up to within three feet of the floor, and let the bottom be paved or made water-tight by cement, or by coal ashes and tar. Let there be an opening at the back for removal, as often as necessary, of the deposit of earth and soil. Let earth be collected in sufficient quantity *in dry weather;* and if there be not a covered shed to keep it in, let it be placed in a portion of the coal-hole, boarded off. Let it be sifted for use through a sieve with a mesh of one-fourth of an inch. And for a family of ordinary number, if the earth so placed be not sufficiently dry, let the requisite quantity be placed either in the oven or at night under the kitchen fire.

Simple pieces of mechanism have been invented and patented, which are set in motion either by lifting a handle as in the ordinary water closet, or by a self-acting seat. This mechanism is alike adapted to fixed closets or to commodes.* The earth is contained in a reservoir at the back of the seat. This reservoir is furnished with a hopper, one kind of which on being lifted fills itself, and then falling by its own weight shoots the sifted earth so as to cover the deposit. In the case of the commode, there is placed beneath the seat a galvanised iron pail, which receives the deposit and the earth, and which is removed when necessary without the slightest offence. For the removal of the contents of these pails from upstair wards of hospitals or sick rooms, an arrangement may easily be made of this kind: in some convenient part of the building, outside (or even inside) the walls, a shaft 12 inches in diameter may be fixed almost close to the wall, at the bottom of which should be a vault or a truck, into which through the shaft the contents might be thrown, and, if a truck were used, immediately removed. This shaft, made either of earthenware or of cast iron, glazed inside, may be used also in immediate connection with the seat of the upstair closet, and if furnished at the lower end with a moveable bottom, will greatly facilitate the removal of the deposit, and at the same time supersede in such cases the use of the vault. It may be indeed a vault in itself. And from the space being more confined than that of the vault, the mixing and the decomposition will be more rapid. Its upper end will be almost close under the pan of the closet, and its lower end be at such a height from the ground as to admit beneath, according to circumstances, a wheelbarrow or a cart. When either of these is placed beneath, and the bottom moved or loosened, the contents of a week or a month, or two months, would fall by their own weight, and the emptying be the work of two or three minutes. This shaft may be placed within the outer walls of a house, descending into a chamber to be approached through a kind of cellar-door in the basement.

In the use of the vault as a receptacle for the contents of the closet descending through this shaft, there would, it is true, be one advantage over the shaft as itself constituting the vault. It is this, that in such cases the earth box and the hopper may be fixed at the bottom of the shaft, and the latter be worked by a wire from the

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* For a description and plan of an earth closet. (See Appendix A.)