

Disclaimer and memorandum of alteration of Pierre Niclolas Goux : treating and utilizing excreta.

Contributors

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A.D. 1868 N° 566*.

DISCLAIMER AND MEMORANDUM OF ALTERATION

OF

PIERRE NICOLAS GOUX.

TREATING AND UTILIZING EXCRETA.

LONDON:

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A.D. 1868 N° 566*.

Treating and Utilizing Excreta.

GOUX'S DISCLAIMER AND MEMORANDUM OF ALTERATION.

Filed 1st May 1871.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, PIERRE NICOLAS GOUX, of No. 49, Rue de Longchamps, Paris, in the Empire of France, Agricultural Proprietor, send greeting.

WHEREAS Her Majesty Queen Victoria, by Her Letters Patent
5 under the Great Seal of Great Britain and Ireland, bearing date ^{at}
Westminster the Twentieth day of February, One thousand eight
hundred and sixty-eight, in the thirty-first year of Her reign, did grant
unto me, the said Pierre Nicolas Goux, my executors, administrators,
and assigns, the sole privilege of making, using, exercising, and vending
10 my Invention of "IMPROVEMENTS IN COLLECTING AND IN DISINFECTING HUMAN
EXCRETA AND CONVERTING THE SAME INTO MANURE; ALSO IN THE APPARATUS OR
MEANS EMPLOYED THEREIN," within the United Kingdom of Great Britain
and Ireland, the Channel Islands, and the Isle of Man, for and during
the term of fourteen years next ensuing: And whereas in pursuance
15 and performance of a proviso in the said Letters Patent contained I did,
within six calendar months next after the date of the said Letters
Patent, cause a Specification in writing, under my hand and seal, par-

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ticularly describing the nature of the said Invention, and in what manner the same was to be performed, to be duly filed in the Great Seal Patent Office: And whereas since the filing of the Specification of my said Patent as aforesaid I have been advised and have ascertained that the claims made by me to the use of the absorbents referred to otherwise 5 than as linings and to the several modifications and arrangements of apparatus and the modes of applying the same, save and except when combined with the use of the absorbent linings described in the said Specification, are claims that are too extensive, and open to objection on the ground of want of novelty or of utility as regards their general 10 application: And whereas I have also discovered certain clerical errors in the said Specification which I am desirous of amending; I am therefore desirous of disclaiming the first, third, and fourth claims of the said Specification, and certain parts thereof referring to the said claims, and otherwise altering the said Specification to render the same consistent 15 with the claims as altered, and for the reasons aforesaid I am desirous of amending the various parts of the said Specification; I therefore, for the reasons aforesaid, strike out from the printed copy of the said Specification, printed by the Queen's Printers, and published at the Great Seal Patent Office (which copy is herein-after referred to as the 20 said printed copy), of the words "the said," which occur in the thirty-seventh line of the third page of the said printed copy. I also strike out the whole of the lines 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15 of the fifth page of the said printed copy of the said Specification, and I insert in place thereof the following words, "Figures 14, 15, 16, 17, 18, 19, 25 and 24 represent arrangements or modifications to which I make no claim." I also, for the reasons aforesaid, strike out from page 5 of the said printed Specification the whole of the passage commencing at line 28 with the words "f is a pipe," and ending at line 35 with the word "compartment." I also strike out the whole of the passage com- 30 mencing in line 32, page 6, of the said printed copy at the words "as herein-before," and ending in line 37 with the words "said Invention." I also, for the reasons aforesaid, alter the word "residiums" in line 19, page 7 of the said printed copy into "residuums;" and I alter the word "carbonite," occurring in line 35, page 7, of the said printed copy, into 35 "carbonate." I also strike out the whole of the passage commencing in line 28 of the same page 7 with the words "I thus reserve," and ending in line 31 with the word "utilized." I also, for the reasons aforesaid, strike out the whole of the paragraphs commencing with the words

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"Figure 14 represents" at page 9, line 18, and ending with the word "absorbents" at line 17, page 10, of the said printed Specification. I also strike out the word "however," occurring in the ^{said} 17th line of the said 10th page. I also, for the reasons aforesaid, strike out from the
5 said Specification the whole of the first claim occurring in lines 29, 30, 31, and 32, page 11, of the said printed Specification; also the word "second" in line 33 of the same page, and the whole of the third and fourth claims in pages 11 and 12 of the said printed Specification; and the said Specification when amended will read as follows, the preamble being
10 omitted:—

NOW KNOW YE, that I, the said Pierre Nicolas Goux, 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, reference being had to the accompanying
15 Drawings, and to the letters and figures marked thereon, that is to say:—

My said Invention has for its object the collection of human excreta, and the conversion of the same whilst in the receptacles in which it is collected into a valuable manure in a simple and efficacious manner.

20 In carrying out my Invention I employ a peculiar system of manure producing closet, cesspool, or receptacle, in which I effect the immediate and complete absorption of the gases and liquids contained in the fecal matters by means of absorbent substances which are applied to the bottom and sides of my receptacles before the fecal matters are deposited
25 therein, I employ, in preference, to fixed cesspools moveable receptacles lined either by hand or by means of moulds in order to expedite the operation with agents capable of absorbing the liquids and metallic salts and of fixing the fertilizing gases.

I shall herein-after give a list of the different materials or substances
30 which I utilize for the purpose of fixing the fertilizing gases, which substances are selected as being of themselves useful for vegetation, whilst serving at the same time for the reception, preservation, disinfection, and solidification of the excreta.

By means of my process the nuisance resulting from the emptying of
35 cesspools is avoided, and an extremely powerful and valuable ^{manure is} obtained which may be used with as much facility as any of those hitherto employed.

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I may observe also that according to my system the emptying of the receptacle and the production of manure are effected by the same operation without filtering or separating the matters, the whole of which are subsequently utilized, no portion being rejected.

And in order that my said Invention may be fully understood I shall 5 now proceed more particularly to describe the same, and for that purpose shall refer to the several Figures on the annexed Sheets of Drawings, the same letters of reference indicating corresponding parts in all the corresponding Figures.

Figure 1 is an elevation and Figure 2 a vertical section of the mould 10 used when ramming the absorbent materials into casks or other receptacles.

Figure 3 is an elevation and Figure 4 a vertical section of the casks which I employ, and which may be of any required form and dimensions for collecting the excreta. 15

Figure 5 is a vertical section of a mould of different dimensions.

Figure 6 is a vertical section of a metallic receptacle which may be of any desired size, and of a cylindrical or other convenient form.

Figure 7 is a vertical section of a mould used when ramming the absorbent into the receptacle, shewn in Figures 8 and 9. 20

Figure 8 is a vertical section and Figure 9 a plan shewing the arrangement of the absorbents in a flat-sided receptacle.

Figure 10 is a vertical section of an oval mould used when disposing the absorbents in the receptacle shewn in Figures 11 and 12.

Figure 11 is a vertical section and Figure 12 a plan of a receptacle 25 of an elongated rectangular form intended to be placed under the seats of ordinary closets.

Figure 13 is a plan of a receptacle of an oval form intended to be used in the same way as Figure 11.

Figures 14, 15, 16, 17, 18, ^{and 24} and 19 [^] represent arrangements or modifica- 30 tions to which I make no claim.

Figure 20 is a vertical section shewing an arrangement which may be employed for the application of my system to a house of several stories.

Figure 21 is a vertical section and Figure 22 a horizontal section 35

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drawn to an enlarged scale of one of the receptacles shewn on a smaller scale in Figure 21, and provided with a lateral opening.

Figure 23 is a vertical section of a modification of the preceding arrangement.

5 And Figure 24 is a vertical section shewing a method of closing a pan which may be placed over one of my receptacles.

a represents the absorbent materials disposed in the receptacles or vessels *b*; *c* is the mould, and *d* its cover and handle; *e* are the handles of the receptacle *b*; *n* (Figure 20) is a pipe for the descent of the
 10 excreta, and *o* is a large receptacle placed underneath the pipe *n* to receive the solid and liquid matters combined or separate as they proceed from the closets; *p* (Figures 20, 21, and 22) is a lateral opening for the escape of the solid fecal matters into the pipe *n*, such opening being closed by a slide *q*; *r* (Figure 23) is a valve closing an opening formed
 15 in the bottom of a receptacle which is intended to be substituted for the slide *q*; *s* are hooks which maintain the valve *r* closed. (In Figure 23 the red lines shew the said valve open). *t*, Figure 24, is a valve filled with pounded charcoal, and closing the bottom of a pan of a watercloset, and *u* is a hinged lid which also actuates the valve *t*, as shewn by red
 20 lines.

As herein-before stated the object of my process is to immediately and completely absorb the gases and liquids contained in the feces, and then to preserve them from the action of the oxygen of the air in order to prevent their fermentation, which produces noxious gases.

25 In order to absorb the gases existing in the feces or which might be developed therein, and to fix the fertilizing substances therein contained, I make use of chemical agents which have been already employed for this purpose, such as sulphate of iron, of zinc, or of lime, and others which I shall herein-after mention; then in order to prevent the contact
 30 of the air and avoid fermentation I employ any species of pulverulent bodies, giving the preference to such as from their nature are capable by themselves of forming a manure, those matters may be of both an absorbent, antiseptic, and disinfectant nature; even the agents used for fixing the gases may form when it ^{is} practicable so to utilize them an
 35 integral part of the absorbents. These matters which are requisite for the mechanical part of the operation will in almost every case act as fertilising agents. These matters may be applied under many forms,

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they may be more or less divided, cut, or pulverized, disintegrated or dissolved, employed in their natural or manufactured condition, and used in a dry or wet state as required.

I shall now indicate some of the mineral, animal, vegetable, or mixed substances which when placed in the receptacles will directly absorb the 5 liquids of the feces and fix their gases. I may mention the following substances as having been found to give good results in practice:—Straw of all kinds, husks, straws, and dust from winnowing machines, the refuse and sweepings of grain mills, residues of straw and fodder 10 lofts, stable litter, and straw from dung heaps, vegetable mould, dry garden mould, road dust, or sweepings, wood ashes, cotton waste of spinning mills, the waste or dust arising from the operation of carding animal or vegetable textile materials, seaweed or wrack, fodder from natural or artificial meadows, reeds of the gladiolus ferns, mosses, lichens, heaths, house, office, and workshop sweepings, old papers, mud 15 or dirt from town sweepings, paper, straw, or hay from packages, feathers, and wastes of feathers, soap boilers' waste or lixivium ashes, carpenters' shavings, flesh and blood, dried and disinfected bone powder, carbonized and pulverized wool, woolen rags, dust from rolling mills, cloth shearings, hair; also dust raspings, waste clippings of horns and 20 hoofs, short hairs, and wastes from tan yards, residue of fat or graves, clippings of hides, glue residues, residuums ^{obtained} in the manufacture of Prussian blue, oil cakes of all oleaginous grains or fruits, sawdust, tan or tan waste, charcoal, pulverized, pounded, or whole, under all its different degrees and modes of preparation, and produced by all carbonizable 25 vegetables, dung, leaves of all vegetables, solid excreta of all domestic animals, stable refuse, residium of expressed grapes, apples, or perry, brewers' mash, residuums from starch works and sugar refineries in every state.

I may here state that I may also employ the vegetable substances 30 herein-before described in a fresh or green state.

Amongst the mineral substances I may mention the sulphates of iron, copper, baryta, lead, ammonia, zinc, potash, soda, magnesia, and alumina or alum, sulphate of lime, chloride of manganese and of magnesium, carbonate of lime or chalk, carbonate of lead or white lead, 35 nitrate of lead, pyrolignite of iron, acetate of protoxide and of sesquioxide of iron, acetate of lead, empyreumatic oils, petroleum, nitric acid, chlorhydric acid, black and red pyritous ashes of every description, coal,

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wood, and peat ashes, carbonized earth, rich aluminous carbonized clay, carbonized or dried alumina, wet clay, soot, peat, carbonized or in its natural condition, lime, phosphate of lime, coprolite, apatite or phosphorite, sulphate of lime, vitrifiable earth, silicate of soda, felspar, 5 magnesia, nitrates of soda, potash, and magnesia, ammoniacal salts, chloride of sodium, gas tar, either in its natural state or carbonized, sulphuric and phosphoric protoxide and peroxide of iron.

In order to collect and absorb the fecal matters, I previously dispose the absorbents herein-before described in receptacles made of wood, 10 metal, or other suitable materials, reserving to myself the right to vary the forms and size to suit the position or the requirements of the operation.

I have shewn in Figures 1 and 2 the description of metal mould which I employ for ramming the absorbent materials into the casks 15 or receptacles, and which I consider most suitable for the ready and inexpensive transport of the manufactured manure.

Figures 3 and 4 shew the description of receptacle which I prefer to employ; it will be observed that the interior is lined with pulverulent matters *a*, which are pressed in so as to form a lining which prevents 20 the immediate contact of the fecal matters with the sides or bottom of the receptacle *b*. The absorbent materials are placed in the receptacle by hand or by means of a metal mould or mandrel *c*, provided with a slightly conical lid or cover *d* which facilitates the introduction of the different substances employed for the absorption of the liquid or gaseous 25 bodies, and which are thus rammed in with facility so as to assume the external form of the mandrel. These moulds or mandrels may obviously be made of any suitable material, and be of corresponding form to the receptacle required to be lined. It will be observed that my receptacles are provided with handles *e*, by which to lay hold of them in order to 30 place them on carts to convey them where required. The various absorbents herein-before mentioned may also be applied to ordinary portable utensils or receptacles in order to obviate the inconvenience which attends the present mode of emptying, returning thus if required to the habitual conditions of working, whilst at the same time the fecal 35 matters are utilized by being converted into a valuable manure.

I have shewn in Figures 5 and 6 the mould or mandrill and metallic

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receptacle which may be advantageously employed when the materials and workmen necessary for the construction of wooden receptacles cannot be readily obtained.

Figures 7, 8, and 9 represent a peculiar form of wooden receptacle provided with its mandrill. In this arrangement the mandrill is of metal 5 and of a nearly cylindrical form; the receptacle on the contrary is of wood and of rectangular form.

Figures 10, 11, and 12 represent another form of mandrill and receptacles intended to be applied under the seats of ordinary closets. The receptacle is of a rectangular form, its height being limited by the 10 height of the seat. The mandrill is of metal and of an oval form in order to facilitate the arrangement of the absorbent materials.

Figure 13 is a modification of the preceding arrangement, in which the wooden receptacle is of an oval form. The object of the oval or elongated form is to admit of the introduction into the receptacles of a 15 sufficient quantity of the absorbent materials which would be difficult with receptacles of any other form on account of their height being necessarily limited. I reserve to myself the right to employ also as urinals my receptacles lined with absorbents by providing them with lips to conduct the urine therein. 20

Figure 20 represents an arrangement which may be employed in order to obviate the necessity for removing the receptacles which are placed beneath the seat of the closet by the staircase in houses of several stories. This consists in providing these receptacles with a lateral opening, as in Figures 21 and 22; or an opening at the bottom, as in Figure 23, 25 communicating with a vertical pipe *n* of larger diameter and of the same height as the building, such pipe conducting the matters into a receptacle *o* placed underneath, or what is better still direct into the cart or waggon intended to convey away the manure produced. By means of this arrangement the urine which escapes by the pipe *n* may 30 be collected in a special receptacle which may be provided for this purpose, in order to obviate the necessity for the frequent renewal of the absorbents in the receptacles disposed on the different floors.

Figures 21 and 22 shew a receptacle in which the lateral opening *p* is closed by means of a species of slide *q*, by raising which the matters 35

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are caused to fall into the pipe *n* and into a receptacle *o* placed underneath.

Figure 23 shews a modification of the preceding arrangement in which the opening is formed at the bottom of the receptacle *r*, the valve to
5 close which is simply maintained fast by means of two hooks *s*.

It is obvious that the external form and method of operation of my apparatus may be modified, and that such means of transport may be employed for the receptacles and the solid and liquid matters, whether separate or mixed together, as circumstances may suggest.

10 Figure 24 shews a simple method of closing the closet by which all emission of smell is effectually prevented. According to this arrangement the pan is closed by a species of valve *t*, which is operated by the lid *u*, and opens and shuts at the same time as the lid. The valve *t* itself consists of a species of box closed at its lower part by wire gauze,
15 and in which granulated charcoal may be placed, or any other substances capable of absorbing the gases which might be evolved therefrom.

It will be readily seen that by the system or method herein-before described a manure may be produced of a considerable fertilizing power, whilst the salubrity of the dwellings and towns where this system is
20 applied are ensured, as fermentation is entirely prevented by the putrescible matters being preserved from contact with the air, the human excreta being collected and preserved in the same manner as those of animals.

Having now described and particularly ascertained the nature of my
25 said Invention, and the manner in which the same is or may be used or carried into effect, I would observe in conclusion that what I consider to be novel and original, and therefore claim as the Invention secured to me by the herein-before in part recited Letters Patent is, the lining with the said absorbents or their equivalents, by the aid of moulds or
30 mandrills or otherwise, the interior of the vessels or receptacles intended to receive human excreta, substantially as herein-before described.

In witness whereof I, the said Pierre Nicolas Goux, have hereunto set my hand and seal, the Thirtieth day of March One thousand eight hundred and seventy-one.

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To the Clerk of the Patents for Inventions.

I hereby grant my fiat giving leave to the above-named Pierre Nicolas Goux to file in the Great Seal Patent Office, with the Specification to which the same relates, the above written Disclaimer and Memorandum of Alteration.

5

29th April 1871.

J. D. COLERIDGE,
Solicitor-General.

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