

Specification of John Lewis Felix Target : collecting and disinfecting excreta.

Contributors

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A.D. 1872, 17th DECEMBER. N^o 3821.

SPECIFICATION

OF

JOHN LEWIS FELIX TARGET.

COLLECTING AND DISINFECTING EXCRETA.

LONDON:

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1873.





A.D. 1872, 17th DECEMBER. N° 3821.

Collecting and Disinfecting Excreta.

LETTERS PATENT to John Lewis Felix Target, of Portsdown Road, in the County of Middlesex, Civil Engineer, for the Invention of "IMPROVED MEANS OR APPARATUS FOR RECEIVING HUMAN EXCRETA AND FOR DISTRIBUTING DEODORIZING OR DISINFECTING POWDER OVER THE SAME."

Sealed the 11th February 1873, and dated the 17th December 1872.

PROVISIONAL SPECIFICATION left by the said John Lewis Felix Target at the Office of the Commissioners of Patents, with his Petition, on the 17th December 1872.

I, JOHN LEWIS FELIX TARGET, of Portsdown Road, in the County of Middlesex, Civil Engineer, do hereby declare the nature of the said
5 Invention for "IMPROVED MEANS OR APPARATUS FOR RECEIVING HUMAN EXCRETA AND FOR DISTRIBUTING DEODORIZING OR DISINFECTING POWDER OVER THE SAME," to be as follows:—

The object of the first part of this Invention is to collect in tubs or
10 moveable receptacles urine and fœces separately, by which means the same are not only more easily deodorized, but are also in a more suitable

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state for industrial and manure manufacturing purposes. This I attain by using double containers or receivers, that is to say, two containers of different dimensions, one placed within the other, but eccentric to each other, the smaller one being hung on to the rim of the larger one by a broad iron hoop or by hooks or other devices, which may also be used as a handle. 5

In placing this double container, which I term the eccentric divisor container, under an ordinary privy seat the point of contact of the two containers must always be placed at the back of the latrine, so that the vacant space left by the difference of diameter of the two containers will be in front directly under the urine guard fixed on to the seat. Urine and foeces being voided separately can by this very simple method be collected apart. 10

The eccentric containers can be either of a circular, oval, or any other shape, and of any suitable size and depth. Both containers may be constructed of galvanized or enamelled iron or any other suitable metal or substance, but I prefer having the larger one in wood and the smaller one in iron. I use these containers with or without any kind of absorbants or deodorizing matter, but when absorbants are used they are thrown loosely into the bottom of each container, and the intervening space between them is also filled up loosely with absorbant matter so as to absorb the urine which falls from the urine guard. The absorbants should not be rammed in, as this prevents their readily absorbing the liquid. Disinfectants of any kind can be mixed with the absorbants, and dry earth or disinfecting powder may be spread over the solid excrement that falls, and is collected separately in the small container by the means or apparatus herein-after described. 15 20 25

The advantages my system of collecting possesses over the common tub, the Goux closet (patented by Pierre Nicolas Goux on the 20 February 1868, No. 566), and other containers are,— 30

1st. That the foeces are kept separate from the urine, by which means the latter being collected pure is in a more fit state to be used for industrial purposes or for extracting its ammonia.

2nd. That when absorbants are not to be readily procured this eccentric divisor container is much more sanitary in its effect than the open tub, where foeces and urine fall mixed together. 35

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3rd. That when absorbants can be used they need not be rammed in as in the Goux system, so as to be able to stand up as absorbant walls after the mould is withdrawn, but can be thrown in lightly, and very dry and pulverulent absorbants can by my method be used without fear
5 of the absorbant walls falling in as with the Goux system.

4th. That by keeping the urine and foeces apart in two separate containers (but which are introduced and removed as one) a very small quantity of disinfecting powder is required for spreading over the solid matters, the urine being absorbed in a separate vessel.

10 The second part of my Invention relates to the means or apparatus for sprinkling or spreading deodorizing or other powders over the foeces in the containers or receivers. For this purpose I use a loose privy seat swung on centres at the sides, and so placed that the centre of gravity of a person sitting down on the seat shall be between these bearing
15 points and the front part of the seat. A box or hopper containing disinfecting powder occupies a position behind the seat, and is fitted with several inclined panels inside to impede and regulate the fall of the powder, and with a small square aperture at the bottom for the purpose of allowing play to what I term a lifter, which is bolted on to the back
20 part of the seat. This lifter, which is curved or of hook form in section, is say 6 inches in breadth, and narrower than the said aperture at the bottom of the hopper, which is about 7 inches, so as allow easy play. Over the whole of the aperture I place a piece of sheet india-rubber or other suitable material, which is fixed on three sides of the aperture, but
25 not on the fourth side or back. Below the hopper and at the back of the seat is a powder box so hung on centres that when at rest the box is overbalanced and falls back by itself resting on the framework of the closet. There are two blocks screwed on to the back part and under side of the seat so as to bear on to the edge and front of the powder box.
30 There are two supports fixed to the closet frame in order to receive the centres on which the powder box turns.

The action is as follows:—On the seat being occupied the weight of the person causes the front part to be depressed about an inch, and the back part and lifter are thereby raised about $1\frac{1}{4}$ inches, by which action
35 the lifter stretches the piece of sheet rubber, and thus opens the aperture at the bottom of the hopper just sufficient to allow a certain quantity of the powder (which has been displaced or dislodged by the upward

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pressure and motion of the lifter) to fall through the space into the powder box below, which has fallen back in order to remove the charge. On the occupier rising from the seat the extra weight of the back part of the seat causes this back part to fall, and the two blocks before named to bear on the edge of the powder box, tilting the same forwards, the 5 charge of powder contained therein being thereby precipitated upon the solid excrement in the small container. At the same time the lifter falls, thereby partly closing the aperture leading to the powder box, and freeing the sheet of rubber, which then completely closes the aperture.

I do not confine myself to the use of any particular disinfecting 10 powder, but I prefer a powder composed of one part of soot, combined with two or three parts of either sawdust, dried fustic wood from the dye works, dry powdered peat, or any other light, dry, pulverulent absorbant thoroughly mixed and incorporated with the soot whose disinfecting power is very great. 15

The advantages of this automatic contrivance are—1st, its extreme simplicity and direct action; and 2dly, the absence of cranks, levers, and weights, and costly iron work.

Although I adopt the above described automatic seat for all people in the habit of sitting on privies, I prefer making for those who are in the 20 habit of squatting as the natives in India a special form of apparatus. This consists of a draw or box about 3 feet long, 2 feet 2 inches broad, and 8 inches deep, having the inside lined with large inclines of slate or analogous material, and provided with a grating or grid to which are fixed two foot rests so placed that a person can only take up his position 25 on these foot rests, the slate inclines preventing any possible loss of urine wherever it be voided, and conducting the same through the aperture at the middle into the container below. This drawer or box occupies by preference the whole area of the latrine, which in this case is constructed much smaller and to the size of the drawer. The drawer is on a level 30 with the ground, and can be drawn out or otherwise removed by the door at the front for the purpose of taking away the container which is placed in a hole in the ground.

In order with this apparatus to sprinkle powder over the fæces in the container I fill the spaces between the inclined slates and the bottom of 35 the drawer with powder, leaving narrow openings adjoining the bottom edges of the slates. The drawer being swung on centres in a similar

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manner to the privy seat herein-before described it moves down when a person gets upon the foot rests and up again when he leaves, each of these movements giving a sort of jerk to the drawer, and thereby causing a sufficient quantity of the powder to pass through the narrow
5 openings above named and to fall into the container.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Lewis Felix Target in the Great Seal Patent Office on the 17th June 1873.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN
10 **LEWIS FELIX TARGET**, of Portsdown Road, in the County of Middlesex, Civil Engineer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Seventeenth day of December, in the year of our Lord One thousand eight hundred and seventy-two, in the
15 thirty-sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Lewis Felix Target, Her special licence that I, the said John Lewis Felix Target, my executors, administrators, and assigns, or such others as I, the said John Lewis Felix Target, my executors, administrators, and assigns, should at any time agree with,
20 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 "**IMPROVED MEANS OR APPARATUS FOR RECEIVING HUMAN EXCRETA AND FOR DISTRIBUTING DEODORIZING**
25 **OR DISINFECTING POWDER OVER THE SAME,**" upon the condition (amongst others) that I, the said John Lewis Felix Target, 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
30 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 John Lewis Felix Target, do hereby declare the nature of my said Invention, and in what manner the same
35 is to be performed, to be particularly described and ascertained in and

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by the following statement thereof, reference being had to the accompanying Drawings, that is to say :—

The object of the first part of this Invention is to collect in tubs or movable receptacles, urine and fœces separately, by which means the same are not only more easily deodorized, but are also in a more suitable 5 state for industrial and manure manufacturing purposes. This I attain by using double containers or receivers, that is to say, two containers of different dimensions, one placed within the other, but excentric to each other, the smaller one being hung on to the rim of the larger one by a broad iron hoop, or by hooks or other devices, which may also serve 10 as a handle. In placing this double container, which I term the excentric divisor container, under a privy seat, the point of contact of the two containers must always be placed at the back of the latrine, so that the vacant space left by the difference of diameter of the two containers will be in front, directly under the urine guard fixed on to 15 the seat. Urine and fœces being voided separately can by this very simple method be collected apart.

My eccentric divisor container is seen in vertical section in Figure 1 of the annexed Drawings, and in plan (in dotted lines) in Figure 2. A is the larger, and B the smaller container hung on to the larger by 20 hooks C, C. The point of contact of the two containers is at the back of the latrine, as shewn, so that the fœces drop into the smaller, while the urine after coming against the guard D falls into the larger. The eccentric containers can be either of a circular, oval, or any other shape, and of any suitable size and depth. Both containers may be constructed 25 of galvanized or enamelled iron, or any other suitable metal or substance, but I prefer having the larger one in wood and the smaller one in iron. I use these containers with or without any kind of absorbents or deodorizing matter, but when absorbents are used they are thrown loosely into the bottom of each container, and the intervening space 30 between them is also filled up loosely with absorbent matter, so as to absorb the urine which falls from the urine guard. The absorbents should not be rammed in, as this prevents their readily absorbing the liquid. Disinfectants of any description can be mixed with the absorbents, and dry earth or disinfecting powder may be spread over the 35 solid excrement that falls separately in the small container by the means or apparatus herein-after described, or otherwise.

The advantages my system of collecting possesses over the common

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tub, the Goux closet (patented by Pierre Nicolas Goux, on the 20 February 1868, No. 566) and other containers are,—

1st. That the fœces are kept entirely separate from the urine, by which means the latter being collected pure is in a more fit state to be
5 used for industrial purposes or for extracting its ammonia.

2nd. That when absorbents are not to be readily procured this excentric divisor container is much more sanitary in its effect than the open tub where fœces and urine fall mixed together.

3rd. That where absorbents can be used they need not be rammed
10 in as in the Goux system so as to be able to stand up as absorbent walls after the mould is withdrawn, but can be thrown in lightly and very dry, and pulverulent absorbents can by my method be used without fear of the absorbent walls falling in as with the Goux system.

4th. That by keeping the urine and fœces apart in two separate
15 containers (but which are introduced and removed as one) a very small quantity of disinfecting powder is required for spreading over the solid matters, the urine being absorbed in a separate vessel.

The second part of my Invention relates to the means or apparatus for sprinkling or spreading deodorizing or other powders over the fœces in
20 the containers or receivers. For this purpose, I use a loose privy seat swung on centres at the sides, and so placed that the centre of gravity of a person sitting down on the seat shall be between these bearing points and the front part of the seat. A box or hopper containing disinfecting powder occupies a position behind the seat, and is fitted
25 with several inclined panels inside to impede and regulate the fall of the powder, and with a small square aperture at the bottom for the purpose of allowing play to what I term a lifter, which is bolted on to the back part of the seat. This lifter which is of curved or hooked form in section is, say 6 inches in breadth, and narrower than the said aperture
30 at the bottom of the hopper, which is about 7 inches, so as to allow easy play. Over the whole of the aperture I place a piece of sheet india-rubber or other suitable material, which is fixed on three sides of the aperture, but not on the fourth side or back. Below the hopper and at the back of the seat is a powder box, so hung on centres that when
35 at rest the box is overbalanced, and falls back by itself, resting on the framework of the closet. There are two blocks screwed on to the back part and under side of the seat, so as to bear on to the edge and front of

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the powder box. There are two supports fixed to the closet frame, in order to receive the centres on which the powder box turns.

This part of my Invention will be understood on reference to Figures 1, 2, and 3, Figure 1 being a vertical section of a closet or privy; Figure 2, a plan with the hopper removed; and Figure 3, a plan of the hopper. 5 E is the privy seat hung on centres F, F, at the sides so that the centre of gravity of a person shall be between these points F and the front part of the seat; G is a box or hopper for containing disinfecting powder; this box may be made removable. At the bottom of the hopper is a lifter H bolted to the back part of the seat E, and smaller than the 10 opening I in the bottom of the hopper, so that it may play easily therein; K is a piece of india-rubber closing the whole of the opening I, the rubber being fixed at three sides of the opening, but not at the fourth side or back; L is a powder box so hung on centres M in supports N that when at rest it is overbalanced and falls back so as to 15 rest on the frame O, as shewn. This frame O may be about 6 inches in depth, and can be adapted to any ordinary closet; P, P, are two blocks screwed under the back part of the seat E, so as to bear upon the edge and front of the box L.

Such being the construction of the parts the action is as follows:— 20 On the seat E being occupied the weight of the person causes the front part to be depressed about an inch into the position shewn in full lines, and the back part and lifter H are thereby raised about $1\frac{1}{4}$ inches, by which action the lifter stretches the rubber K, and thus opens the aperture I at the bottom of the hopper G just sufficient to allow a 25 certain quantity of the powder (which has been displaced or dislodged by the upward pressure and motion of the lifter) to fall through into the powder box L below, which has fallen back to the position shewn in full lines in order to receive the charge.

On the occupier rising from the seat the extra weight of the back part 30 of the seat causes this back part to fall into the position shewn in dotted lines, and the two blocks P to bear on the edge of the powder box L, tilting the same forwards into the position shewn in dotted lines, the charge of powder contained therein being thereby precipitated upon the solid excrement in the small container B. At the same time the lifter H 35 falls, thereby partly closing the aperture I leading to the powder box and freeing the sheet of rubber K, which then completely closes the aperture.

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Figure 4 is a view similar to Figure 1, but shewing this part of my Invention applied to a divisor system suitable for cases where it is deemed desirable to collect the urine of several adjoining houses in one urine cistern. It will be seen that the urine passes down the pipe Q,
5 and enters a horizontal pipe R from several houses to one common cistern.

I do not confine myself to the use in my closets of any particular disinfecting powder, but I prefer a powder composed of one part of soot combined with 2 or 3 parts of either sawdust, dried fustic wood from
10 the dye works, dry powdered peat, or any other light dry pulverulent absorbent thoroughly mixed and incorporated with the soot whose disinfecting power is very great.

As advantages of my automatic contrivance for distributing the powder I may mention, 1st, its extreme simplicity and direct action ;
15 and, 2dly, the absence of cranks, levers, and weights and costly iron-work.

Although I adopt the above-described automatic seat for all people in the habit of sitting on privies I prefer making for those who are in the habit of squatting, as the natives in India, a special form of apparatus
20 represented in Figures 5, 6, and 7 ; Figure 5 being a plan ; Figure 6, a longitudinal section ; and Figure 7, a transverse section. This apparatus consists of a drawer or box A, about 3 feet long, 2 feet broad, and 9 inches deep, having the inside lined with large inclines B of slate or analogous material, and provided with a grating or grid C, to which are
25 fixed two foot rests D, so placed that a person can only take up his position on these foot rests, the slate inclines preventing any possible loss of urine wherever it be voided, and conducting the same through the aperture E at the middle into the container below. This drawer or box A occupies by preference the whole area of the latrine, which in
30 this case is constructed much smaller and to the size of the drawer ; the drawer is on a level with the ground, and can be drawn out or otherwise removed by the door F at the front. The container, which is placed below, can be removed by another door G.

In order with this apparatus to sprinkle powder over the fœces in the
35 container I fill the spaces H between the side and back inclined slates B and flaps I at the bottom of the drawer with powder leaving narrow openings at J adjoining the bottom edges of the slates. The drawer

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being swung on centres at K, K, in a similar manner to the privy seat herein-before described, it moves down at the front when a person gets upon the foot rests D, and up again when he leaves, each of these movements giving a sort of jerk to the drawer, and thereby causing a sufficient quantity of the powder to pass through the narrow openings J, and to fall into the container. The spaces H can be refilled with powder by withdrawing the drawer A, turning it over, and lifting the flaps I; the flaps should be provided with suitable fastenings.

And having now described the nature of my said Invention, and in what manner the same is to be performed, I declare that I claim,— 10

1. The double container or excentric devisor container, herein-before described and represented in Figures 1 and 2, for collecting urine and fœces separately.

2. The arrangement or combination of parts, herein-before described and represented in Figures 1 to 4, for spreading or distributing powder 15 over the fœces in closets and privies.

3. The tilting powder box so arranged with respect to a tilting closet or privy seat that the powder in the box is automatically thrown out into the container, substantially as herein-before described and represented in Figures 1 to 4. 20

4. The lifter H and sheet K, Figures 1 to 4, arranged and acting substantially as herein-before described.

5. Constructing apparatus, substantially as herein-before described with reference to Figures 5, 6, and 7.

In witness whereof, I, the said John Lewis Felix Target, have 25 hereunto set my hand and seal, this Sixteenth day of June One thousand eight hundred and seventy-three.

J. L. F. TARGET. (L.S.)

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1873.



1. The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of life, and shows that the most probable is the theory of spontaneous generation.

2. The second part of the paper is devoted to a discussion of the problem of the origin of the human race. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human race, and shows that the most probable is the theory of spontaneous generation.

3. The third part of the paper is devoted to a discussion of the problem of the origin of the human mind. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human mind, and shows that the most probable is the theory of spontaneous generation.

4. The fourth part of the paper is devoted to a discussion of the problem of the origin of the human soul. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human soul, and shows that the most probable is the theory of spontaneous generation.

5. The fifth part of the paper is devoted to a discussion of the problem of the origin of the human body. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human body, and shows that the most probable is the theory of spontaneous generation.

6. The sixth part of the paper is devoted to a discussion of the problem of the origin of the human spirit. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human spirit, and shows that the most probable is the theory of spontaneous generation.

7. The seventh part of the paper is devoted to a discussion of the problem of the origin of the human soul. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human soul, and shows that the most probable is the theory of spontaneous generation.

8. The eighth part of the paper is devoted to a discussion of the problem of the origin of the human body. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human body, and shows that the most probable is the theory of spontaneous generation.

9. The ninth part of the paper is devoted to a discussion of the problem of the origin of the human mind. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human mind, and shows that the most probable is the theory of spontaneous generation.

10. The tenth part of the paper is devoted to a discussion of the problem of the origin of the human soul. It is shown that the problem is one of the most important and interesting in the history of science. The author discusses the various theories of the origin of the human soul, and shows that the most probable is the theory of spontaneous generation.

FIG. 5.

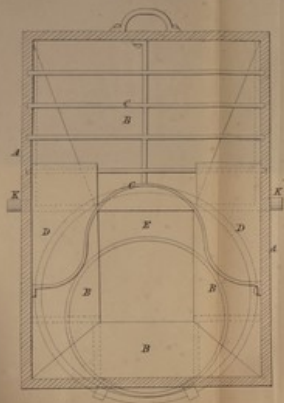


FIG. 7.

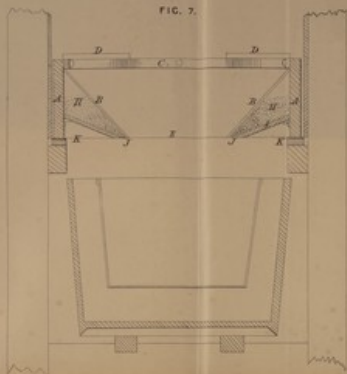


FIG. 3.

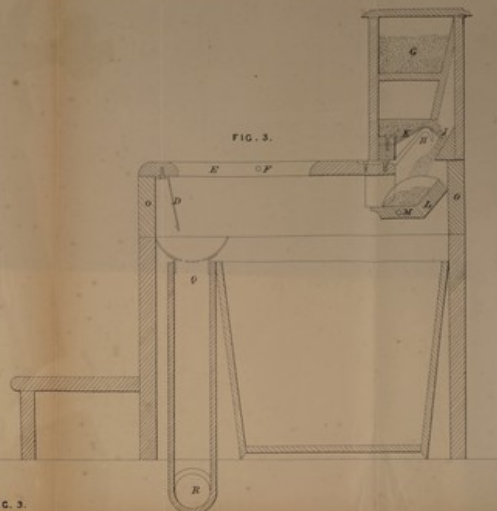


FIG. 3.



FIG. 2.

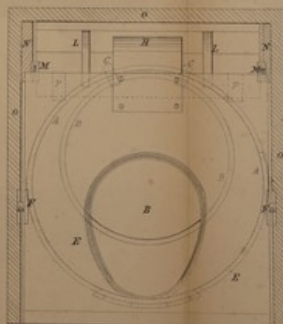


FIG. 1.

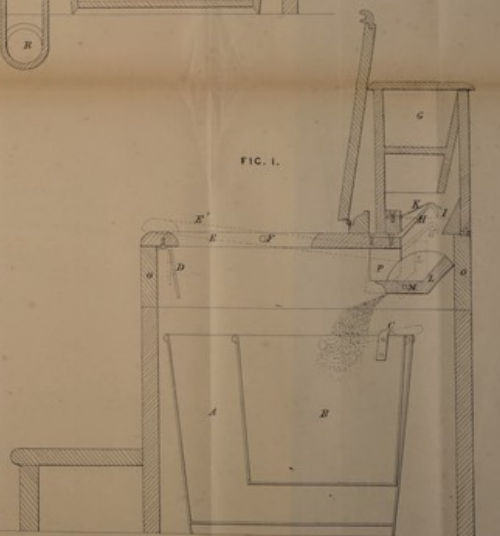


FIG. 6.

