

provement to make them perfect would be the substitution of prepared charcoal for dry earth or ashes, for, as Dr. Parkes says, "3 oz. of charcoal is equal to 1½ lbs. of earth," and is more powerful as an "absorbent and deodorizer than either earth or ashes." All that is now required is that the community at large appreciate the comfort and advantage of the system, and act in concert with the local authorities in accepting generally these conveniences in lieu of the

#### ABOMINABLE "CESSPIT."

Dr. Carpenter says, in the pamphlet to which I have referred, Article 23: "It can scarcely be doubted that the earth closet is the best mode for collecting and disinfecting *excreta*, providing arrangements for its removal can be satisfactorily made." Dr. Parkes, a high sanitary authority, says in his "Manual of Hygiene," "In Glasgow the *excreta* from one part of the town, containing 80,000 people, are now removed every day and sent long distances at a profit. There is no better deodorizer than charcoal, 3 oz. of which is equal to 1½ lbs. of dry earth. Experience only can show whether it be commercially successful, but there can be no question that it is an excellent plan in a sanitary point of view." Dr. A. Winter Blyth says, in his "Dictionary of Hygiene":—"As compared with the 'water closet the dry closet system has these advantages: It is cheaper in its original cost, it requires less repair, it is not injured by frost, and it very greatly reduces the quantity of water required by each householder." In England the Board of Health may adopt dry closets, may dispense with a supply of water for the latter purpose, and undertake by themselves or by a contractor to supply dry earth, charcoal, or any other deodorizing substance to houses within their district for the regular supply of dry closets, also may provide and maintain, in suitable places, public earth closets." Dr. N. Radcliffe, Inspector to the Local Government Board, reports as follows:—"In Manchester (Eng.) there are 6,000 ash closets already in use; these are provided with a cinder sifter so that the ashes are sprinkled into the receptacle and the cinders thrown out, so that they can be returned. This is great economy and much appreciated by small householders. Tenants are willing to give three shillings more rent weekly for premises thus reconstructed. The removal is made

"once a week by the town authorities. It is entirely inoffensive. It is found that a class of the population, commonly believed to be indifferent to such niceties, have rapidly appreciated the advantages of the new closets and taken to the use of the cinder-sifter." Of Rochdale the same inspector reports:—"The pail system has been thoroughly approved by all who have experience of it, and has proved equally efficacious in private houses, lodging houses, factories and workshops. The cost of removal which, under the old system, amounted to \$355 per 1,000 persons per annum, is reduced to \$95 per 1,000, and the value as manure equals three-fourths of the latter sum, so that a large economy is hereby effected."

#### WHAT THE SCIENTISTS ELSEWHERE SAY.

Moreover, the same general conclusions have been reached by the highest authorities in the United States, the following preamble and resolutions having been published by the State Board of Health, N. Y., in 1881:—"Whereas many cases of disease arise from contamination of water and earth by the soakage from privies and cesspools, and disease from this cause will increase unless action is taken to avert the evil." Be it resolved, "1st. That the use of privy vaults, pits and cesspools, is seriously affecting public health, and should be abolished; 2nd, That all excreta should be removed from the neighborhood of human dwellings; 3rd, That this should be done by the local authorities; 4th, That it may be cheaply and healthfully done, either by 'dry removal' or by 'water carriage' and in the latter case the 'separate system of sewers' is hereby recommended for general use in this State."

Dr. Jas. T. Gardiner, director of the New York State survey, in his report to the State Board of Health, says:—"The awful lessons taught by epidemic diseases are awakening the towns of the State to the need of relief from the prevailing privy vault and cesspool nuisances. I find that wherever intelligent efforts have been made to produce sanitary conditions for towns, cesspools and vaults are abolished, and the sewage is removed from the neighborhood of dwellings by 'dry removal' or by 'water carriage.' The 'tub,' 'cask' or 'pail' system, used even on a large scale in England, France and Germany, is undoubtedly the best method of removal, where the water system is not available. In Rochdale and Manchester