out and buried about once in three months—dug a trench in the ground near by, cleaned out the settling basin and buried its contents in the trench. But once, only a week after cleaning it out, I had occasion to empty it again for another purpose and found that it was as foul as it had been after a longer interval. That was about three years ago. Since that time the settling basin has never been opened excepted for inspection, and its condition remains always the same. The explanation is perfectly simple. The solid matter at the bottom of the tank is decomposable matter, and is constantly passing itself off in solution in the water which flows away; and the matters which are decomposing are very strong producers of ammonia, which acts upon the under side of the floor of grease and converts that into soap, which in its time passes off."

James C. Bayles, author of the well known treatise on "House Drainage and Water Service," says: "Having had three years experience with this system, so far as its essential details are concerned, in draining my own house, I have no hesitation in expressing the opinion, that under favorable conditions it will work satisfactorily and be found an improvement on any other system which can be contained within the restricted limits of a village lot or villa site."

Dr. Whitehorde, physician of the Essex County Penitentiary, says: "I would say that the fact of the utility of the system is patent, and under proper conditions is available for the healthful disposal of the sewage equally of the smallest family or the largest public institution. Before the change was made here the solid fecal matters were composted and made use of on the farm but a large portion of the immense amount of liquid, holding noxious matter in suspension, found its way into a neighboring brook, and contaminated both the air and the running water, being perceptible as far as Caldwell village, three-fourths of a mile distant. At present the solids are equally available for composting, and the saturated liquids, by means of the laterals, are disposed of without defiling the running water below. During summer the ground above is made use of for a kitchen garden, and produces abundantly, so that thus controlled, these elements otherwise poisonous, are made subservient to the good of man."

Mr. Edward S. Philbrick says: "There are so many places where this system is applicable, and its merits are so great in such places, that a full and detailed description of it may be of interest. The limits of its application are as follows: Wherever a quarter of an acre of grass land is available for a single family of eight or ten persons, or an acre for an aggregate of eighty persons, so situated that the surface of the sod is five feet or more below the level of the house drain, where it leaves the house or houses, this system will dispose of all their sewage in a satisfactory manner, summer and winter, with very little attention, for a term of years."

Dr. Pinkham, before referred to, addressed circulars to some sixty people, who for various lengths of time had employed the sub-surface irrigation system. Their replies were satisfactory almost to an unit.

The questions were: 1st, State size of family; 2nd, approximate first cost of system; 3rd, approximate cost of annual maintenance; 4th, length of time in use; 5th, Is system free from nuisance? 6th, Is all house waste satisfactorily disposed of? 7th, Have stoppages occurred? 8th, Is the soakage area underdrained? 9th, Is it superficially dry? 10th, Give any facts which you think may be of service in determining to what extent and under what circumstances this system can be recommended for general use.

As to question 1st, (size of family) the answers were "from four to one hundred and fifty"—the latter number in Essex County Penitentiary; 2nd, first cost ranged from $175 to $1000; 3rd, (cost of annual maintenance,) "from nothing to $25"; 4th, (length of time in use,) seventeen months to five years; 5th, (Is system free from nuisance?) "Yes," unanimously; 6th, (Is all waste satisfactorily disposed of?) "Yes," but in two cases; 7th, (Have stoppages occurred?) "No," in all but four instances; 8th, (Is soakage area underdrained?) "No," in every case but one; 9th, (Is it sufficiently dry?) "Yes," unanimously; 10th, (Give facts, etc.) all spoke most favorably, giving the system second place only to the system in vogue in regularly sewered towns. Where stoppages occurred, the replies were to the effect that it was to a small extent and in one "once in three years."

The accompanying cuts Fig. 1 and 2, are the plans and details of the system as adopted at the new Dining Hall building erected at Woodstock College, and carried out by the firm of which I am a member, in the years 1886 and 1887.