

VIRGINIA



HEALTH BULLETIN

VOL. VII.

JUNE, 1915.

No. 6

The Danger Zone

ON THE FARM

Sewerage Disposal

Entered as second-class matter July 28, 1908, at the postoffice at Richmond Va., under the Act of July 16, 1894.

## FOREWORD

**N**E of the greatest lessons that civilized man is learning is the danger to life and health which comes from the careless handling of the discharges from the human body. We have learned that except for a few diseases which are spread by biting insects, almost all those diseases that are communicable, or "catching," are caused by getting into the body the germs of disease which come from the body of some other person infected with the same disease.

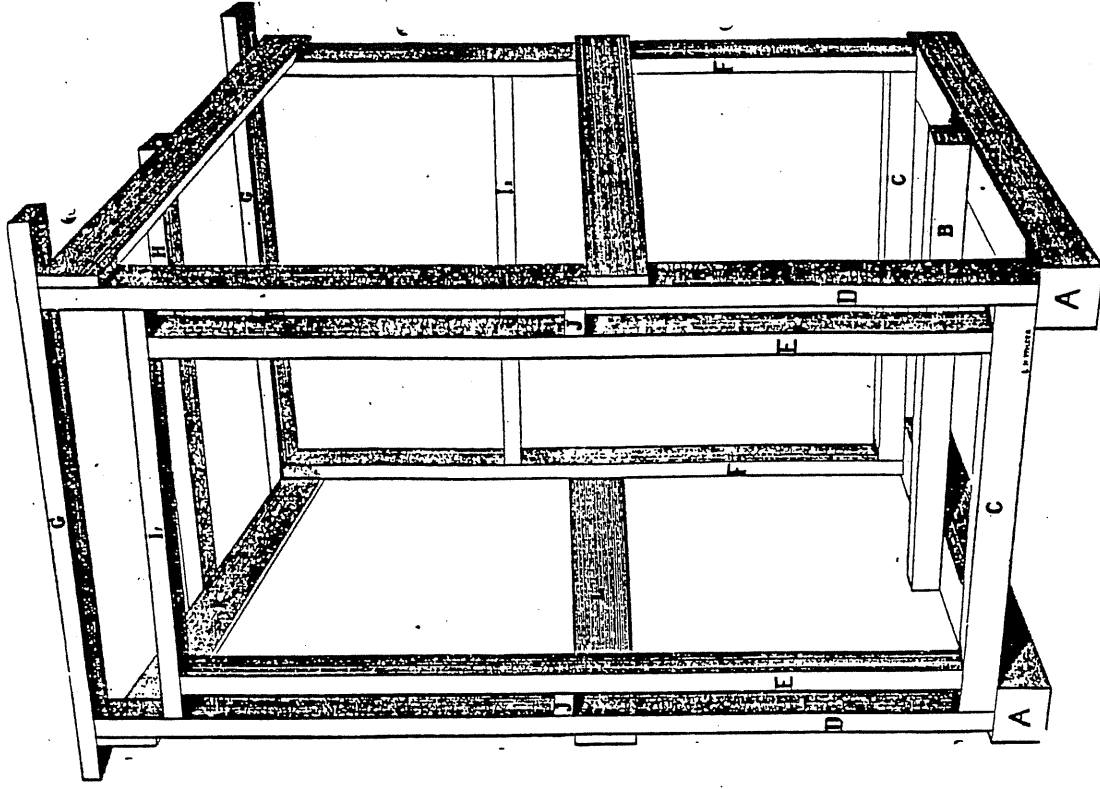
From the nose and mouth come the germs of disease which cause almost all the contagious diseases of childhood—measles, mumps, scarlet fever, diphtheria and similar ills. From the nose and mouth come also the germs which cause consumption—the captain of the hosts of death—the germs of pneumonia, of influenza, of "grippe" and of common colds. Meningitis and infantile paralysis, those insidious and dreadful diseases, are likewise caused by germs leaving the body of the patient in excretions from the nose and mouth. The prevention of these diseases is dependent on the proper care of these excretions, and is proceeding just as rapidly as knowledge is being spread of the means of keeping the body-wastes from being scattered about. Even the pus, or "matter," from a common boil will, if rubbed into the skin, produce other boils in the same person or in other persons in the same way.

In addition to the great group of diseases spread by the discharges from the nose and throat of infected persons, there is another group, almost as large, spread by the discharges from the bowels and bladder. In general, the diseases affecting the organs of the head, neck and chest are spread by the discharges from the nose and mouth; those affecting the organs of the abdomen are spread mainly by the discharges from the bladder and bowels.

Of the diseases thus spread from the bowels, typhoid fever is by far the most important in Virginia, but it is by no means the only one. The eggs of the hookworm leave the body in the stools; the germs of Asiatic cholera, of epidemic and chronic dysentery, of various forms of diarrhoea, and of various animal parasites are also found in the stools.

The prevention of these diseases, therefore, depends primarily on the proper disposal of the discharges from the bowels of human beings. If the discharges of all human beings in Virginia were disposed of in such a manner that they could not be scattered about and reach the mouths of other persons, typhoid fever would at once disappear and the general health of our people would improve to a degree almost beyond calculation.

Present conditions on many hundred farms in Virginia permit the scattering of human manure in such a manner that some of it must inevitably reach human food and human mouths. On some farms there is no privy. Instead, the residents deposit their stools on the ground about



FRAMEWORK FOR MODEL PRIVY HOUSE.

Such a house is NOT necessary, but can be conveniently and cheaply built about the privy box. The latter is the all-important part of the privy.

### The Pail Privy.

the outbuildings and in the nearby woods. The stools so deposited are scattered by flies and domestic animals, are tracked back to the house on the feet of human beings or are washed by the rains into the water courses. On other farms, stools are deposited in the ordinary open-back privy. Under these conditions, the stools are scattered by the same means as where no privy is used.

The health of all the family depends on the use by all of a privy so designed and so operated that the human filth deposited in it is kept safe in some kind of a tight receptacle, protected from the weather and from domestic animals and screened against flies. Such a privy will prevent the scattering of the filth in it until such time as this filth can be disposed of with safety.

### A Privy House.

There are various kinds of sanitary privies, only three of which will be described here. The purpose of all is the same; the differences are all under the seat. Whatever may be the type chosen, the style of house around the privy box is immaterial. *Any form of privy house will do; it matters not how primitive or simple it may be.*

Some, however, prefer a substantial structure, in which case that designed by Dr. Charles W. Stiles is to be recommended. For this, the following material will suffice: 1 scantling, 6 by 6 inches, 8 feet long; 1 scantling, 4 by 4 inches, 12 feet long; 5 scantlings, 2 by 4 inches, each 16 feet long; 2 boards, 1 by 9 inches, each 9 feet long; 3 boards, 1 by 10 inches, each 7 feet long; 15 boards, 1 by 12 inches, each 12 feet long; 12 boards, ½ by 3 inches, each 16 feet long; 2 pounds of 20-penny spikes, 6 pounds of 10-penny nails, 2 pounds of 6-penny nails, 7 feet of wire screen, 15 mesh, copper, 12 inches wide; 4 hinges, 6-inch strap style, for front and back doors; 2 hinges, 6-inch "T" or 3-inch "butts" for cover; 1 coil spring for front door.

The framework should be constructed according to the plan printed above, and the timber listed above should be cut as follows, to correspond with the lettered pieces of the frame in the illustration:

- (A) Two pieces, 6 by 6 inches, 4 feet long.
- (B) One piece, 4 by 4 inches, 3 feet 10 inches long.
- (C) Two pieces, 4 by 4 inches, 3 feet 4 inches long.
- (D) Two pieces, 2 by 4 inches, 7 feet 9 inches long.
- (E) Two pieces, 2 by 4 inches, 6 feet 7 inches long.
- (F) Two pieces, 2 by 4 inches, 6 feet 3 inches long.
- (G) Two pieces, 2 by 4 inches, 5 feet long.
- (H) One piece, 2 by 4 inches, 3 feet 10 inches long.
- (I) Two pieces, 2 by 4 inches, 3 feet 4 inches long.
- (J) Two pieces, 2 by 4 inches, 3 inches long.
- (K) Two pieces, 1 by 6 inches, 4 feet 7 inches long.
- (L) Two pieces, 1 by 6 inches, 4 feet long.

should be trimmed after being nailed in place.

The so-called "pail privy" is the simplest and one of the most inexpensive of all, and can be installed in any existing privy with a few hours' labor.

The important features of such a privy are (1) a tight box, the top of which is used as a seat, and (2) a pail or receptacle of some sort fitting directly under the hole cut in a seat.

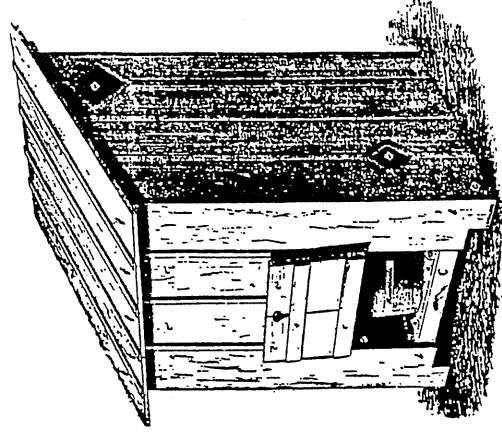
The box part of the privy should be so constructed and floored that no domestic animals or flies can get into it. In order that it may be cleaned as indicated below, it should be supplied with a hinged back, front or top. The most effective type is that which has a sliding back, fitted into grooves and easily raised when necessary. This design is illustrated on another page. In the top of the box, over the hole, should be placed a hinged top that will stay in place at all times except when the privy is in use. As persons sometimes forget to replace the seat cover, it is well to have the top hinged and to fasten a piece of board to the back of the privy just above the seat, so that the top will fall as soon as the person who is using the privy rises from the seat.

The receptacle of the pail privy must fit so neatly under the seat that none of the filth in it can be reached by flies or domestic animals. The receptacle can be either a galvanized garbage or ash can, a lard tin, a water-tight box, a half-barrel, or anything of the same type. In case a box or can is used which has no handles, these should be attached for convenience in cleaning the privy.

A very good device for use with such a privy is to nail two strips in the form of a V under the seat, the open end to the side from which the privy is cleaned. If this be done, the receptacle can be slipped back into place after cleaning without difficulty.

### Using and Cleaning the Pail Privy.

The pail privy can be used dry, simply as a receptacle for filth, which is afterwards to be buried, or it can be used wet with a suitable disinfectant.



MODEL PAIL PRIVY IN A SUBSTANTIAL PRIVY HOUSE.

The rear of the privy, which should always be kept closed except when the privy is being cleaned, is raised in this illustration to show how the water-tight pail or receptacle fits snugly under the seat in the fly-proof box, the top of which is the seat.

If used dry, there should be kept in the privy a small box or keg of dry, well-powdered surface dirt, some of which is sprinkled with a scoop or paddle on the contents of the privy after each use of it.

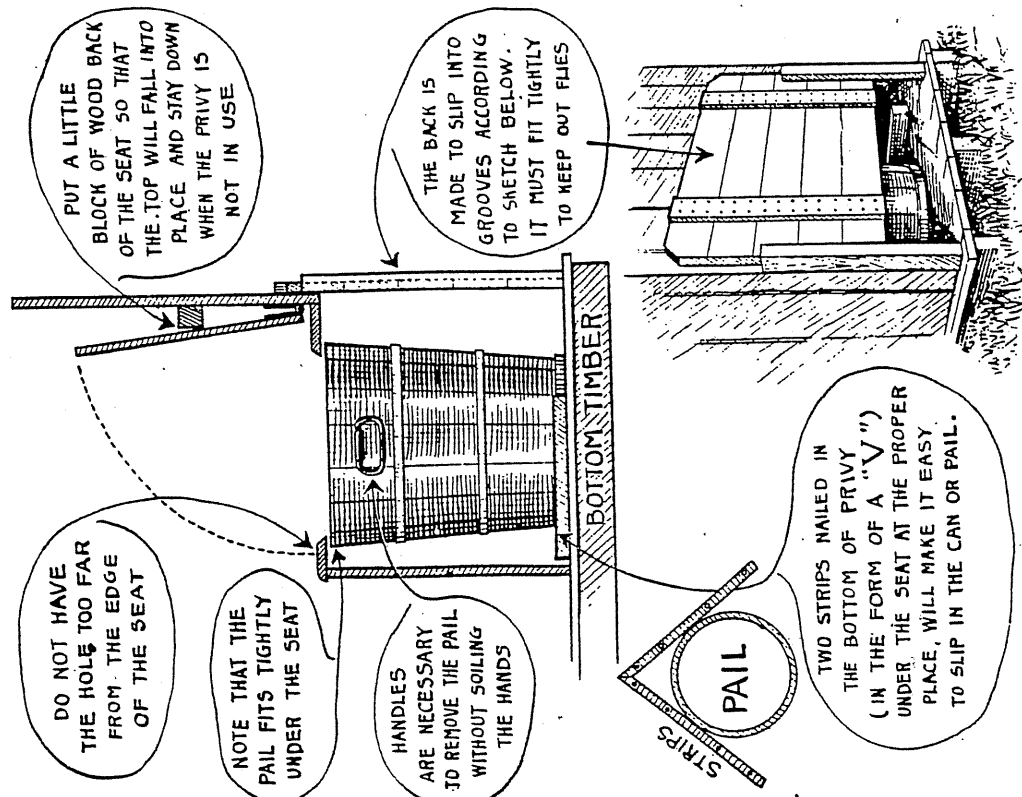


DIAGRAM OF THE SANITARY PRIVY BOX, THE TOP OF WHICH IS THE SEAT OF THE PRIVY.

The inset on the lower right-hand corner shows the sliding back, which is heartily to be commended. The inset in the lower left-hand corner shows how strips may be nailed to the floor to make it easy to slide the pail back into place.

If this is not desired and a disinfectant is preferred, it can be handled easily. From any drug store may be bought one of the standard liquid disinfectants at about \$1.50 the gallon. Whenever the pail is emptied a gill of this disinfectant in a gallon of water should be poured in the bottom. The disinfectant, it must be remembered, is not essential.

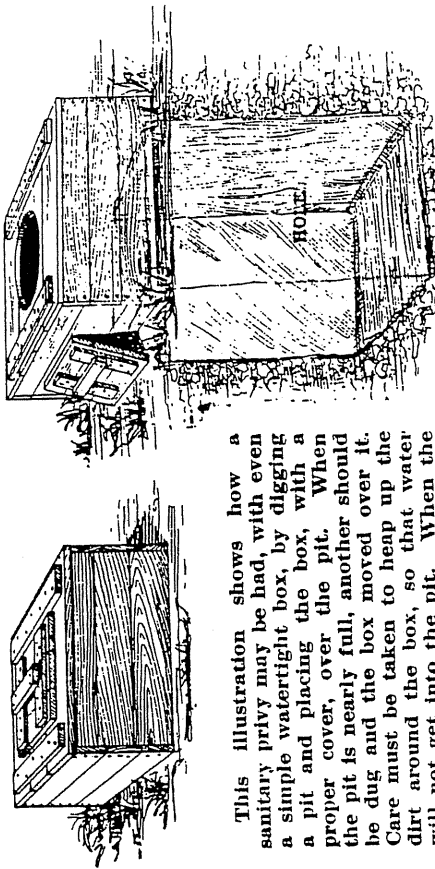
When the pail is about three-fourths full—whether it be used wet or dry—it should be removed, placed on a wheelbarrow and carried at least two hundred yards, preferably down hill from the privy and away from the well or spring. The contents should then be buried in a hole two feet deep and should be well covered with packed earth.

Where it is desired, a ventilator-pipe may be run from under the seat through the privy and out to open air above the roof. This will reduce unpleasant odors but is not necessary to a safe privy.

**The Pit Privy.**

The pail privy is chiefly subject to objection because it must be cleaned frequently. To obviate this objection, it is possible to use a type of privy which does not have to be cleaned out.

THE PIT PRIVY, SIMPLEST FORM.



This illustration shows how a sanitary privy may be had, with even a simple watertight box, by digging a pit and placing the box, with a proper cover, over the pit. When the pit is nearly full, another should be dug and the box moved over it. Care must be taken to heap up the dirt around the box, so that water will not get into the pit. When the box is removed to a new pit, the old one should be filled with earth, raised in a mound over it. This is necessary to keep the pit from becoming a sink-hole.

This is called a pit privy and consists essentially of a hole in the ground over which the privy is set, the dirt being banked up around the sides to keep out flies and rain water. The important factors are (1) that the privy be built light and strong so it can easily be moved; (2) that the back be entirely closed, and (3) that the seat be provided with a close-fitting cover, just as in the case of the pail privy.

In use, the pit is dug as deep as the soil will permit without caving in,

and just large enough for the privy seat to cover it and to rest on solid ground. The earth is then banked up as indicated.

When the pit is nearly full, another pit is dug some distance off. The privy should be moved and the first hole filled up, the dirt being heaped over it and packed tightly.

#### Cautions.

The pit privy should be placed as far as possible from the well and never less distant than 150 feet. Rain or surface water should be kept out in order that the contents of the pit shall remain dry. Furthermore, this type of privy should never be placed directly over a limestone ledge and, while elsewhere, at schools and in the country, it is satisfactory and fairly safe, it should not be used in towns. There the pail type privy should always be installed unless, of course, there is a sewerage system that makes it possible to have water-closets.

For clearness of illustration, the sketch of the pit privy on the preceding page does not show the surrounding privy house. This, as already pointed out, is not essential, however desirable it may be for reasons of modesty. Where the cost of a pit privy with a house seems too great, a simple pit privy box, commonly called a "sanitary box," may be used instead. The design should follow the lines shown in the illustration. All the precautions necessary for the pit privy must be taken.

#### Acceptable for Schools.

Special designs for privies for schools have been prepared by the State Board of Health and issued by the State Department of Public Instruction. While those designs are believed to be best for schools where there is no water supply, two of the privies described above, of any design, will meet the requirements of law if properly constructed and regularly tended.

#### The Kentucky Privy.

The third type of privy, now to be described, is somewhat more elaborate and commodious than either of the two considered above. It is known as the "Kentucky" privy from its use in that State.

The theory on which this privy is constructed is that the filth shall be placed in a concrete vault, safe from flies and yet so kept that it cannot seep through and pollute water supplies. A simple system of tile-drain is also used to carry off the wastes so that the privy will need little attention.

To build such a privy, a pit must first be dug four feet deep, five feet wide and seven feet six inches long. The next steps in the construction are to prepare the forms and put in the concrete walls. The method of doing this is well described in the directions prepared by the Kentucky Board. These follow:

"If the digging is carefully done, the earth walls will make the best outside forms, except above the surface of the ground, where plank will be needed to support the top of the tank walls until they set. The height of this form above the ground will depend upon the lay of the land and the amount of fall necessary for the drain-pipes, but the tank should always extend at least a foot above the surface of the ground and a little more than this on flat land, or in a clay soil.

"The inside forms, three boxes, each 2 by 4 feet by 4 feet 2 inches high, for the three compartments of the tank, with provision for the drain-pipe and

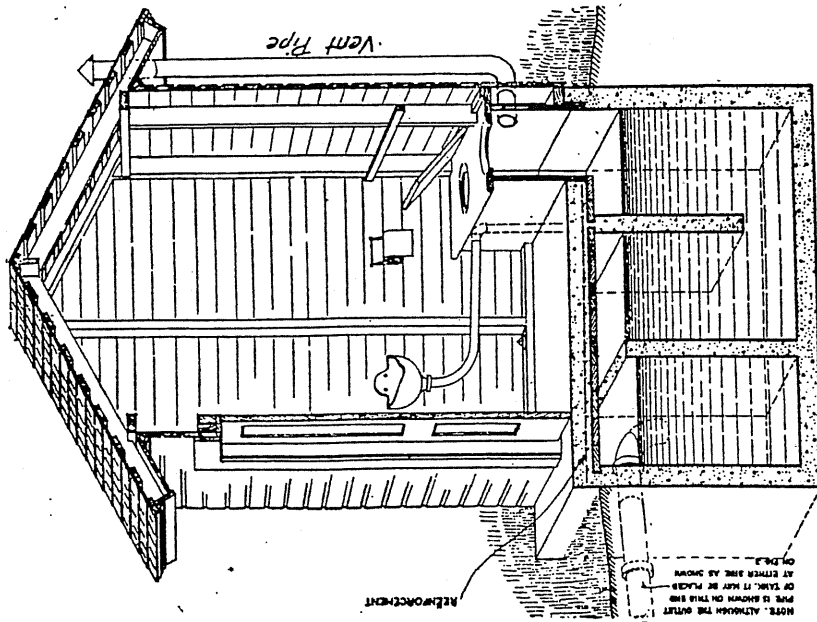


Fig. 1

PRIVY HOUSE AND TANK FOR THE "KENTUCKY PRIVY."  
The full page drawing on page 257 shows, in figures 2 and 3, the details of the tank.

for the underflow for the first and the overflow for the second partition, as shown in the cuts, can be made by any one of ordinary skill, of any lumber, old or new, which can be so closely fitted as to retain the moisture in the concrete. Care should be taken in putting the forms in place that no trash or dust are left under them to cause a leak where the concrete of the floor and walls are to join. A wooden strip 1½ inches by 1½ inches should then be put entirely around the outside of the forms, and 1½ inches by 1½ inches on both

sides of the form for the first partition, at the top, as shown by the dotted line in the concrete in the cuts. The purpose of this strip is to hold the forms in line as the walls are filled in and to leave a shoulder in the concrete on which the plank supports rest, as shown in all of the cuts. The lumber in the forms can be used over and over again for an entire community or district if care be taken in putting them together and in putting on the strips described with screws or with nails not entirely driven home to make their removal easy.

*The Concrete.*

"The concrete should be thoroughly mixed in a small mortar-bed, with enough water to bring it to the consistency of batter. Water is the only constituent in concrete which costs nothing, yet the failure to use it freely constitutes one of the greatest difficulties in securing water and air-tight walls and joints for these tanks, and in all concrete work. The proportions of the mixture are 1 part fresh Portland cement, 2 parts of sharp sand, and 4 parts of gravel or finely-crushed rock, the largest piece of which will pass through the meshes of a half-inch sieve, and plenty of water. The sand and cement should first be thoroughly mixed, then add the gravel and work them well together by rapidly turning the mass over with shovels time after time, after which comes the water to bring it to the proper consistency.

"It is important that the sides be poured in one operation so as not to have leaky joints.

"For a tank of the size shown in the cuts, 15 bags of cement, 1 yard of sand and 3 yards of gravel will be required, and in this proportion for large schools and hotels or where bath and toilet water from the inside of the house are to be received. As the concrete is poured into the forms it should be constantly tamped, using a thin-edged plank for this purpose next to the inside plank forms to make sure of a smooth finish for the inside walls. After the walls have set for three days the forms should be carefully removed, after taking out the screws or nails, and every inch of surface of the floor and inside walls coated well with a mixture of equal parts of cement and sand of the consistency of cream, put on carefully with a whitewash or similar brush. The seat may then be put in place and the tank covered with 1½ or 2-inch lumber, as shown in the cuts, making sure that concrete joins to concrete over the walls and the first partition and entirely around the seat. The concrete top, which is to be the floor of the privy, should be reinforced, and with two or more layers of galvanized-iron fence wire or rods and the bolts for making the house secure put in place as the concrete goes in, as shown in the cuts, and the upper surface should be so smoothly troweled and finished as to make it easy to keep it clean.

*The Tile Drains.*

"As shown in the cuts, the first or curved joint of the drain should be of glazed tile and the inner end should go well into the water to make it an effectual trap. As shown on figure 3, the drain may extend from the front or either side of the tank as will best suit the lay of the ground. The porous farm tile should extend 100 feet, more or less, depending upon the character of the soil. It should be laid below the frost or freezing line, away from the spring or well, should discharge entirely underground, and the surface over the drains should be utilized for a flower-bed or rose garden, getting the benefit of the constant irrigation and fertilization, thus converting into a thing of beauty and pleasure what has heretofore always been a malodorous source of danger.

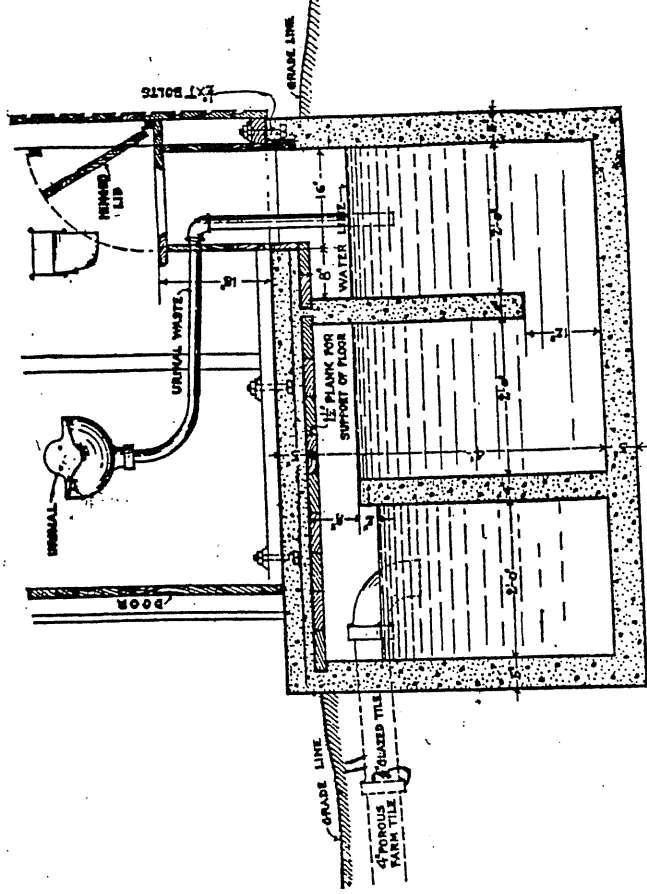


FIG. 2  
VERTICAL SECTION

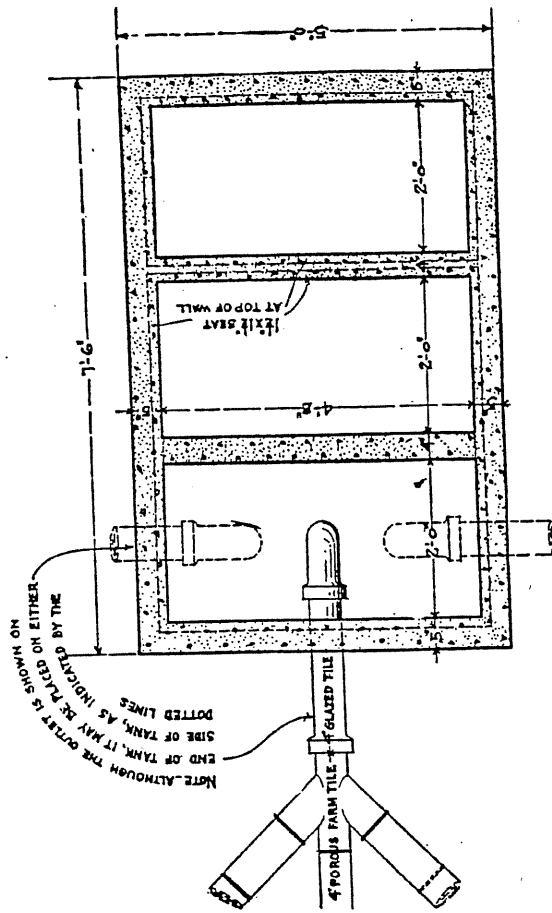


FIG. 3

#### Filling and Inoculating the Tank.

"Before the house is put in place and bolted down, the tank should be filled with water, five or six shovelful of old, well-rotted horse manure should be put in to inoculate the fluid with the liquifying, purifying germs upon which everything depends, a supply of toilet paper should be provided, and the privy is ready for use.

#### The Urinals.

"The urinals shown in the cuts are intended for private homes or other places where it will be used by a small number of persons. For privies for schools, courthouses or similar places to be used promiscuously by boys and men, most of them more or less carelessly, glazed iron troughs should be substituted for the urinals, and always should be placed in properly-latticed sheds at the back or side of the privy with the pipes extending through the wall and seat and well down into the water as shown in the cuts, and with additional care as to daily flushing and cleanliness in proportion to the number of persons using them.

"At least four gallons of water should be poured through each hole in the seat and the urinal every day, and some reliable person should be designated and held responsible for this duty and to see that toilet paper is constantly provided, and that the premises are kept scrupulously clean."

#### Other Forms of Sewage Disposal.

"There are some who are willing to expend money for an adequate system of sewage disposal with water-closets if they can be advised how to do so. But in many instances there are no streams into which sewage can be safely emptied. For such cases, the following system is recommended if the surrounding soil be suitable:

#### Subsurface Irrigation Sewage Disposal Plant.

*The subsurface irrigation type of sewage-disposal plant is adapted to localities having a light sandy loam soil at least two feet in depth, porous enough to absorb the liquid distributed by the system of drain tile.*

The system consists of (1) a line of vitrified sewer pipe from the house; (2) a sewage tank which is divided into two chambers, the intercepting and the siphon or flush chambers; (3) a four-inch drain for the effluent, and (4) the absorption field where the liquid is distributed over a large area by a net-work of drain tile laid with open joints about ten inches beneath the surface. The details of this system will be plain from the illustration on page 260.

The operation of the system, in brief, is this: As the sewage passes through the intercepting chamber the heavier solids settle to the bottom where certain kinds of bacteria liquefy or gasify them—the process known as "digestion." The liquid then fills the siphon chamber to a certain level and then the automatic siphon is set in action. All the liquid is quickly discharged through the effluent drain with such a rush that all parts of the underground tile system should be reached, a little liquid seeping out of each joint. The siphon chamber is very essential to accumulate the varying flow of sewage from the house and to give the absorption field an oppor-

tunity to rest between the flushes. The siphon chamber should be so designed that the discharge will occur about once every day.

Unless the instructions for laying the underground drain tile are carefully followed, unsatisfactory results may be expected.

The pipes should never be deeper than 12 inches below the surface, for the following reasons: First, that the millions of bacteria which are present in the top of the soil may destroy the impurities in the liquid. These bacteria rapidly diminish in number below the 12-inch depth. Secondly, that while the field is resting it may renew its supply of oxygen. Thirdly, that the liquid may be absorbed by the roots of grass and plants.

As a rule, the sewage tank should be located at least 100 feet away from the house. The contour of the ground will determine largely the arrangement of the underground tile. If there is a spring or well on the premises or nearby, supplying water for drinking purposes, the absorption field should be located as far away as possible, and at a lower elevation. The tiles may be, and in practice often are, laid under well-kept lawns or gardens. For level ground, a shallow siphon chamber must be used. This, of course, will increase the frequency of dosing.

#### Building the Sewer-Pipe from House to Sewage Tank.

The house drain of cast-iron pipe extends at least five feet outside the foundation wall. From this point to the sewage tank vitrified sewer pipe is used. This pipe should be laid with a grade or fall of at least one foot in every 100 feet, but where possible a fall of one foot in sixty will give better results. The bottom of the trench should be dug to the exact grade and shaped as nearly as possible to fit the lower half of the pipe. Grooves should be cut in the trench bottom for the "bells," so that each pipe will have a firm bearing throughout its whole length.

The joints of the pipe must be carefully made so as to keep out all rain water or ground water. If additional water finds its way into the pipe through defective joints it will be necessary to use more drain tile. The bells, or hubs, should be laid up-grade and the space between the hub and spigot should first be filled with a small rope of picked oakum, rammed into place with a hand iron. This is to prevent any cement mortar from entering at the joints. The remainder of the space should then be filled with a mortar made of one part Portland cement and one part clean sand. The cement and sand must be thoroughly mixed dry and wetted up only as needed. The bottom of the joint should be made with particular care, using the fingers to push the mortar into place. As soon as the joint is finished, the groove in the trench should be filled with earth to prevent the joint being broken before the cement has time to harden. After making each joint, the inside should be cleaned out with a swab to remove any projections of oakum or cement.

#### Sewage Tank.

As has already been said, the general contour of the ground will largely determine the location of the sewage tank, but as a rule it should be placed at least 100 feet away from the house. The tank is divided into two chambers—the intercepting chamber of the siphon chamber. The plan on page 260 shows in detail the inside dimensions, the thickness of the walls, the location of the inlet and outlet pipes, etc.

The plan shows floors and walls of concrete and the roof over the siphon chamber of concrete slabs reinforced with small iron rods, barbed wire or wire mesh placed within one inch of the bottom surface. The concrete slabs for the roof may be made in boxes of boards 4 inches deep, 4 feet long and 2 feet wide, so as not to be too heavy to handle. The concrete should consist of one part Portland cement, two parts clean sand and four parts of stone

or gravel screened to pass a 1½-inch mesh. The reinforcement must be placed when the concrete is poured into boxes and the cement should be allowed to set two weeks before the slabs are disturbed. If materials are not convenient for making concrete, the slabs may be of large flat stones with the joints cemented to keep the earth from falling in.

The manholes, with perforated covers to allow any gas to escape, are for inspection purposes and may be either 20 or 24 inches in diameter.

The siphon flush chamber should have a capacity of from eight to twelve hours' normal flow of sewage so that the tilling system will be dosed two or three times each day. The automatic siphon shown in the cut is known as the Miller siphon, and is manufactured by the Pacific Flush Tank Co., Chicago, Ill. Having no moving parts, it requires very little attention. The three-inch size is the one generally used for private plants.

*Effluent Drain.*

The drain from the siphon chamber to the absorption field should be of 4-inch vitrified pipe laid with as much fall as the lay of the land will require. When it approaches the absorption field the grade should be not greater than 4 to 6 inches per 100 feet in order to get a more uniform distribution of sewage. The joints must be cemented as specified for the house drain.

Generally it is advisable to divide the absorption field into two separate units and provide a gate set in a shallow manhole (see plan) and operated by hand to change the flow from one unit to the other.

*Absorption Field.*

The area selected for the absorption or irrigation field should have a gravel or a sandy loam soil. A heavy clay soil is not suitable for this system, although it is sometimes used in clay by providing a system of under-drains to collect the effluent and filling the distributing trenches with sand, gravel or fine clinders. It should be noted that the success of this system depends upon the accuracy with which the distributing or three-inch drain tiles are laid. According to the general contour of the ground, parallel lines of common three-inch agricultural drain tile in one-foot lengths lead off from the four-inch drain by tees or preferably by special Y branches. If the lines are parallel they should be spaced at least four feet apart and not more than twelve inches below the ground surface. As shown on the plan, the tiles should be laid in continuous boards in the bottom of the trenches and should have a fall of about two inches in 100 feet. Much care must be taken to get the grade uniform or the liquid will not be evenly distributed. A space of one-fourth of an inch should be left at the joints to allow the liquid to ooze out into the soil, and earthenware or tarred paper caps should be placed over each joint to prevent any dirt from falling in. In case any of the lines clog, it is a simple matter to take up the pipes, clean and then replace them.

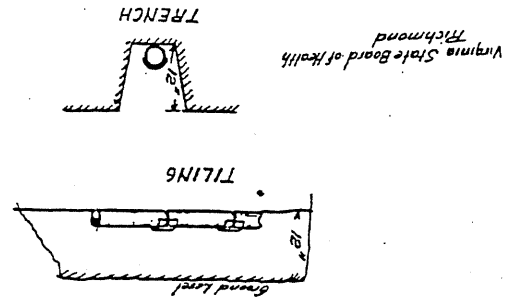
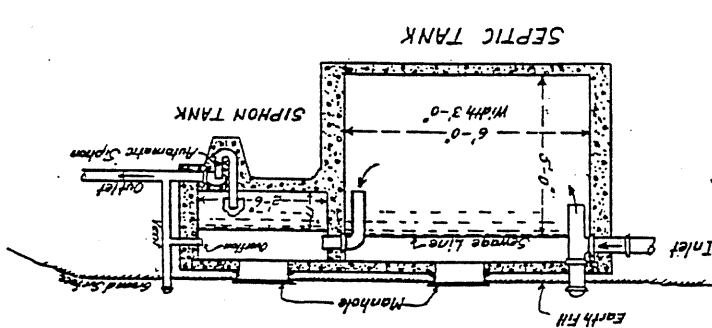
The number of feet of absorption tile required for a particular residence will depend largely upon the character of the soil. Sand is the best filtering medium, though a light sandy loam will do. The usual rule followed is to use as many feet of tile as there are gallons of flow daily ~~connected with the~~ ~~system.~~

To repeat, it is always best to divide the distributing system into two separate units, as shown on the plan, and, by means of the gate, to change the flow each week from one to the other. This will give the soil a period of rest and allow the supply of bacteria to be renewed.

*Publications.*

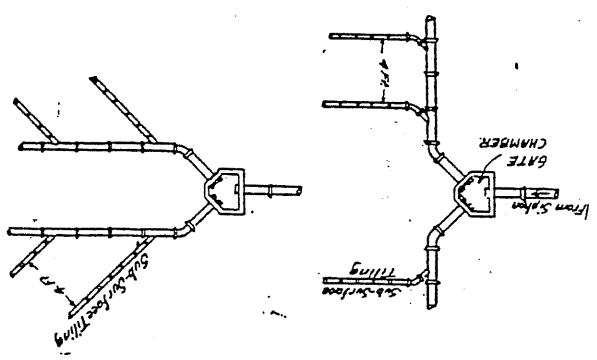
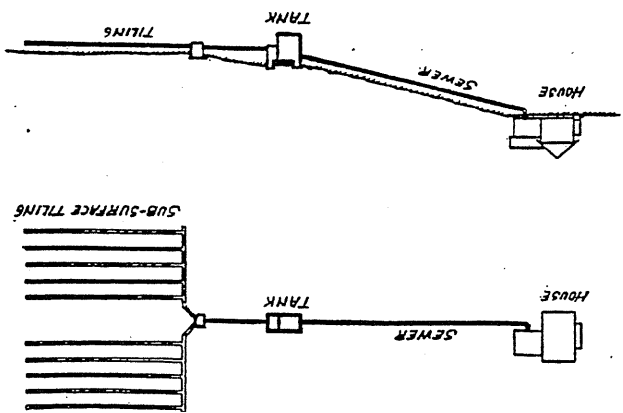
To any who desires to gain a more extended knowledge of questions re-

SEWAGE DISPOSAL PLANT FOR PRIVATE HOME



Virginia State Board of Health  
Richmond

TWO METHODS OF LAYING SUB-SURFACE TILING





lating to the disposal of sewage from private residences, the following publications are recommended:

"Practical Methods of Sewage Disposal," by Ogden & Cleveland; John Wiley & Sons, 432 Fourth Avenue, New York City. \$1.50.

"The Disposal of Household Wastes," by Wm. Paul Gerhard; D. Van Nostrand Co., New York, 1904. 196 pp. 50 cents.

"How to Drain a House," by Col. Geo. E. Waring; D. Van Nostrand Co., New York, 1895. 12 mo., 222 pp. \$1.25.

#### Caution.

This admirable system of sewage disposal, to repeat, is adapted to homes where there is a light sandy loam soil several feet in depth and sufficiently porous to absorb the liquid distributed. This system does not work well elsewhere. Persons who wish to install private sewage-disposal systems in other kinds of soil are requested to write the State Board of Health for more specific advice. Some plan can usually be recommended that will be satisfactory and safe.

#### Which Will You Have?

The pail privy, the pit privy, the sanitary box, the Kentucky privy, and the private sewage-disposal plant—these offer a wide range, both in price and convenience. A sewage-disposal plant, costing from \$100 to \$150, will give the well-to-do farmer virtually the same sanitary comfort that his city brother enjoys; a sanitary box, costing half-a-day's work and perhaps one dollar in money, offers protection where the soil is suitable. Between these extremes there is ample room for individual taste and private means. But the important thing is to have some sanitary arrangement for caring for the filth from your household. It will mean safety; it will mean comfort; it may mean insurance against disease.

What sort of a privy do you intend to have, and when will you start it?