communicates with the receptacle of the excrement by means of a pipe, the passage of which is first descending, then rising, and afterwards delivering the latter opening into the excrement receptacle, either at the front or at the back. The apparatus is placed under the hole of the privy or commode in such a position that the urine can only pass to the excrement receptacle, until after it has passed through the descending, ascending, and delivery portions of the pipe before mentioned, and it is in the descending part of the pipe that the disinfecting matter is placed. 5 10

Another arrangement consists in providing the vessel which receives the urine with a vertical pipe opening at the bottom into a box or receiver containing disinfecting matter, there being near the top of the box a pipe opening into the receptacle for the excrement. The disinfecting matter is placed in the box in such quantity that the urine, after having passed through it, shall have a certain depth above the said disinfecting matter and run off into the excrement, when a fresh supply of urine is added. 15 20

The apparatus can be made of lead, tin plate, or other suitable metal, or of glass, porcelain, earthenware, and be placed in the interior or at the exterior separately or formed with the body of the privy or commode.

The distinctive character of this system consists in the employment of urine when it is ejected as a solvent or vehicle of the disinfecting matter, and the application of it by means at each usage of the privy or commode, the urine before it is mixed with the solid excrement being itself disinfected by the disinfecting matter, and afterwards operating upon the excrementitious substances. 25 30

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Frans Julius Fahlman in the Great Seal Patent Office on the 11th November 1871.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FRANS JULIUS FAHLMAN, Swedish-Norwegian Vice-Consul at Iliza, Balearic 35**

*Fahlman's Improved System of Disinfecting Fœcal Matter.*

Islands, Spain, at present in Stockholm, on leave of absence, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eleventh day of May, in the year of  
5 our Lord One thousand eight hundred and seventy-one, in the thirty-fourth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Frans Julius Fahlman, Her special licence that I, the said Frans Julius Fahlman, my executors, administrators, and assigns, or such others as I, the said Frans Julius Fahlman, my  
10 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  
15 "IMPROVED SYSTEM OF DISINFECTING FOECAL MATTER, AND APPARATUS EMPLOYED THEREIN," upon the condition (amongst others) that I, the said Frans Julius Fahlman, 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,  
20 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.

NOW KNOW YE, that I, the said Frans Julius Fahlman, do hereby declare the nature of my said Invention, and in what manner the same  
25 is to be performed, to be particularly described and ascertained in and by the following statement (that is to say) :—

This Invention relates to privies and commodes, and consists in an improved system and apparatus for effecting the disinfection of the foecal matter at the time of its evacuation, by means of the urine of  
30 the person using the privy or commode. For this purpose, before the urine is received into the receptacle of the excrement, it passes through a quantity of any suitable disinfecting matter placed in a pipe or box through which the urine traverses before it is precipitated on the solid excrement, the disinfecting matter being sulphate of iron, or other  
35 disinfectant, which the urine can dissolve.

The manner in which this Invention is to be performed will be clearly understood by the following particular description thereof, reference being had to the Figures on the accompanying Sheet of Drawings, and to

*Fahlman's Improved System of Disinfecting Faecal Matter.*

the letters of reference marked thereon:—Fig. 1 is an elevation of one arrangement of apparatus for enabling the foecal matter to be disinfected at the time of its production by urine absorbed with disinfecting matter. The apparatus consists of a small vessel A for receiving the urine only of the person using the privy or commode, which vessel communicates 5 with the excrement receptacle E by means of the pipe B, C, D, the part B being descending, the part C rising, and the part D delivering. The apparatus is placed under the seat of the privy or commode in such a position that the urine cannot pass to the excrement receptacle E until it has passed through the pipe B, C, D, and it is in the descending 10 part B that the disinfecting matter is placed, it being passed as powder crystals, or otherwise, through the hole at bottom of the vessel A. As the urine fills the parts B, C, it dissolves and takes up disinfecting matter and afterwards runs off through the part D to the solid excrement, especially when a quantity of fresh urine is added to the 15 vessel A.

Another arrangement shewn in the elevation, Fig. 2, consists in providing the vessel A which receives the urine with a vertical pipe B opening at the bottom into a box or reservoir C, containing disinfecting matter, there being at the top of the box a delivery pipe D opening 20 into the excrement receptacle E. The pipe B conducts the urine to the bottom of the box C, from whence it rises through the disinfecting matter to run off through the delivery pipe D to the excrement deposited in the receptacle E, and by this arrangement any obstruction in the passage of the urine is avoided, and the delivery pipe D, both in 25 Figs. 1 and 2, can be passed round to the back by giving it the necessary length and curve.

In some cases the disinfecting matter is placed in the box in such quantity that the urine, after having passed through it, shall have a certain depth above the disinfecting matter, and run off to the excrement, 30 when a fresh supply of urine is added.

Fig. 3 represents in elevation a modification of Fig. 2. Instead of fixing the box B to the front wall of the seat, and thereby make both the box and vessel A stationary, I connect the box C and vessel A, Fig. 3 to a plate F, so that they can swing or turn to the position shewn 35 by the dotted lines, in order that all the urine may pour in an instant into the excrement receptacle E. For this purpose the plate F is jointed to a bracket F<sup>1</sup> fixed to the wall O of wood or masonry, and near the

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*Fahlman's Improved System of Disinfecting Fæcal Matter.*

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bottom of the plate there is a projecting arm or lever H, above which there is a projection on the rod G, having a head screwed on the top, the head being in contact with a hinged seat. The weight of the person occupying the seat causes the plate F to be vertical by means of the  
5 rod G and arm H, and then the vessel A and box B are in proper positions for receiving the urine, but when the person rises the weight of the vessel A and box B causes them to turn over and empty the contents of the box into the receptacle E, the urine mixed with disinfecting matter being effectually spread over the excrement.

10 Fig. 4 is a front view of the plate and bracket F, F<sup>1</sup>; Fig. 5, a side view of the plate F with its arm H and the rod G, there being also side and top views of the guides and stops; Fig. 6 is a front view of the vessel A and box C; Figs. 7 and 8 are top and side views of the vessel A, and Figs. 9, 10, and 11 are bottom, top, and back views of the box C.

15 The apparatus can be made of lead, tin plate, or other suitable metal, or of glass, porcelain, or earthenware, and be placed outside or inside the excrement receptacle, or formed with it.

The distinctive character of this system consists in the employment of human urine at the time of its production as a solvent and absorbent  
20 of disinfecting matter, and the application of the urine and disinfectant combined at each usage of the privy or commode, the urine before it is mixed with the solid excrement being itself disinfected by the disinfecting matter, and afterwards operating upon the excrementitious substances.

25 Having now described the nature and particulars of my said Invention and the manner in which the same is to be performed, I desire it to be understood that I claim the improved system and apparatus for disinfecting the fæcal matters of privies and commodes as herein described and illustrated in the accompanying Sheet of Drawings.

30 In witness whereof, I, the said Frans Julius Fahlman, have hereunto set my hand and seal, this Thirty-first day of October, in the year of our Lord, One thousand eight hundred and seventy-one.

F. J. FAHLMAN. (L.S.)

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LONDON:

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Printers to the Queen's most Excellent Majesty. 1871.



Warrant of Appointment of the Board of Health

bottom of the plate there is a projecting arm or lever H, upon which there is a projection on the rod G, having a notch secured on the top of the head being in contact with a fixed axis. The weight of the person occupying the seat causes the plate K to be vertical by means of the rod G and arm H, and thus the vessel A and box B are in proper position for receiving the urine, but when the person rises the weight of the vessel A and box B causes them to turn over and empty the contents of the box into the receptacle J, the urine mixed with disinfecting matter being ultimately spread over the excrement.

10 Fig. 1 is a front view of the plate and bracket K, Fig. 2, a side view of the plate K with its arm H and the rod G, there being also side and top views of the guides and stops; Fig. 3 is a front view of the vessel A and box B, and 4 and 5 are top and side views of the rod G, and Fig. 6, 7, 8, and 9 are bottom, top, and back views of the box C.

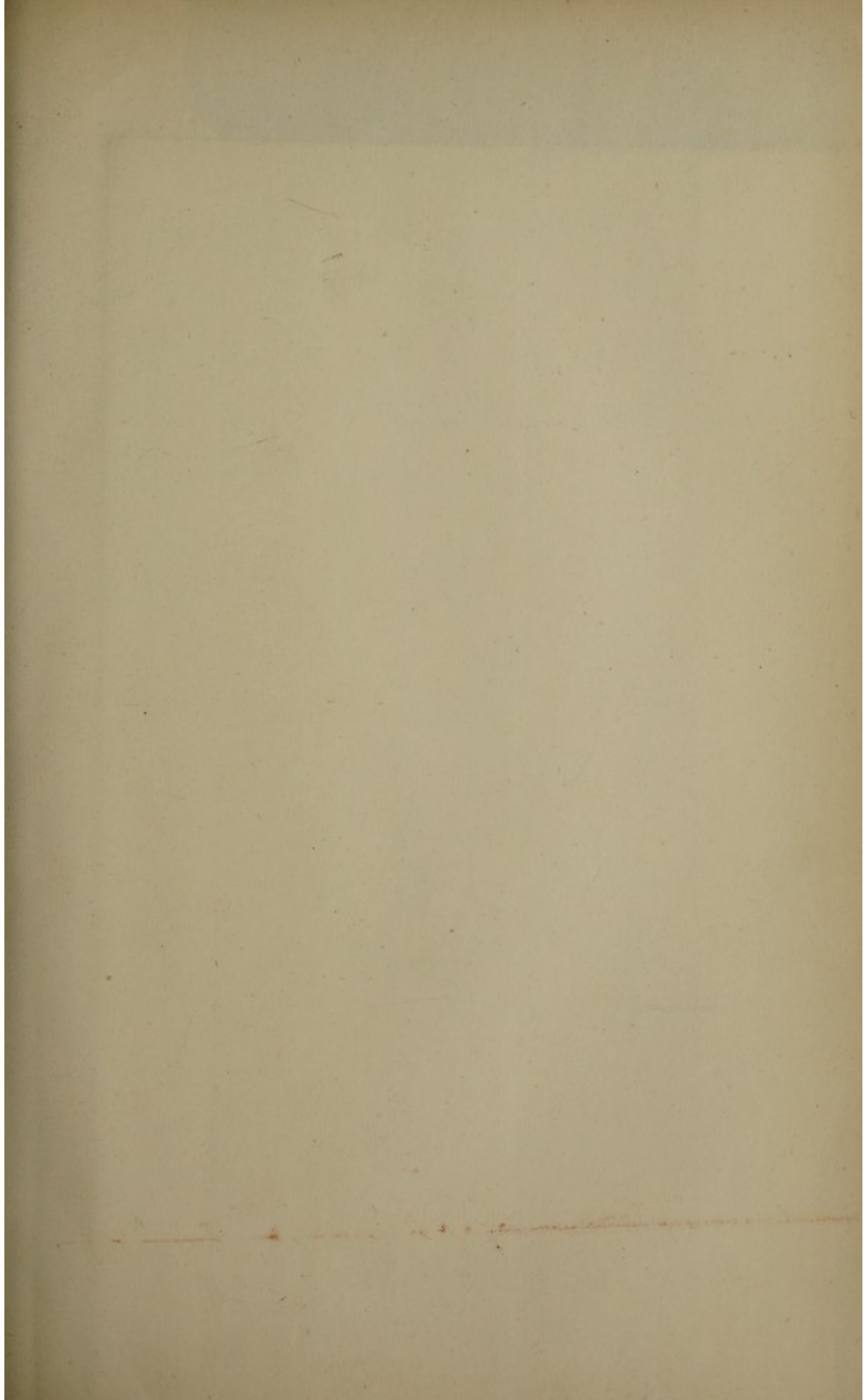
15 The apparatus can be made of lead, tin plate, or other suitable metal, or of glass, porcelain, or otherware, and be placed outside or inside the excrement receptacle, or covered with it.

The distinctive character of this system consists in the employment of human urine at the time of its production as a solvent and absorbent of disintegrating matter, and the application of the urine and disintegrant combined at each stage of the process or treatment, the urine before it is mixed with the solid excrement being itself disintegrated by the disintegrating matter, and afterwards opening upon the excrementitious substances.

25 Having now described the nature and particulars of my said invention and the manner in which the same is to be performed, I desire it to be understood that I claim the improved system and apparatus for disinfecting the fecal contents of privies and outhouses as herein described, and the detail in the accompanying Sheet of Drawings.

30 In witness whereof, I the said Lewis White Fishburn, have hereunto set my hand and seal, this thirty-first day of October, in the year of our Lord, One thousand eight hundred and seventy-

F. J. FALLEN, (Jr.)



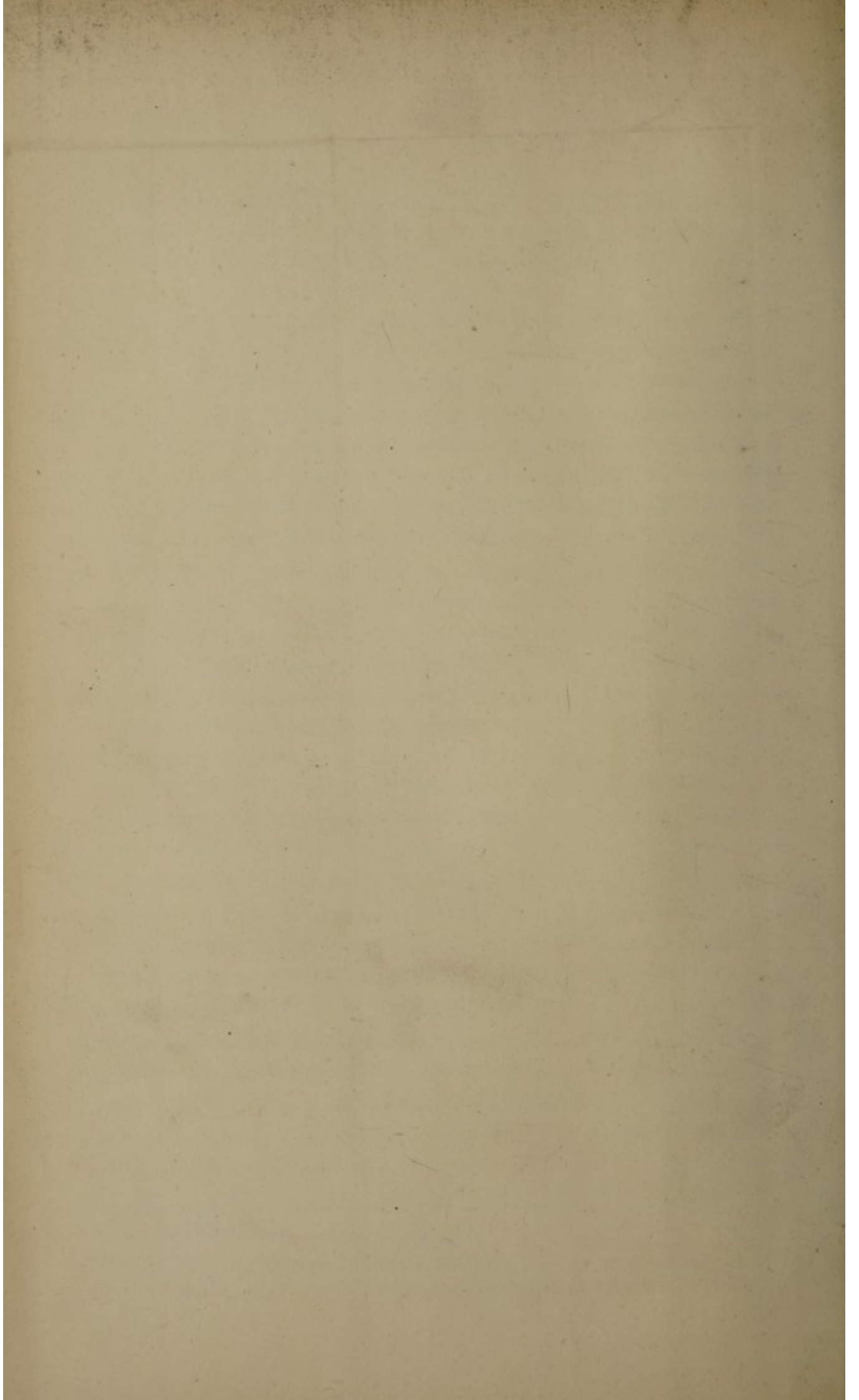


FIG. 1.

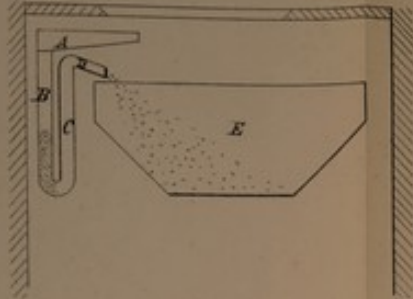


FIG. 2.

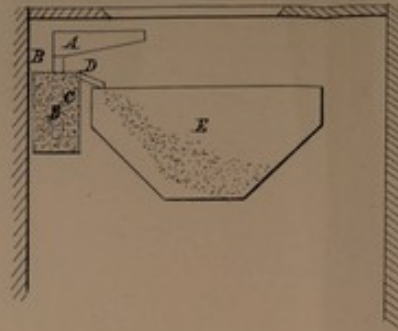


FIG. 3.

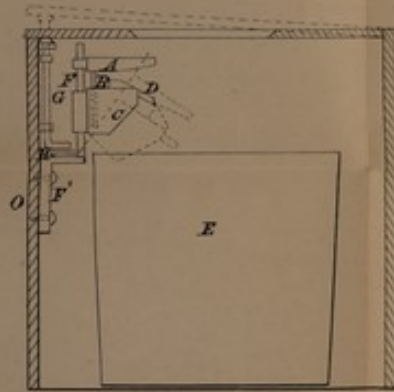


FIG. 4.

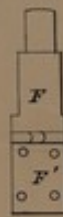


FIG. 5.

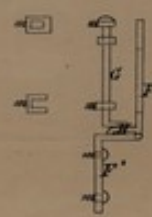


FIG. 6.

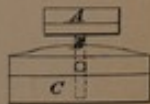


FIG. 7.



FIG. 8.

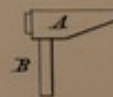


FIG. 9.

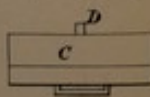


FIG. 10.



FIG. 11.

