

Specification of William White : deodorizing sewage matters.

Contributors

White, William.

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A.D. 1854 N° 1741.

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

OF

WILLIAM WHITE.

DEODORIZING SEWAGE MATTERS.

LONDON:

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1855.

THE UNIVERSITY OF CHICAGO



PHYSICS DEPARTMENT

PHYSICS 309

PROBLEM SET 10

Due Date: Friday, November 10, 1995

PROBLEM 1

A particle of mass m moves in a potential $V(x) = \frac{1}{2}kx^2$. The energy of the particle is E . Find the probability of finding the particle in the region $x > 0$ when it is in the ground state.

1

PHYSICS 309



A.D. 1854 N° 1741.

Deodorizing Sewage Matters.

LETTERS PATENT to William White, of York Villa, Kensington Park, Bayswater, Consulting Chemist, for the Invention of "**AN IMPROVEMENT IN DEODORISING THE CONTENTS OF CESSPOOLS, PRIVIES, AND ALSO LIKE MATTERS IN OTHER PLACES.**"

Sealed the 12th January 1855, and dated the 8th August 1854.

PROVISIONAL SPECIFICATION left by the said William White at the Office of the Commissioners of Patents, with his Petition, on the 8th August 1854.

I, **WILLIAM WHITE**, of York Villa, Kensington Park, Bayswater, Consulting
5 Chemist, do hereby declare the nature of the Invention for "**AN IMPROVEMENT IN DEODORISING THE CONTENTS OF CESSPOOLS, PRIVIES, AND ALSO LIKE MATTERS IN OTHER PLACES,**" to be as follows:—

My Invention consists of applying a combination of the ingredients hereinafter described for the purpose of deodorizing the contents of cesspools, privies,
10 drains, and manure tanks, and pits and other places for the collection and passage of decomposed organic matters, and for arresting their decomposition and neutralizing their obnoxious volatile principles.

The combination is a powder consisting of the following materials, viz., charcoal prepared from night soil combined with vegetable matter, or prepared

White's Improvements in Deodorizing the Contents of Cesspools, Privies, &c.

from the substantive parts of night soil, with burned clay and sulphate of the protoxide of iron. I am aware that some of these substances have been before used for like purposes, but my Invention consists in the employment of these matters in combination.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed 5
by the said William White in the Great Seal Patent Office on the 7th
February 1855.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM
WHITE, of York Villa, Kensington Park, Bayswater, Consulting Chemist,**
send greeting. 10

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters
Patent bearing date the Eighth day of August, in the year of our Lord One
thousand eight hundred and fifty-four, in the eighteenth year of Her reign,
did, for Herself, Her heirs and successors, give and grant unto me, the said
William White, Her special licence that I, the said William White, my 15
executors, administrators, and assigns, or such others as I, the said William
White, 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 20
Channel Islands, and Isle of Man, an Invention for "**AN IMPROVEMENT IN
DEODORIZING THE CONTENTS OF CESSPOOLS, PRIVIES, AND ALSO LIKE MATTERS IN OTHER
PLACES,**" upon the condition (amongst others) that I, the said William White,
by an instrument in writing under my hand and seal, should particularly
describe and ascertain the nature of the said Invention, and in what manner 25
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 William White, do hereby declare the
nature of the said Invention, and in what manner the same is to be performed, 30
to be particularly described and ascertained in and by the following statement
thereof (that is to say):—

My Invention consists of applying a combination of the ingredients herein-
after described for the purpose of deodorizing the contents of cesspools, privies,
drains, and manure tanks, and pits and other places for the collection and 35

White's Improvements in Deodorizing the Contents of Cesspools, Privies, &c.

passage of decomposed organic matters, and for arresting their decomposition and neutralizing their obnoxious volatile principles.

The combination is a powder consisting of the following materials, videlicet, charcoal prepared from night soil combined with vegetable matter, or prepared
5 from the substantive parts of night soil, with burned clay and sulphate of the protoxide of iron. I am aware that some of these substances have been before used for like purposes, but my Invention consists in the employment of these matters in combination.

Having thus stated the nature of my said Invention, I will proceed to describe
10 the manner of performing the same.

In preparing compounds according to my Invention for deodorizing the contents of cesspools, privies, sewers, drains, and other places for the retention and passage of fœcal matters, and also for arresting organic decomposition in manure heaps and tanks, and further, for neutralizing or destroying the offensive
15 emanations which proceed from accumulations of refuse, animal matters, or which are evolved during the treatment of such matters in various manufactures, I combine charcoal produced by means of burning human fœces in conjunction with an absorbent and carbonized aluminous earth, schist, or other matter, with a due proportion of the sulphate of the protoxide of iron.

20 In the preparation of the fœcal charcoal, I first combine a given quantity of human fœces, the contents of cesspools or privies, with about a third part their bulk of spent tan, sawdust, dried peat, or other absorbent, and expose the mixture to the atmosphere; or I employ artificial desiccating means until the moisture of the mass is reduced to below fifty per cent. I then intimately
25 blend this mixture with about twenty per cent. (by weight) of clay, schist, or other aluminous matter; of these I give the preference to Portland schist or alum shale. The whole is then to be placed into an iron or earthenware retort, and exposed to a degree of heat sufficient to secure the complete and uniform carbonization to the entire mass.

30 The retort must be provided with a beak, for the exit of the steam, vapour, and ammoniacal and other gases given off during the process, and which are allowed to flow into a condenser, containing a solution of common salt, or of sulphuric acid, or some other matter in solution, to be afterwards employed for the purpose of manure or otherwise; and care must be taken not to remove the
35 cover of the retort, or otherwise to permit its carbonized contents to be exposed to the atmosphere as long as incandescence is maintained. The resulting charcoal being removed from the retort, it is to be ground fine and incorporated with about a third of its weight of finely-powdered sulphate of protoxide of iron. I would remark that I am aware of the employment of charcoal

White's Improvements in Deodorizing the Contents of Cesspools, Privies, &c.

prepared from night soil as a means of deodorization, and also of the employment of the sulphate of the protoxide of iron for a like purpose. I do not therefore claim the same separately; but what I claim is, the combining of the three constituents herein mentioned, whereby the desired result is more efficiently and instantaneously obtained.

5

In witness whereof, I, the said William White, have hereunto set my hand and seal, this Seventh day of February, in the year of our Lord One thousand eight hundred and fifty-five.

W. WHITE. (L.S.)

10

Witness,

S. CARPMAEL.

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1855.