

# **EARTH-CLOSETS: HOW TO MAKE THEM AND HOW TO USE THEM**

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Earth-closets: How to make them and how to use them by Geo. E. Waring Jr.

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**GEO. E. WARING JR.**

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1868.

In offering this pamphlet to the public, it is not necessary to accompany it by a word of explanation or apology.

It is sufficiently understood, by all who have given the least thought to the subject, that the waste of the most vital elements of the soil's fertility, through our present practice of treating human excrement as a thing that is to be hurried into the sea, or buried in underground vaults, or in some other way put out of sight and out of reach, is full of danger to our future prosperity.

Our bodies have come out of our fertile fields; our prosperity is based on the production and the exchange of the earth's fruits; and all our industry has its foundation in arts and interests connected with or dependent on a successful agriculture.

Liebig asserts that the greatness of the Roman Empire was sapped by the *Cloaca Maxima*, through which the entire sewage of Rome was washed into the Tiber. The yearly decrease of productive power in the older grain regions of the West, and the increasing demand for manures in the Atlantic States, sufficiently prove that our own country is no exception to the rule that has established its sway over Europe.

The large class who will fail to feel the force of the agricultural reasons in favor of the reform which this pamphlet is written to uphold, will realize, more clearly than farmers will, the importance of protecting dwellings against the gravest annoyance, the most fertile source of disease, and the most certain vehicle of contagion.

Supported as they are, then, by the most imperative agricultural and sanitary considerations, it is hoped that the arguments of the following pages will commend themselves to the approval of all, in both town and country, who have the well-being of society at heart.

OGDEN FARM, Newport, R. I.,  
September, 1868.

## SECOND EDITION.

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During the six months that have elapsed since this pamphlet was first published, the progress of the Earth Closet has been unexpectedly rapid, and there is every reason to hope that within a very few years its principle will be universally adopted throughout the United States, except in the larger cities, which are supplied with waterworks and sewers. Into these it will probably (except for commodes in sick rooms) find its way only when the demand for manure shall make its use a source of profit.

The following new facts are worthy of notice:—

A company for the manufacture of commodes and the apparatus for fixed closets, has been formed in Hartford, Conn., and is already doing a very large business under the patent which Mr. Moule has taken out in this country.

The subject has attracted the attention of the War Department, and an engineer officer has been ordered to report upon it. Arrangements are now being made to introduce the system into officers' quarters, and for use in the soldiers' latrines.

In hospitals, in various parts of the country, it is now being tried with the most complete success; especially for "fracture beds," the occupants of which cannot change their position, it is perfect. A little dry earth is put on the bottom of the pan (which is attached to the under part of the



bed), and small paper bags, each containing about a pint of earth are within reach of the patient. One of these he empties into the pan after use, thus entirely overcoming what has hitherto been an insurmountable difficulty in the way of purifying the air of the wards.

The most striking result of the introduction of the Dry Earth System is set forth in the following communication that I made to the *Evening Post*. (In addition to the achievement herein described, Dr. Hewson made the above named adaptation of the system for the use of fracture patients).

#### THE EARTH CLOSET AND THE TREATMENT OF WOUNDS.

One of the experimental commodes sent out by the Earth Closet Company of Hartford was placed at the disposal of Dr. Addinell Hewson, of the Pennsylvania Hospital (in Philadelphia). Its introduction into the surgical ward, where it has been for two weeks in constant use by about twenty patients, and has been subjected to the severest test possible, has been so entirely satisfactory that it is proposed to substitute earth closets for water closets wherever these exist in the institution.

At the time of its introduction there was lying in the ward a patient suffering from a very severe compound fracture of the lower leg. The wound was in an unhealthy condition, and its exudations, amounting to a pint in twenty-four hours, were so offensive as to cause a sickening, even dangerous stench, that the excellent ventilation of the ward and the usual disinfectants were hardly able even to mitigate. It occurred to Dr. Hewson to test the power of dry earth to absorb this odor, as it had that of excrement. The effect was magical. Not only was the offensiveness entirely overcome, but the effect on the character of the wound itself was such as no previous treatment had been able to compass. The suppuration was, within a few days, so reduced that the daily dressing of a single half pint of earth was not even saturated; the edges of the flesh wound lost their inflamed character; the intense pain of the sore was entirely relieved, and a healthy granulation has ensued.

Such an indication of a newly-found healing-agent was not disregarded.

On Monday last, being in Philadelphia, I was invited to attend the morning dressing of the earth-treated wounds. This is what I saw:

First—Two patients suffering from serious varicose ulcers, after prolonged suffering, and with little relief from the usual treatment, have ceased to be offensive to their wardmates; they find their sores growing daily smaller; all pain and inflammation have left them; and they feel the certainty of an early cure.

Second—A railroad brakeman, whose hand was—a year and a half ago—crushed between the coupling heads of two cars, and who has never been free from pain, and seldom from intense pain; whose hand from the wrist to the knuckles was a festering mass of carious bones and inflamed flesh, and whose system had been so reduced that he could not have survived the amputation which alone can entirely relieve him, is now happy in freedom from pain. His flesh-wound has taken on a healthy character, and his strength is fast returning. He even hopes to save his hand, but the long-continued decay of the bone makes this impossible.

Third—Another brakeman, suffering from a precisely similar injury, in no respect less serious, but received within a few days, was immediately treated with dry earth. Its constant application has entirely prevented inflammation, and a healthy healing of the flesh and knitting of the bone will soon return him to his duties with two useful hands.

Fourth—A farm laborer, on Friday last, had three of his fingers nearly cut off and fearfully torn by a horse-power hay cutter. Since the first application of the dry earth (a few hours after the accident) he has been free from pain, and he will save his hand.

Fifth—On Saturday last a laborer, engaged in breaking up condemned shells, exploded one that was charged. The powder burned his face and arms, and (seriously) one of his knees, which was struck by a fragment of the iron that completely shattered the knee pan. His burns and the fracture were immediately dressed with dry earth, and the freedom from pain and the absence of inflammation have been as marked in his case as in the others. Without this dressing the knee joint must inevitably have become involved, and the leg must have been lost. Now, the wound is evidently healing, and (although it is

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too early to speak positively) there is every reason to hope that the only result of the injury will be a stiff knee.

Sixth—Within a few days a woman was brought to the hospital with her neck and a large part of her body very severely and dangerously burned. That she could escape long weeks of agony was beyond hope. Yet on Monday her eye was clear and calm, and her voice was strong; and when the doctor asked her how she felt, she said she was a great deal better, and that she had no pain.

Seventh—Last Wednesday an entire breast was removed for cancer, and the wound was dressed with dry earth. It is now healing rapidly. There has been no inflammation and no suppuration, and this woman, too,—calm and happy-looking, with a healthy color and a steady voice—spoke far more than her cheerful words in thankfulness for her relief.

Surely, with our gratitude to the Vicar of Fordington, who has conferred the greatest benefit on the human race that it has ever been given to one person to accomplish, we must unite our thanks to the senior surgeon of the Pennsylvania Hospital for thus applying the principles of his invention to the saving of life and limb, and to the alleviation of unspeakable suffering.

And the end, I trust, is not yet. It seems inevitable that the pustules of small pox must give up their pain and their offensiveness at this magic touch of mother earth; and if it is true that its contagion spreads from its exudations, may we not hope that Dr. Hewson has bound its feet as Mr. Moule has those of cholera?

February 24, 1869.

The question of the disposal of kitchen and other house slops is attracting attention among those who appreciate the merits of the Earth Closet. Any means by which they may be filtered through or covered with earth will solve the problem. The English plan is to run them through open jointed draining tiles, laid about a foot below the surface of the ground. The lines of tiles being within five or six feet of each other, great fertility may thus be given to the ground of a garden. In our colder States this plan would not be effective in winter. The following, however, will be entirely so at all seasons of the year, and will produce an