The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Entered as second-class matter at Postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. XXXIV JULY, 1919 No. 7

A Law of Moses, Judge of Israel; About 1491 B. C.

"Thou shalt have a place also without the camp, whither thou shalt go forth abroad:

"And thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee."—Deut. 23: 12-13.

A Law of the State of North Carolina, Enacted A. D. 1919.

1. "Every residence located within three hundred yards of another residence must have an improved privy of a type approved by the State Board of Health."

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INTRODUCTION

By A. J. Warren,
Assistant Secretary, State Board of Health

This July issue of the Health Bulletin covers in the most practical manner the largest single factor that is impeding the progress of health work in North Carolina and that confronts her citizens today—the disposal of human excreta.

Realizing this fact and being willing to meet, like true men should, their responsibility, the last General Assembly passed an act requiring every home within three hundred yards of another home to have an improved type of privy that the State Board of Health would approve. The questions immediately arise, "What type will the State Board of Health approve, and what type shall I install?" This Bulletin answers both questions. The information set forth in this Bulletin is not influenced by a prejudice against nor preference for any particular type of privy, but each type is dealt with in detail and both the advantages and disadvantages, together with the comparative costs given, as each particular type warrants.

The substance of this Bulletin was not compiled until an exhaustive study of the various types of privies in use in the various sections of the country had been made. Each type was studied not from its theoretical application alone, but in actual use as well.

We present this Bulletin as the most complete study that has yet been made public relative to the practical application of the various types of privies now in use.

The technical matter in this Bulletin was prepared by H. E. Miller, C.E., Director of the Bureau of Engineering and Inspection of the State Board of Health, and past assistant surgeon K. E. Miller of the United States Public Health Service.

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THE STATE-WIDE PRIVY LAW EXPLAINED

1. Object

The Governor of the State, in his message to the last General Assembly, said, "A general law should be enacted making it compulsory for the owner of property on which a privy is located within three hundred yards of the dwelling house of any other person, to maintain a sanitary privy in accordance with plans and specifications approved by the State Board of Health."

The State Board of Health drafted and recommended to the General Assembly the passage of such an act, which is explained in this article.

In advocating such a course, both the highest executive official of the State and the State Board of Health had but one object in view—the prevention of human suffering and distress from preventable diseases, and the saving of human lives.

2. Meaning and Scope

When reduced from legal terms to plain English, the law simply means that the open back surface privy will no longer meet the requirements and demands of modern civilization; and it must be remodeled and converted into a sanitary type that the State Board of Health approves. The term "privy" as used in the act includes every type of disposal system, except sewer connections and septic tanks of a type approved by the State Board of Health, that is located within three hundred yards of another residence.

The danger of any open, insanitary privy is in proportion to the size of the population to which it is related by either the fly or water route. An open back privy in a town or city block is within fly range, that is, three hundred yards, of from sixteen to twenty homes with a total population of from ninety to one hundred and twenty people. An open back privy in the average rural district is in three hundred yards of one home of from five to seven people. The open privy in the country districts usually affects only the owner, who is responsible for his own surroundings, whereas the open privy in the city or town affects other people who are in no way responsible for it and have no control over it. The enforcement of the act will protect these defenseless homes against typhoid fever, dysentery, and other "privy-filth" diseases. In the strictly rural districts of North Carolina, there is one case of typhoid fever per thousand per year, whereas in the unsewered city, town, village or suburban section there are from five to six cases of typhoid per thousand population yearly.

The responsibility for the sanitary maintenance of the privy is definitely fixed as falling upon the head of a family or household, the proprietor of a boarding-house, hotel, restaurant, or store, the principal or superintendent of a school, the agent or station-master of a railroad station or depot, or the person in charge of an office

building, establishment, or institution. Any of the above named parties who permits a privy other than a sanitary privy to be used by his or her household, guests, customers, pupils, passengers, occupants, employees, workers, or other persons, will be guilty of a misdemeanor and subject to prosecution.

The North Carolina State Board of Health, through its officers and inspectors, will supervise the construction and maintenance of all privies coming under the jurisdiction of this act. This will be done by dividing the State into ten sanitary districts of ten counties each, and a sanitary inspector will be placed in charge of each district. These ten sanitary inspectors will be under the direct supervision of an experienced sanitary engineer, the chief of the Bureau of Sanitary Engineering and Inspection. All types of privies built must be approved by this bureau.

Whenever an inspector of the State Board of Health shall find a privy located within three hundred yards of the residence of a person other than that of the owner or tenant thereof, which is not constructed according to the specifications of the Bureau of Sanitary Engineering and Inspection, he shall fasten on such privy a notice reading "Insanitary; unlawful to use," and the use of a privy so placarded will be a misdemeanor. Or if a privy be constructed according to specifications, but is not being properly maintained, it will be placarded the same as one not properly constructed. When a privy is found to be properly constructed and maintained, the inspector will attach thereon a license tag permitting its use, and also instructions for the proper maintenance of the privy.

At the time of the inspection, the owner of each privy shall pay to the officer or inspector a license fee of forty cents, for which the inspector is required to issue a receipt. This license fee is to be used to defray the expenses incurred by the State in the enforcement of this act.

Cities that have a population in excess of twenty thousand will be exempted from the requirements of the act if the city officially requests the State Board of Health to exempt it from its provisions before the first of October, 1919.

The Necessity for Such An Act

The swallowing of human excrement causes 2,000 deaths and 34,000 cases of sickness in North Carolina every year, as is shown by the following figures:

Deaths from—	
Typhoid	502
Dysentery	604
Diarrheal diseases of infants	875
Total	1,981
Cases of sickness—	
Typhoid	5,020
Dysentery	12,080
Diarrheal diseases of infants	17,350
Total	34,450

It is true that all of the above list of diseases did not have their sole origin from the open privy. And it is also true that after the State has been sanitated there will continue to be sporadic cases of diseases of fecal origin. But it is quite certain that the open back privy is the chief source of propagation for the fecal-borne diseases in North Carolina. It is also quite certain that the enforcement of this sanitary law will greatly reduce this number of both deaths and cases of sickness. And it is a singular fact noted by sanitarians that wherever the sanitary conditions are so improved as to render the fecal-borne diseases of minor consequence, the general health of the community relative to the other diseases improves also, and the total death rate is materially lowered.

Let us assume that we prevent only 18 per cent of deaths and sickness now due to fecal-borne diseases (an extremely conservative estimate) by enforcing the sanitary privy law. We would then prevent 365 deaths, one for each day in the year, and the occurrence of 63,000 cases of sickness. If the 365 lives saved are worth $1,000 each, we shall have saved $365,000 worth of human economic value. And if the 63,000 cases of sickness cost in doctors' bills, druggists' bills, nurses, time lost from labor, etc., $30 apiece, we shall have saved an additional $189,000; a total saving of $554,000 for the State. The question is simply this: Shall you pay to the State an annual inspection tax of 40c, or shall the State lose annually in human economic values $554,000?

A copy of the law will be sent to any person desiring it, upon request.

(Signed) A. J. W.

SANITARY PRINCIPLES OF THE CONSTRUCTION OF PRIVIES

It is only in recent years that we have come to a truer and more thorough understanding of the meaning of sanitation and its life-saving principles. More recent still is the application of these principles in a wholesale manner to the daily life of the citizens of a community, to prevent the spread of disease.

Typhoid fever, dysentery, diarrhea, summer complaint, and certain other diseases have been proven to have their origin in human filth. That is, in plain English, any person who contracts one of these diseases has either eaten or drunk the body waste of some one else who had the disease. Repulsive as this may seem, it is nevertheless a daily occurrence in the majority of our homes, especially during the warm months, and it must be so as long as the insanitary privy remains in any community, as will be shown below. There is, therefore, no more simple and far reaching phase of sanitation than that dealing with the reduction of disease by means of sanitary construction and mainte-

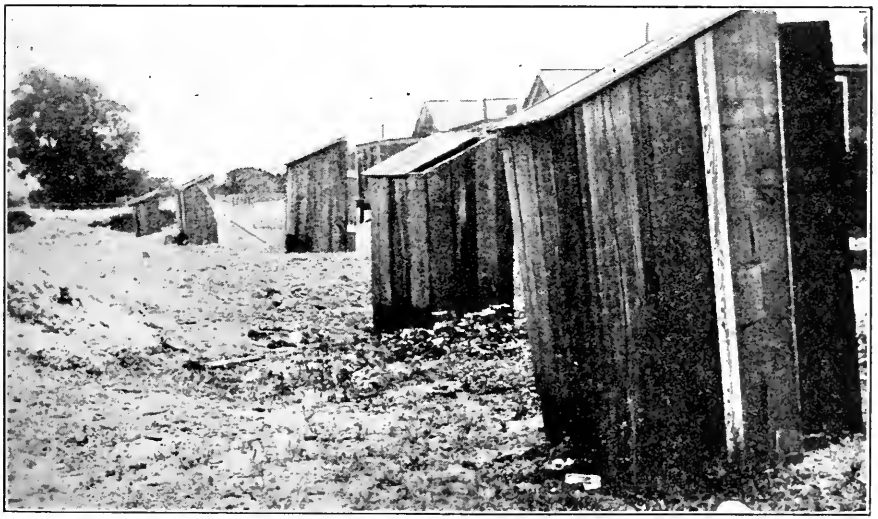


FIG. 1. North Carolina's battlefield. A battery of the enemy's automatic rapid-firing guns. Their firing range is at least 300 yards, and they are a particularly deadly weapon for the reason that they shoot in all directions with equal effectiveness.

nance of the privy, from which, or the lack of which, practically all fecal borne disease has its origin. It was with a full realization of this fact that the people of North Carolina, through their representatives, the members of the General Assembly, put themselves on record as desirous of protecting themselves and their neighbors from the ravages of fecal borne diseases, by passing a law in February, 1919, entitled, "An Act to Prevent the Spread of Disease from Insanitary Privies."

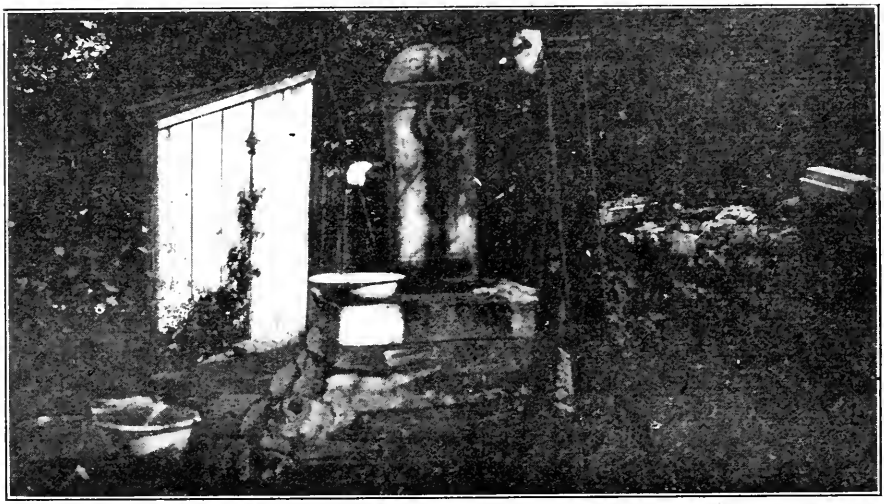


FIG. 2. A backyard "bum" planted and ready for destruction of the occupants of the home. This open surface privy is less than 10 feet from a surface drinking-water supply. It is perhaps the source of constant pollution of the drinking-water in this case.

What constitutes an insanitary privy? It is best exemplified by the open surface privy, which is very commonly used in our State. In this type of privy, which is usually open in back from the seat to the ground, the excreta is deposited upon the surface of the ground, where it can be reached and scattered about by flies, birds, domestic fowls and animals, and with every rain may be washed into the open well or spring, or into the adjoining garden, where vegetables become contaminated with the human filth. It is little wonder, then, that we have typhoid fever, diarrhea and dysentery, when we eat vegetables contaminated with human filth, when our wells and springs are polluted with it, and when the food upon our tables is accessible to flies that were bred and bathed in the human excreta of our own family or of diseased neighbors. Therefore, the open surface privy, which violates every law of sanitation, is a nefarious institution in any community, and must be entirely eliminated.

On the other hand, a properly constructed privy is one in which there is a vault, pail, or tank which receives and retains the excreta until properly disposed of. This receptacle should be surrounded and protected by fly-tight walls. Self-closing lids should always be provided, and kept closed, in order to keep the flies entirely away from the filth. In addition, due regard must be paid to the protection of drinking water supplies from contamination, either by waterproof receptacles, or by locating at such distance from the water supply, and down slope from the same, so that the dangers from seepage and drainage will be done away with.

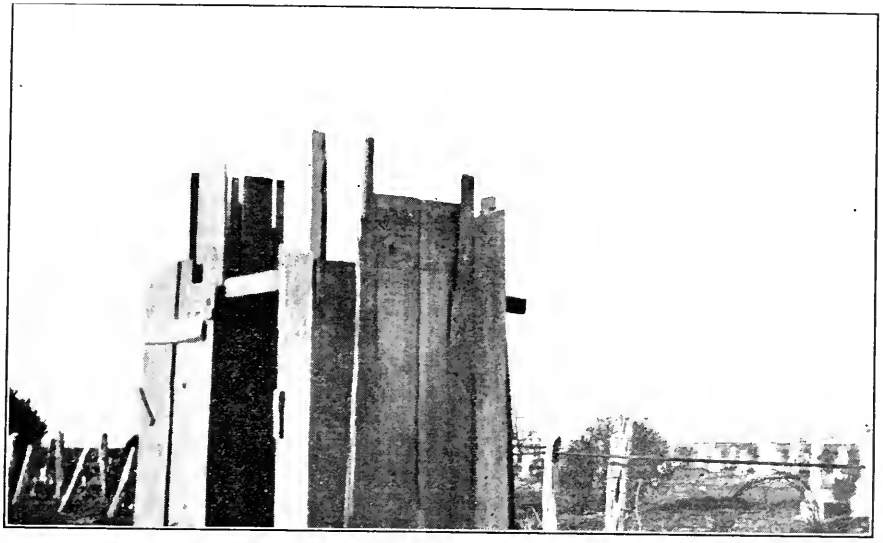


FIG. 3. Cause and effect—the open surface privy and near-by cemetery. Disreputable as this old privy is, many of the fair white stones in the adjoining cemetery rear their stately heads in memory of it.

A discussion of each individual type of privy will be entered into in the succeeding articles.

From the foregoing, one is promptly convinced of the simplicity of the principles involved in sanitary privy construction. But, while simple, they admit of no compromise. In addition, another factor quite as important as construction is that of proper maintenance, without which no privy will pass the inspection of the State Board of Health. Specific directions will be given along with the discussion of the various types of privies that may be used.

FIG. 4. The effect of winds, etc., on open surface privy filth. Soiled toilet paper was found floating in this tank, having been blown in from the near-by privies.

TYPES OF IMPROVED PRIVIES

Advantages and Disadvantages of Each

In order to assist the individual in the choice of the privy which he shall install, a discussion is here given covering each of the several types of improved privies. It will be seen that no one of them has a field of universal application. Each type has its limitations, and likewise each type has features which would especially recommend it, all depending upon the conditions existing in each case where the installation is to be made. But, by virtue of the several types of improved privies from which one has to chose, there is no condition that may arise, so far as we can see, that cannot be satisfactorily met and disposed of.

The types of improved privies are as follows:

1. Earth pit.
2. The box and can.
3. Tank construction employing the L. R. S. principle.
4. Chemical privies.
5. The double compartment concrete vault.
6. Miscellaneous.

The Earth Pit

By all means, the simplest of all improved privy types is that of the dry earth pit. Humble as it is, the principle upon which it is operated enjoys the distinction of being included among the rules laid down by Moses, the great giver of the law. The reference is found in Deuteronomy, chapter 23, verses 12 and 13, which is here quoted as follows:

"Thou shalt have a place also without the camp, whither thou shalt go forth abroad: And thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee."

The principle here involved is the immediate burial of the waste matter from the human body, which is in effect what is accomplished in a properly constructed and properly operated earth pit privy.

Advantages

1. It is the cheapest of all types. When the task in hand is merely one of reconstruction of an existing insanitary privy to make it correspond to the specifications for an approved pit privy, the expense for materials is small.

2. It possesses many of the qualities of a fool-proof privy. It cannot be too often reiterated that the construction of a privy is no more than half the task to be performed. The other half is maintenance. Certain types require very intelligent supervision, and lots of it, and without this their purpose may not only be defeated, but they may become public nuisances. This is particularly true of the box and can privy. When once properly located and constructed, the earth pit requires little attention beyond occasional removals to new pits, and it will give effective service even among ignorant and careless classes.

3. It may be quickly installed, and is frequently used in cases of emergency, or during the interim while higher types of waste disposal systems are under contemplation or under construction. In fact, this is the chief purpose for which they can properly be considered in towns and villages.

Disadvantages

1. The earth pit privy is the only type particularly influenced by geological conditions. In most places in the State of North Carolina the pit may be used with safety, but there are some places where it may be used only with caution or not at all. (a) In limestone regions where the stratified rock comes as close as ten feet from the surface. The danger is particularly great in cases where

the rock strata are tilted. Due to this fact, one is often deceived, and in locating the privy down slope from his well it sometimes happens that an arrangement is effected by which the privy filth may reach the well directly by traveling along sheets of rock that are tilted opposite to the slope of the surface earth. It is, therefore, essential to notice not only the surface slope, but the slope of the sub-surface rock strata as well. (b) Another type of earth in which pit privies may not be suitable is very low, swampy lands where the ground water level is very high. The danger here is that of overflowing at certain seasons of the year, due to an excess of ground water. Bear in mind, however, that water in a pit is no great disadvantage, so long as there is no danger of overflowing. But, due to the presence of water, there is frequently copious mosquito breeding in the earth pit. This may be the source of considerable annoyance, but is of no danger to health, as the malaria-bearing mosquito rarely, if ever, breeds in such a place. The difficulty is easily remedied by pouring in a half cupful of kerosene once each week during the months from April to October.

2. Judgment must be exercised in the location of the earth pit with respect to any well or spring. In no instance is it permissible except when located down slope from the water supply. Although the limit of safety will differ in different soils, the State Board of Health will not approve any earth pit privy that does not conform to certain requirements as to location. (See specifications.)

3. There is no provision for disposal of filth except burial on the spot where the building is located. When the pit fills to its capacity, a new pit must be dug and the building moved and placed over it. The intervals when this must be done vary in such wide limits that no reliable statement can be made on this point, but it is safe to say that this is oftener than desirable.

In towns and villages there are considerable disadvantages connected with the use of the earth pit. (a) There is great difficulty usually in finding sufficient space to permit of the location of the pit the required distance from a water supply. (b) It is more than possible that the congestion of a great number of privies into a small area will result in a supersaturation of the soil to a point where the whole water table will be endangered.

4. Although the pit privy is the most primitive method of waste disposal, it is likewise the crudest of all allowable types. It is the first step toward safe disposal of human waste matter, but is not held up as the ultimate and unqualified solution of the problem.

The Box and Can Privy

The box and can privy collects all the privy filth in a water-tight receptacle which is inclosed inside a fly-tight compartment. Thus it admirably satisfies the two principles of sanitary privy construction. But in its practical operation it is found, like all other types, to have its advantages and disadvantages.

Advantages.

Certain of these are similar to those of the pit privy.

1. Next to the pit privy, it is the cheapest to install, and as regards rapidity of installation it excels all others. When the boxes are supplied ready for installation a carpenter can install from 8 to 12 in a day.

2. This type is especially suitable to towns and villages having as many as 300 homes to serve. A community of this kind can be quickly and cheaply supplied with sanitary privies by handling the job on a wholesale plan. Some one takes the contract to build

the required number of boxes at a minimum figure. A carpenter is then employed by the job or piece to do the installations. In this way, uniform work is accomplished throughout, and the cost to the individual is reduced to the lowest terms. (Illustration, Quantity Production of Boxes.)

3. As with the pit privy, any building in good repair that will afford adequate shelter from storms and rain may be utilized in which to install it.

4. The box and can may be used in all places without regard to geological conditions or nearness to water supplies, though, of course, one would naturally avoid any unnecessary nearness to the source of drinking water.

FIG. 5. Quantity production of boxes for box and can privies

Disadvantages

1. Its capacity is very limited. The can holds only about nine gallons, and is therefore sufficient to serve the average family only about one week. On this account the box and can privy is not advisable for general adoption, since the average man does not like to go to the trouble of removing the can and burying the contents once each week. In practice, it is found that where this duty is to be performed by the user of the privy it is almost always neglected, resulting in overflowing of the can and consequently highly insanitary conditions. In general, it may be said that a well organized and operated scavenger service is absolutely essential to the success of the box and can privy. For this reason, the State Board of Health will consider the box and can plus a satisfactory scavenger service as an inseparable sanitary unit. The failure of either portion of the unit will bring condemnation upon the whole unit. Those contemplating such installations, therefore, should do so with great caution, as they will be under the constant liability of having to adopt some other more satisfactory system. The box-and-can-scavenger system, at best, is only a makeshift.

Such a scavenger service as mentioned above can hardly be expected in a community of less than 300 homes. In order to be effective, the scavenger service must visit each privy regularly once each week.

Practice has shown that the only satisfactory way to operate such a service is by means of cans belonging, not to the individual, but to the town or village, as otherwise a hopeless confusion would result from misplacing of cans. The scavenger man starts out on his rounds with a load of clean cans, which he exchanges as he goes for those containing privy filth. Having completed the exchange, he hauls the load of filled cans to a proper disposal station, where they are emptied, washed, and treated with a disinfectant solution, rendering them ready for use again.

2. It will be seen from the above description of the scavenger service necessary to operate a box and can system that it is a matter involving a continuous expense. This item varies greatly in different localities, from $1.25 a quarter up to $3.00 a quarter for each privy. At the present cost of labor and equipment it is very unlikely that the work could be undertaken for less than $1.75 to $2.00 a quarter in any locality in the State.

3. The privy contents are more accessible to flies than in any other type of privy. The scavenger men are usually a careless class, and commonly leave the tops of the boxes improperly adjusted after the weekly visits for removal of the privy cans. Again, the privy contents, being located in a box having a fair amount of light in it, are much more likely to attract flies through small cracks, or seats inadvertently left open, than similar contents in the bottom of a deep, dark pit or vault.

4. During the hot summer months the privy filth in the cans is frequently subjected to considerable heat in privies exposed to the sun, giving rise to a high degree of putrefactive fermentation, which will create very foul odors unless great care is taken to insure effective ventilation. Furthermore, in mid-winter the privy material sometimes freezes. This freezing is not such as to burst the cans, but adds to the difficulty of the scavenger in emptying them.

Tank Construction Employing the L. R. S. Principle

The so-called L. R. S.* principle in privy construction is based upon the liquefying action of certain bacteria in surroundings suitable for their growth and activity. When fecal matter is deposited into water in certain proportions and provision made for suitable length of storage therein, there is developed a growth of liquefying bacteria which convert the major portion of the privy solids to a liquid state. This principle is made use of in various privy vault designs, several of which are supplied to the market by commercial concerns. As good as any of the designs employing this principle is the North Carolina privy, which is illustrated on page 23. Special mention is made of this design for the reason that it is one that can be duplicated by any one experienced with concrete construction, at an expense somewhat less than required for the purchase of the commercial products. The individual should be warned, however, against assuming that this is a trivial undertaking. Until one is certain that he can carry through all the details of the work without making any mistakes it should best not be attempted.

The prime virtue arising from the use of the L. R. S. or septic privies is liquefaction of privy solids, thereby rendering the ultimate disposal of the privy contents much easier. All such privy designs must provide for some adequate drainage system to carry the liquefied material away from the privy and dispose of it in such a manner that it will not become a nuisance

*The term "L. R. S.", as here used, is derived from the names of three U. S. Public Health Service officers, Lumsden, Rucker, and Stiles, who were the originators of this type of privy construction.

or in any way endanger public health through contamination of food or drinking water supplies. Privy filth so treated is not purified to such an extent that careful provisions for safe disposal of the effluent can be overlooked. The public should be guarded against the arguments of ignorant or unscrupulous salesmen who would lead them to believe in the extreme purifying power of privies of this type.

The usual provisions for drainage from septic privies consist of subsurface tiling with uncemented joints to admit of underground distribution and absorption of the liquefied material. In soils where the absorption is poor it may be necessary to provide a filter trench.

There is room for considerable confusion as to the difference between a septic tank and a septic privy. Indeed, the contention may be raised by exponents of the septic privy that the terms are identical. While the action is similar in both cases, the practical operation of them is essentially different. In the meaning of the State Board of Health any sewage liquefaction tank utilizing for this purpose bacterial action and receiving its human waste matter by means of a water carriage system will be considered a septic tank. Such a liquefaction tank receiving its human waste matter direct will be considered a septic privy. It is obvious from this definition that the most essential difference lies in the fact that the septic tank receives an abundance of water automatically through flushing, while the septic privy receives none except that which is added at such intervals and in such amounts as the user sees fit. Since we have seen that certain proportions of water to privy filth are necessary to maintain this process in effective operation, it is plain that the maintenance liabilities of the septic privy are very great as compared to the septic tank. It is for this reason that this sharp distinction must be drawn, so as to make clear the reasons why it is imperative to include the septic privy within the provisions of the state-wide privy law.

Advantages

1. All but a small portion of the privy solids are reduced to a liquid state, which admits of ultimate disposal without handling in any way. This is a great point in favor of this type of construction, since no one relishes the task of handling privy filth. It must be remembered, however, that not all the privy solids are eliminated. A certain small residue remains, which settles to the bottom and is called sludge. This gradually collects to the point where the effectiveness of the privy is destroyed unless the sludge be removed. Ordinarily this will have to be attended to once in every three to five years.

2. The cost of maintenance is very small, involving only the cost of toilet paper, which is an essential, and the cost of cleaning at long intervals.

3. It is a type of privy that can be used in practically any soil or location, though the location of the disposal bed is governed by certain limitations. (See specifications.)

4. It has the advantage of permanence. It grows better with age, rather than deteriorating.

5. In towns and villages where sewerage is not an economic possibility in the near future the superiority of the septic privy over other types can hardly be questioned. Nowhere is this more true than in industrial villages.

Disadvantages.

1. The first cost is comparatively large.

2. Intelligent care is required. (a) Water must be added regularly in order to maintain an approximately constant water level. This will require from three to five bucketfuls

of water each week. (b) Only toilet paper may be used in the septic privy, as other materials will clog it up. Special care must be taken to prevent children and irresponsible persons from throwing rags, sticks, cotton waste, etc., into the tank. (c) Should a heavy mat of privy filth form on the surface, this must be broken up and allowed to settle.

3. For the reasons just stated, the septic privy is not, as a rule, suitable for use in public places, except where constant and strict supervision is maintained.

Chemical Privies

All types of chemical privies on the market are patented commercial products, none being home-made affairs. Like the septic privies, their object is liquefaction of fecal matter so that it may be the more easily disposed of. This object is accomplished, however, through chemical instead of bacterial action. Generally a special iron tank of sufficient size to allow for storage over a considerable length of time, six months to a year, is provided. The tank is then charged with a certain stated amount of caustic substance which has the power of liquefying fecal matter. When the tank is filled to its capacity the liquefied matter is removed either by pumping out into a tank wagon or by underground drainage into a filter bed or cesspool.

Advantages.

1. Like the septic privy, it has the advantage of adaptability to any location.

2. Like the septic privy, also, it makes ultimate disposal easy by means of liquefaction. In this connection, it has an added virtue by reason of the fact that its liquefying powers are greater than those of the septic privy.

3. In addition to liquefaction, there is a high degree of purification accomplished through the destruction of bacteria and the eggs of intestinal parasites.

4. A virtue possessed by this type of privy in greater extent than in any other type is that of deodorization.

5. The fly nuisance is reduced to a minimum in this type of privy.

6. It seems to be particularly adapted for use in schools, churches, and other public places.

7. It is better suited to inside installation than any other type of privy.

Disadvantages.

1. It is a commercial product which cannot be home-made. This is naturally a factor in increasing the first cost.

2. In their present state, the life of the chemical privy tanks is certainly not permanent.

3. The cost of maintenance is greater than that of the septic privy, but the trouble attached thereto is considerably less, provided the contents of the tank be carried off by drainage.

The Double Compartment Concrete Vault

A recent development in privy construction is the double compartment concrete vault. The principle herein involved contemplates the action that takes place in privy filth in the presence of some drying substance such as dry earth or lime, when allowed to stand for a period of three to six months. When such drying substance is used regularly and in sufficient quantity, the product, after standing for several months, is similar to well rotted manure, and offers little or no offensiveness in handling it. A vault of suitable size is built (see specifications) with a partition wall dividing it equally from front to back. Only one compartment at a time is used, the other being closed completely. When one compartment becomes filled it is closed up and the other opened for use. The collection in the

first is allowed to stand untouched during the period that is consumed in filling the second compartment. This takes from three to six months, averaging nearer three than six.

This type of construction has been extensively employed in extra-cantonment zones, and while still in the experimental stage to a certain extent, some very good results are reported from its use wherever it is properly attended to. At the present time there are studies in progress upon the use of caustic soda in these vaults instead of dry earth, the object being to effect both liquefaction and sterilization of the contents. Inasmuch as these experiments are unfinished, we cannot give further information upon them.

FIG. 6. Excellent seats, but faulty seat covers. Always be on guard for warping such as seen in this picture. This furnishes ample opportunity for flies to reach the privy contents.

Advantages

The advantages in the use of this type of privy are similar to those of the septic privy. It is a permanent construction; if properly cared for will render the contents inoffensive to handle; the privy can be used in any location; and can be home-made.

Disadvantages

These, likewise, are similar to those of the septic privy. The first cost is about the same as for the home-made septic privy, but the cost of maintenance is greater unless the cleaning is done by the user, as it requires attention at rather frequent intervals. The care to be exercised in its use must be constant, as the object of the privy is defeated unless a sufficient amount of dry earth or lime be used to take up the excess of moisture from the contents.

Miscellaneous

1. Chemical Commodes. These are nothing more nor less than box and can privies. A chemical substance is used which generally gives them the advantage of liquefaction, deodorization and sterilization. These properties are relied upon to make the chemical commode adaptable to use inside the house. As compared to the ordinary box and can privy, however, they are much more expensive to install, and more expensive to maintain,

the chemical alone costing about $7.00 a year for the average family. Another decided disadvantage connected with them is that they are not capable of being cared for by a systematized scavenger service, as is the ordinary box and can. The reason for this is the fact that they are generally indoor installations, and it would not be at all practicable for a scavenger man to have to go inside a house to remove privy cans. Thus, the chief advantage claimed for this type of privy becomes at once its chief disadvantage. However, an exception is made with reference to the chemical commode which will permit it to be used without being served by a scavenger system, as required for other box-and-can privies.

It is not the intention of the State Board of Health to place an unqualified disapproval upon this type of privy, but it is the purpose of the board to discourage the use of the chemical commode, for the reason that we know of but few instances where some other type of privy would not be more suitable.

2. Cesspools. A cesspool is a drainage basin, not having water-tight walls, for the reception and disposal of the effluent from a flush closet or chemical privy. The cesspool is commonly made by digging a hole 8 to 10 feet deep in the earth, which is usually walled up with stone or brick to prevent caving. Its essential object is to get rid of the fluid portion of such effluents, in order to avoid creation of a nuisance. In doing this, the effluent is taken up by the deep layers of the soil, thus subjecting the water-bearing strata to great danger of pollution.

The use of cesspools for disposal of human filth is prohibited, except for effluents from approved chemical privy vaults.

3. Sewerage Systems. A discussion of sewerage systems does not rightly belong in this Bulletin, which is devoted to privies, except to stress the fact that privies should be regarded only as stepping stones to sewer systems as an ultimate goal. In all towns where a sewer system is an economic possibility, serious consideration should be given to its installation, or to extension of the system where one exists. This is also true for isolated homes, but the case here is not so urgent as it is in towns or cities.

This matter will be taken up in some detail in a succeeding bulletin.

PLANS AND SPECIFICATIONS FOR APPROVED PRIVIES

In order that the work of remodeling and construction of privies, to meet with the requirements of the new privy law, may proceed without delay, plans and specifications, such as will be approved by the State Board of Health, are herein set forth.

I. General for All Types of Privies

1. Privy Building. (a) General. While the specifications for building

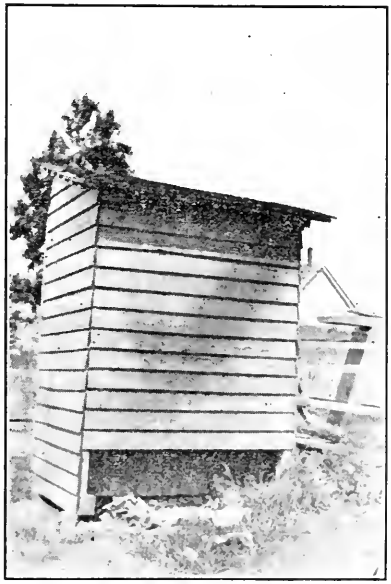


Fig. 7. A good privy building which is capable of reconstruction to meet the requirements for improved privies.

must of necessity be rather elastic in order to provide for utilizing as many as possible of the old buildings, it must be borne in mind that no type of privy can be maintained and operated in a satisfactory manner unless it is housed in a well constructed and maintained building of sufficient size and capacity. The building shall be so constructed as to afford privacy to the user in the acts of urination and defecation and protection from inclement weather conditions. It must be provided with a hinged door which can be closed and fastened on the inside.

Location. Location of the privy within convenient reach of the house is a matter of great hygienic importance.

(1) A properly operated privy does not have to be located in a remote corner. Get it as near the residence as is consistent with esthetic and sanitary principles.

(2) Provide a walk-way from back door to privy, so that the privy may be visited in bad weather or at night with ease. Such a walk covered with vines or lattice work is strongly recommended.

Disregard of these suggestions interferes with one's privy-going habit, thereby giving rise to habitual constipation, or aggravating it in those already affected in this way. It should be emphasized that constipation is perhaps the cause for more calls upon the physician than any other physical ailment.

(b) Utilization of Old Buildings. In a great many instances the old building may be repaired and used to house a new or improved privy. In Figure 7 there is shown an open surface privy, with building well constructed and in a fair state of repair. Such a privy, although the building is in good condition, is insanitary and dangerous to health, and would not be approved by the State Board of Health. Figure 8, however, shows the same building repaired and placed over a septic privy. With very little expense this privy, originally a menace to the community, was so improved that it may be used without danger of spreading disease, and will therefore pass inspection and be approved by the State Board of Health.

(c) Old Buildings Condemned. In Figure 9 there is shown a privy building which is poorly constructed and in such a deplorable state of repair as to render it past redemption for use with any type of privy. Such a building will in no case be approved by the State Board of Health.

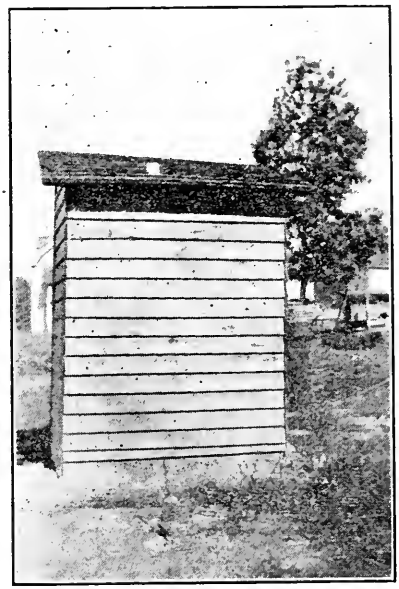


FIG. 8. The same building as shown in Fig. 7, after reconstruction, placed over a North Carolina septic privy.

(d) Construction of New Buildings. In case it is necessary to construct a new privy building, such a building as that shown in Figure 10 will be found inexpensive and easy to construct.

Material required to construct building shown in Figure 10, 4 feet square, rear wall 6 feet high, front wall 7½ feet high, is tabulated in Table 1.

TABLE 1.

Similar to Fig. 10.

	No. pieces	Dimensions	Bd. Ft.	Total	At $40.00 M.
Frame	6	2″x 4″x14′	56		
Frame	2	2″x 4″x12′	16		
Walls	19	1″x 6″x12′	114		
Roof	5	1″x 8″x12′	40		
Floor	4	1″x 4″x12′	16		
Seat	1	1″x10″x16′	14	256	$10.00
Nails					.15
Two pairs hinges					.60
Total					$10.75

Add for 4 yds. roofing material.

The minimum allowable dimensions of privy buildings shall be as shown in Table 2.

For each additional seat thereafter the length shall be increased 2 feet.

(e) Frame. The frame should be constructed of pieces at least 2″ x 4″ in cross section.

(f) Walls. The walls should be covered with lap weather boarding, tongued and grooved, or other closely fitting boards.

(g) Roof. The roof should be constructed of one inch boards, covered with shingles, tar paper, or other roofing material.

(h) Floor. The floor should be constructed of concrete, or of planks tongued and grooved or otherwise closely fitting.

(i) Housing Excreta. All cracks or

TABLE 2.

	Width	Length	Height Front	Height Back	Projection of Roof Front	Projection of Roof Rear	Projection of Roof Sides
For one seat	4′	4′	7′	5½′	6″	10″	6″
For two seats	4′	4′	7′	5½′	6″	10″	6″

Dimensions of box seat.

Overall width, front to back	Length hole	Width hole	Riser to front of hole	Back of hole to rear wall	Back of hole to hinge of lid	Length of lid
24″	12″	9″	3″	9″	6″	20″

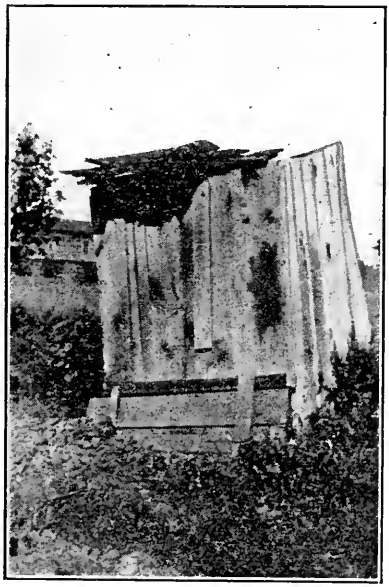


FIG. 9. The type of building which is incapable of reconstruction. Nothing but a new building can be considered in this instance.

holes in that part of the building which surrounds and houses the excreta shall be so covered and screened as to exclude flies from the filth.

(j) Box Seat.

(k) Green or unseasoned lumber should not be used for any part of the privy building. This is especially true of the box seat and other portions housing the excreta, because green lumber will shrink and produce cracks between boards, which is especially undesirable in this portion of the building.

2. Ventilation. The pit, can, tank, vault, or other receptacle for excreta shall be ventilated by means of a metal or wooden pipe, with a minimum cross-sectional dimension of 3″ for one hole, 4″ for 2 holes, and one additional ventilator, as above provided, for each additional hole or two holes, respectively, or the equivalent thereof. The pipe shall extend from

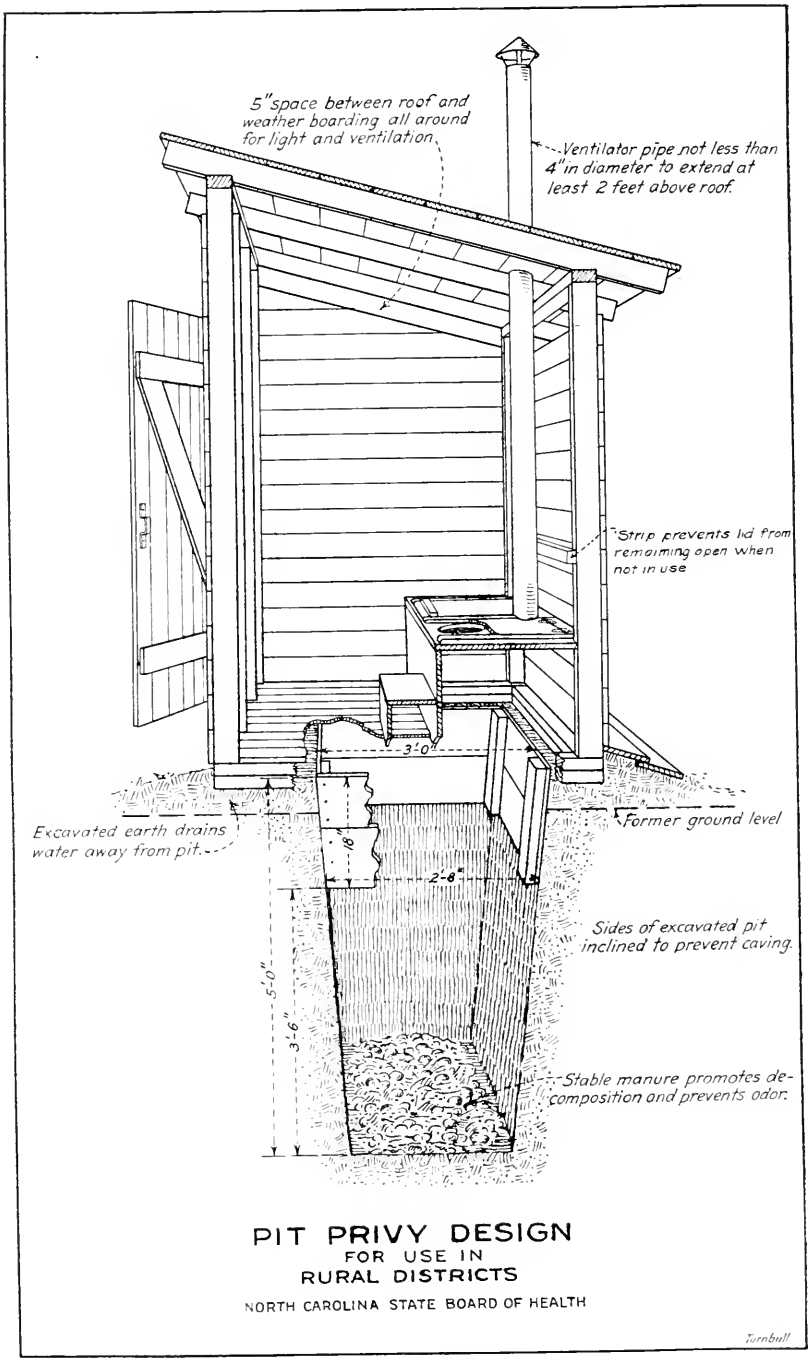

5"space between roof and weather boarding all around for light and ventilation
Ventilator pipe not less than 4"in diameter to extend at least 2 feet above roof.
Strip prevents lid from remaining open when not in use
3'0"
Excavated earth drains water away from pit.
Former ground level
18"
2'8"
Sides of excavated pit inclined to prevent caving.
5'0"
3'6"
Stable manure promotes decomposition and prevents odor.
PIT PRIVY DESIGN
FOR USE IN
RURAL DISTRICTS
NORTH CAROLINA STATE BOARD OF HEALTH
Turnbull

FIG. 10

a point below the seat to a point at least 2 feet above the roof, as shown in Fig. 10. The cross-sectional opening shall be screened to exclude flies, and covered with a vent hood.

3. Seat Covers. All lids shall be self closing, that is, so constructed that the lid will automatically fall and remain closed at all times when the seat is not occupied.

4. Surface Drainage. The ground surface adjacent to the privy walls shall be graded up to an elevation at least 6 inches higher than any point within six feet in any direction therefrom. Excavated earth may be used for this purpose, as in Fig. 10.

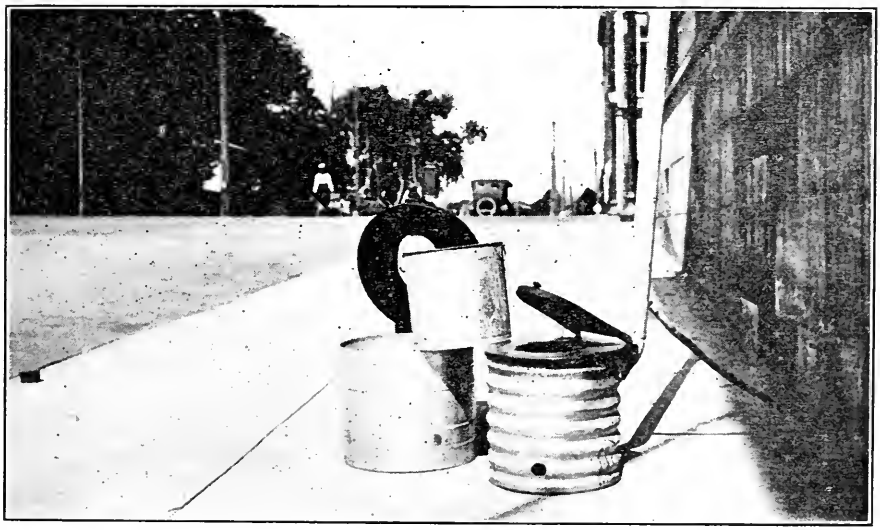


FIG. 11. Two models of galvanized iron boxes for box-and-can privy.

II. Miscellaneous

1. Cesspools. Cesspools will in no case be approved for the disposal of human wastes, except in connection with chemical privies.

2. Chemical Commodes. (a) Chemical commodes shall correspond to specifications of section IV, for box-and-can privies.

(b) Chemical commodes will be approved only on condition that dry caustic chemical substance, of a phenol coefficiency of at least 15, be used.

The following specifications are of necessity highly technical, and therefore of special interest only to those contemplating the installation of one of the types of privies set forth therein.

III. The Earth Pit Privy—Class 1

1. Location

(a) The earth pit privy shall be located at least 100 feet if possible, but never less than fifty feet, from any well, spring, or other source of domestic water supply, and upon ground sloping therefrom. Distances less than 100 feet may be maintained only with the approval of the State Board of Health.

(b) The earth pit privy shall never be located upon swampy ground. Exceptions to this rule may be permitted, at the discretion of the State Board of Health.

(c) The earth pit privy shall never be located where formations of solid or fissured rock lie closer than 10 feet below the ground surface. Distances less than 10 feet may be maintained only with the approval of the State Board of Health.

2. The Pit

(a) *Shape.* The pit shall be dug with sides sloped, as shown in Fig. 10, to prevent caving.

(b) *Dimensions.* The dimensions of the pit shall conform to the following table:

TABLE 3.

No. Seats	Depth Max.	Depth Min.	Min. Width Bottom	Min. Width Top	Min. Length
1	5′	4′	1′	18″	4′
2	5′	4′	1′	18″	4′
More than 2 seats			Increase 2′ for each additional seat.		

(c) *Curbing.*

(1) The pit shall be provided with a box curbing at least 18″ in depth, fitted closely to the sides of the pit as shown in Fig. 10.

(2) In loose sandy soils the pit shall be curbed or sheeted from top to bottom.

(d) Boards shall be placed over the ground surface on the rear side of the building, as shown in Fig. 10, to prevent caving caused by rain water running off from roof.

tice, not only the individual box-and-can installation, but also the system under which such installations are operated. Upon such disapproval by the State Board of Health, the said box-and-can installation or system shall be replaced by some other filth disposal facilities, as are approved by the said Board.

4. Can

The can shall be of 24 to 26 gauge galvanized iron, 15 inches in diameter and 15 inches deep. It shall be provided with bail or handles to facilitate removal.

5. Box

(a) *Dimensions.* The can shall be housed in a substantially constructed fly-tight box, as shown in Figs. 11 and 12, of approximately the following dimensions, inside measurements:

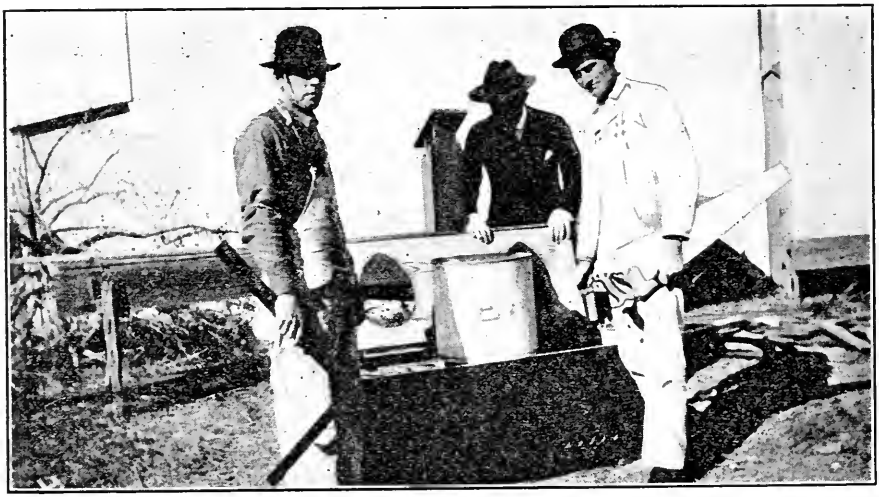


FIG. 12. A home-made double seat box-and-can privy.

IV. The Box-and-Can Privy—Class 2.

1. Installation

The box-and-can privy, except the chemical commode, may be installed and maintained only when an adequate scavenger system is maintained.

2. Location

The box-and-can privy may be located without reference to soil conditions or distance from source of water supply. Only chemically operated or commode can-privies may be located within a residence, school, or public building.

3. Removal

The State Board of Health reserves the right to disapprove at any time, with due no-

TABLE 4.

Shape	Depth	Min. Diameter
Circular	18″	18″
Rectangular	18″	
	Min. Width	Min. Length
Circular		
Rectangular	20″	20″

If it is desired to use two cans in the same privy, two boxes of the above dimensions, or one box twice the length, may be used.

(b) *Cover.* The top of the box shall be hinged or removable, as shown in Fig. 11, to facilitate removal of can.

V. L. R. S. Or Septic Privy—Class 3

1. Location

The L. R. S. or septic privy shall be so located that no portion of the drainage sys-

tem shall be less than 25 feet, if possible, from any well, spring, or other source of domestic water supply.

2. Tank

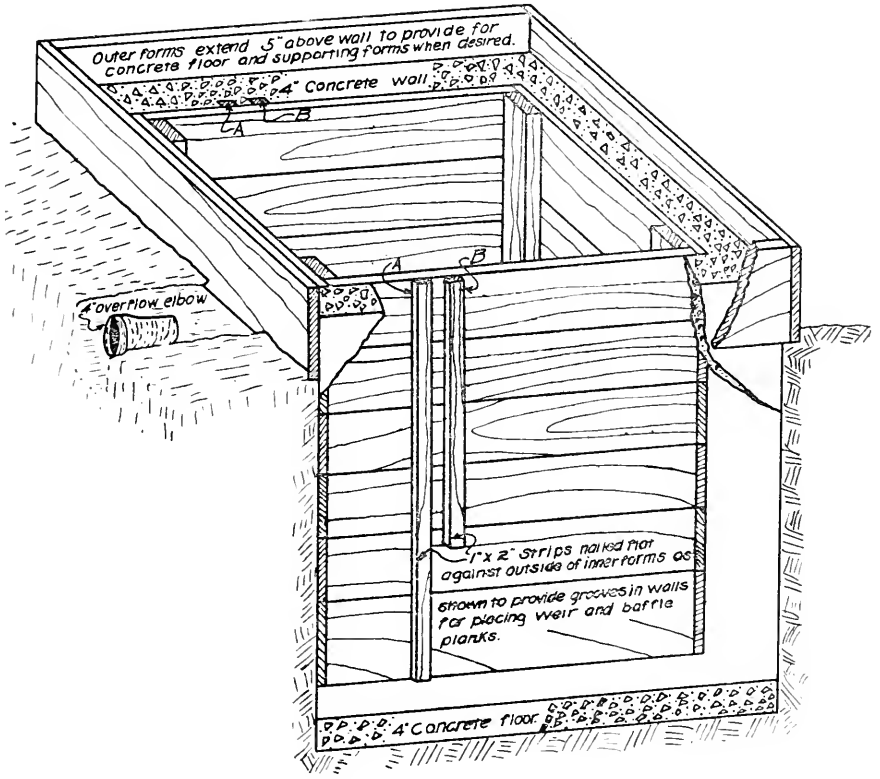
(a) *Form.* The tank shall be of two or more chambers, connected by baffled weir, overflow pipe, or orifice properly located, as shown in Figs. 14, 15 and 16, or two or more tanks may be connected together in series by means of overflow elbows and pipe, as shown in Fig. 17.

II. All cement tanks with walls under 4" in thickness shall be thoroughly waterproofed inside and out, or constructed of cement mixed with a standard waterproofing element.

WARNING: Beware, in making contracts with commercial producers of concrete tanks, to make sure that they include the following specifications:

a. *The richness of the concrete mixture.*

The purchaser should be on guard against inferior qualities of concrete construction, as



FORMS IN PLACE IN PIT
CONCRETE BOTTOM AND SIDEWALLS POURED

FIG. 13

(b) *Construction.*

(1) The tank shall be so constructed as to render it impervious to water and resistant to oxidation and decay.

(2) *Waterproofing Concrete or Cement Tanks.*

I. All concrete tanks with walls 4" and over in thickness shall be thoroughly waterproofed on the inside or constructed of cement mixed with a standard waterproofing element.

concrete constructions are by no means of equal value. The best mixture is one to one—that is, one part of cement to one of clean, sharp sand. Others used are one to two and one to three. Each grade may be used satisfactorily, but there is greater danger of leakage and breakage in tanks with the leaner mixtures.

b. All tanks should be guaranteed not to leak when laid down at the point of installation.

c. Leakage may be determined by filling tank with water before being placed in ground. All leaky tanks should be replaced or repaired before being accepted.

(c) *Capacity.* The minimum volumes and dimensions shall conform to Table 5, which is based upon the assumption that the average family consists of five persons.

3. Drainage System

(a) *Methods.* The effluent from the septic privy may be discharged into a system of tile or cement drains, laid as close to the surface as is consistent with protection of drains.

(b) *Length of Drain.* Where the effluent is disposed of through subsurface drainage lengths of drain lines in accordance with Table 5 shall be provided.

TABLE 5.

Minimum Allowable Capacities and Dimensions of Septic Privy Tanks.

No. Families	Volume	Sludge Chamber Effective Depth	Distance Water Line to Cover	Effluent Chamber Volume	Drain Length
1	100 gal.	30″	12″	45 gal.	20′
2	175 gal.	30″	12″	50 gal.	40′
3	250 gal.	36″	12″	55 gal.	50′
4	300 gal.	36″	12″	60 gal.	60′

(1) *Joints.* The drain lines shall be laid with abutting joints.

(2) *Soil Distribution.* In order to insure distribution and absorption, in clay and other non-porous soils the drains shall be laid on a bed of coarse gravel or cinders, 6″ in depth, to the full width of the trench. In case the drain is laid in sand, the gravel or cinder bed may be omitted.

North Carolina Privy

In Fig. 14 is shown the North Carolina L. R. S. privy. This type of privy is designed for home construction. The tank is simply a rectangular concrete box provided with baffleboard, weir and overflow, constructed in a pit dug to the proper dimensions.

To build this tank, first dig a hole 5′-0″ long, 3′ 8″ wide, and 3′ 9″ deep. Then mix and pour a 4″ layer of concrete in bottom of hole for the floor. After this concrete has become set, roughen a 4″ strip all the way around the edge, to give bond between floor and side walls. Place forms and pour side walls, as shown in Fig. 13. Cleats B, Fig. 13, are nailed to sides of forms, 16 inches from outlet end, to make grooves in walls for placing of baffles, as shown in Fig. 14. Cleats A are nailed to the sides of forms 12″ from the outlet end to make grooves for placing weir. Concrete should be mixed in proportions of one part of cement to four parts of sand and gravel.

Make weir 24″ high, make baffle 2′-11″ high, extending from bottom of groove B to top of tank, as shown in Fig. 14.

When bottom and walls are poured and forms removed, plaster the entire inner surface with 1 to 1 mixture of cement and sand. Test tank for leaks, before placing cover.

Starting at the outlet elbow, dig trench about 20′ long. Beginning at and joining with outlet elbow, lay 4″ drain the full length of ditch, in accordance with specifications for drains.

This privy tank has a capacity of 180 gallons in the sludge chamber, and 60 gallons in the effluent chamber.

In case one does not care to construct his own septic privy, there are various commercial types employing the same principle, which may be purchased at reasonable prices. Some general types are shown in Figs. 15, 16, and 17.

VI. Chemical Privies—Class 4

All chemical privies of the vault type installed after July 31, 1919, shall correspond to the following specifications:

1. The Bowl

The bowl must be of good grade vitreous china, or such material as may hereafter be approved, plain and sanitary, with connection for vent pipe at the top, equipped with good grade of seat so constructed as to insure durability.

TABLE 6.

Materials Required to Construct North Carolina Septic Privy

Material	Quantity	Estimated Cost
Lumber for forms	64 bd. ft.	$ 5.00
Board 2″x12″x16′ for baffle and weir	32 bd. ft.	1.50
One 4″ glazed elbow or quarter bend	1	.50
4″ drain	20 ft.	1.50
Sand and gravel	1 cu. yd.	2.00
Cement	7 sacks	7.00
Total		$17.50

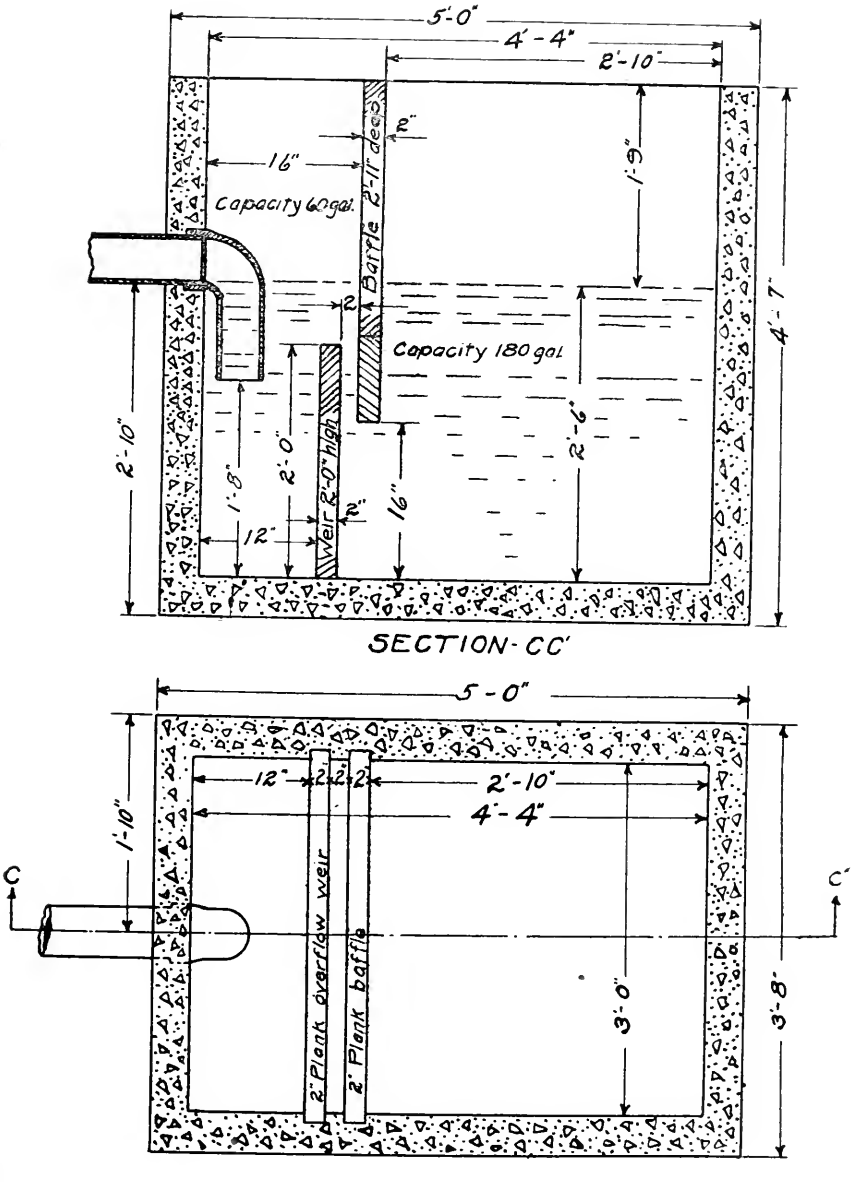

5'-0"
4'-4"
2'-10"
2"
16"
Capacity 60 gal.
Baffle 2'-11" deep
1'-9"
4'-7"
2"
Capacity 180 gal.
2'-10"
1'-8"
2'-0"
Weir 2'-0" high
2"
16"
2'-6"
12"
SECTION-CC'
5'-0"
1'-10"
12"
2-2-2
2'-10"
4'-4"
C
C'
2" Plank overflow weir
2" Plank baffle
3'-0"
3'-8"
PLAN
NORTH CAROLINA SEPTIC PRIVY

FIG. 14

2. Connecting Tube

(a) The connecting tube is to be made of the best available material to withstand corrosion and effect of urine, such as monel metal or lead, each properly insulated from iron, enameled iron, or a metal coated with non-corrosive, non-absorbent material.

(b) The tube must extend into the tank a sufficient distance to prevent urine from coming into contact with the tank.

(c) The tank tube must not be less than 11 inches outside diameter.

3. Tank

(a) The tank must be made of iron or copper bearing steel of the best grade, equal to that made by the three leading American manufacturers, and must be not less than fourteen gauge thickness, or such material as may hereafter be approved, and provided with an agitator which will effectually mix the entire contents. The capacity is to be not less than 125 gallons per bowl. The shape must be cylindrical or half-round. In steel tanks all joints must be welded.

(b) Openings in the tanks for bowls are to be spaced not less than thirty inches from center to center.

(c) All steel tanks are either to be furnished with sufficient burlap and tar or asphaltum paint free from acid or water to cover the tank with two coats of the former and three of the latter on installation, or be thoroughly covered at the factory with some approved coating that will unquestionably furnish equal protection.

4. Ventilating Pipes

(a) Ventilating pipes must be so designed and arranged as to give proper ventilation regardless of atmospheric conditions. The minimum vent pipe to be used on single bowls and urinals is four inches, and pipes are to be made correspondingly larger as bowls are added for multiple installations.

(b) All ventilating pipe is to run inside of the building so far as possible and emerge at the ridge of the roof. If impossible to emerge at the ridge or in close proximity to it so as to obtain unobstructed draft without long extension of pipe above the point of emergence from roof, a suitable ventilator is to be provided to insure good ventilation. Ventilation into the smoke flue of a chimney is not permitted.

(c) In placing pipes, right angled turns must not be used, and an angle not exceeding 45 degrees is to be worked to wherever possible.

(d) Neither horizontal runs nor square pipes will be permitted.

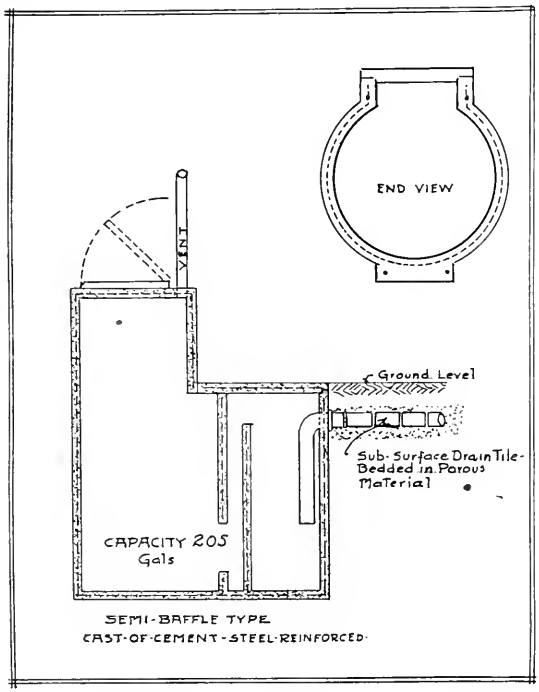


FIG. 15. Commercial septic privy, employing baffle and weir in its construction.

5. Drain

The drain valve opening is to be not less than three inches in diameter. The drain pipe leading from the drain valve is to be not less than four inches in diameter.

6. Installation

(a) The distance between the top of tank and bottom of bowl must not be less than 18 inches or more than 48 inches.

(b) The opening for the clean-out and for the manhole must be readily accessible either inside or outside of building, outside when the tank is to be cleaned by pumping or dipping.

(c) All joints leading to and from the tank are to be made tight.

(d) The installation must be made so as to insure the tank ample protection against frost.

7. Drainage

Drainage may be provided as follows:

(a) *Tile.* When absorption tile drainage is used, sufficient lengths of 4" abutted joint tile lines shall be provided to receive and readily dispose of the entire tank volume.

(b) *Cesspool or leaching well.* Whenever the cesspool or leaching well is used, a capacity equal at least to the capacity of the tank should be provided, with a drain leading thereto from the tank, the fall of which must be at least one-half inch to the foot. The construction of the cesspool or leaching well and its distance from the tank must be made to conform to the conditions that prevail in the case. However, a cesspool or leaching well is not to be used when there is any possibility of contaminating drinking water through its use.

8. Chemical

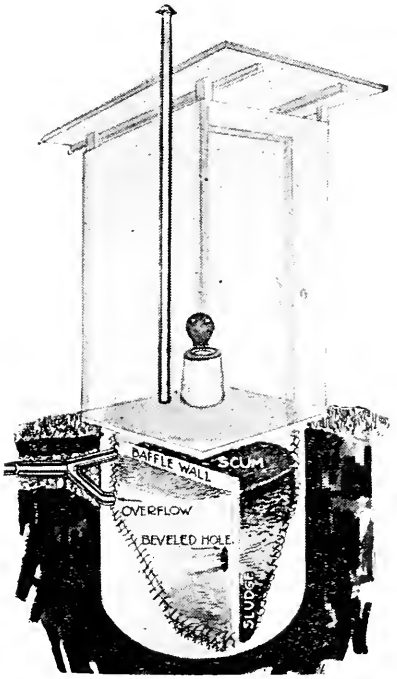
The chemical used shall be a dry caustic chemical of standard commercial quality with a phenol coefficiency of at least 15, and a minimum amount of 25 pounds of chemical of this standard per bowl is to be used.

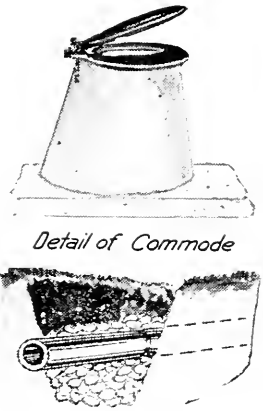
9. Service and Guarantee

(a) Each manufacturer is to guarantee his equipment against defects in material and workmanship for at least two years, and that it will operate effectively provided it is installed and used in accordance with his directions.

(b) The manufacturer is to be notified of defects, if any exist, and is to be given opportunity to make them good without charge to the purchaser.

(c) In case difficulty arises which is clearly due to the fault of the purchaser either in installing or operating, he is chargeable for the service at regular rates.





Note. Beveled hole in baffle.
Two overflow openings flush with tank.

FIG. 16. Commercial septic privy, employing baffle and orifice in its construction.

The general principles of construction of the vault type chemical privy are shown in Fig. 18.

All chemical privies installed prior to July 31, 1919, which do not correspond to the above specifications will be allowed to remain only with the approval of the State Board of Health.

VII. Double Compartment Concrete Vault—Class 5

The double compartment concrete vault, for family installation, shall be constructed in accordance with U. S. Public Health Service plans shown in Fig. 19, of such dimensions as shown therein.

The double compartment concrete vault may be constructed either with plank floor and seat risers, as shown in Fig. 20, or with concrete floor and seat risers, as shown in Fig. 21.

SUMMARY OF RULES FOR MAINTENANCE OF DIFFERENT TYPES OF PRIVIES

Certain features of maintenance are common to all types of improved privies, and therefore need to be stated only once.

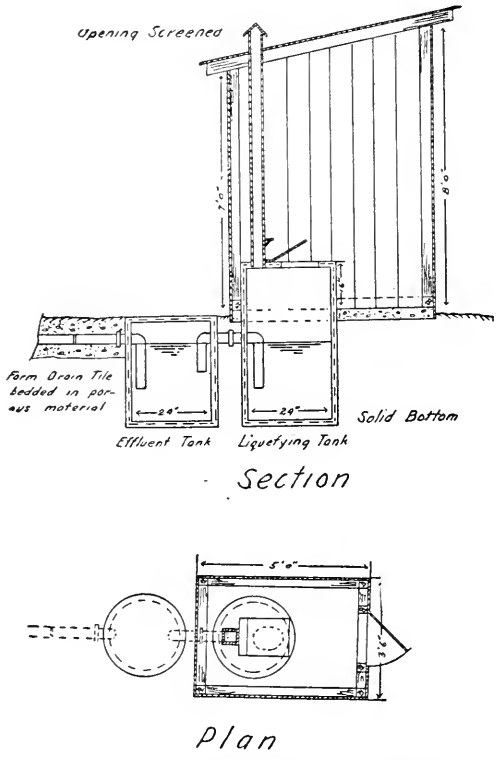


FIG. 17. Commercial septic privy consisting of two tanks connected by overflow pipe.

In Fig. 20 is shown a double compartment concrete vault with concrete poured, forms drawn, and anchor bolts in place. Note grooves in top of center wall and inner sides of side walls. These grooves are for the purpose of making union of concrete floor with walls.

In Fig. 21 is shown concrete work of vault finished, with floor and risers for seats in place.

General Rules

1. The State Board of Health will not approve any type of privy unless it is housed in a building that will afford a reasonable degree of protection from bad weather conditions.

2. The walls, floor, and seat of the privy, and the ground immediately

adjacent to the building, must be kept in a clean and decent condition. The sanitary inspector will not compromise on these points.

3. Never allow chickens or other animals to harbor in the building.

4. Privy seat covers shall be kept closed at all times when the seat is unoccupied. This should be set down as the golden rule, as all the objects of fly-proof construction are frustrated if this point is neglected. In certain types of privies, of course, this is decidedly more essential than in others, but no exception can be made in any case.

5. Make frequent inspection of the seat and seat covers to be sure that there is no warping or shrinking of planks that would give access to flies. (See fig. 6, Faulty Seat Covers.)

6. Screen wire coverings of vent holes shall be maintained in such a state of repair as to exclude flies, at all times.

7. That portion of the privy building which houses the privy filth shall be maintained at all times in such state of repair as to exclude flies.

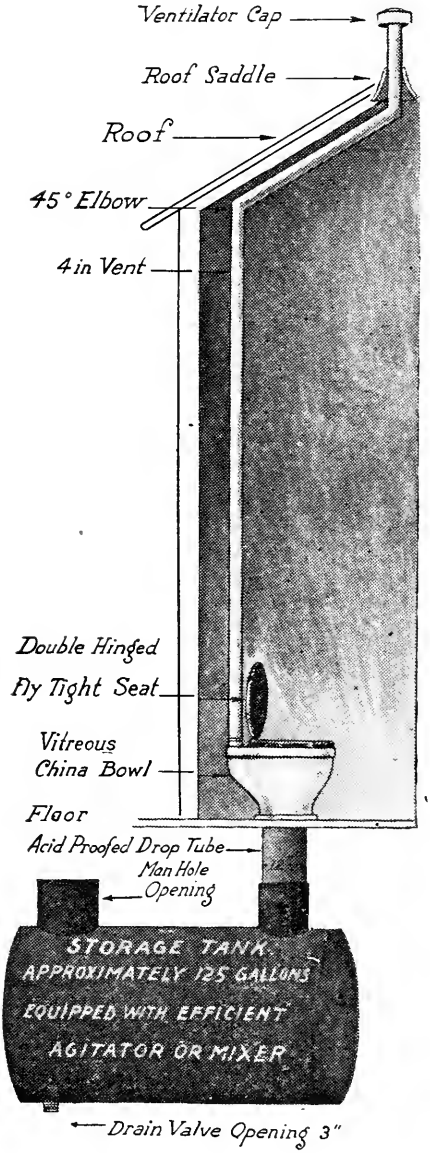


FIG. 18. Vault type chemical privy.

The Earth Pit

1. When the privy contents reach within 18 inches of the top of the pit the building must be removed to a new pit and the old pit completely filled with earth.

2. The pit must never be allowed to fill with water to overflowing.

3. If the pit should cave in at any time it must be promptly repaired.

4. During months from April to October, sprinkle cupful of kerosene each week into the pit to prevent fly and mosquito breeding.

The Box and Can Privy

1. The can must never be allowed to become filled closer than within four inches of the top. A routine practice of removal and emptying of the can regularly once each week should be adopted, no matter whether or not the can be filled to the limit.

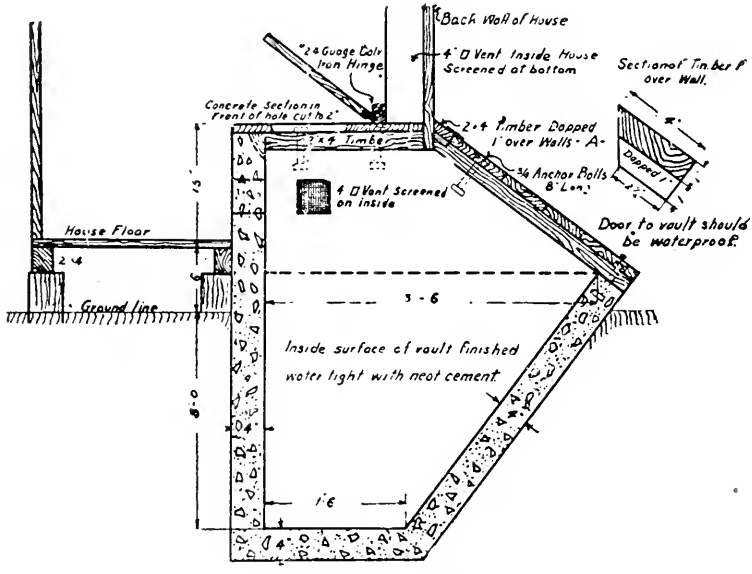
2. The privy filth must be disposed of in a sanitary manner (a) by emptying into sewer main, or (b) by shallow earth burial, 6 to 12 inches below the surface.

3. Cans must be reasonably clean before being replaced in the privy box.

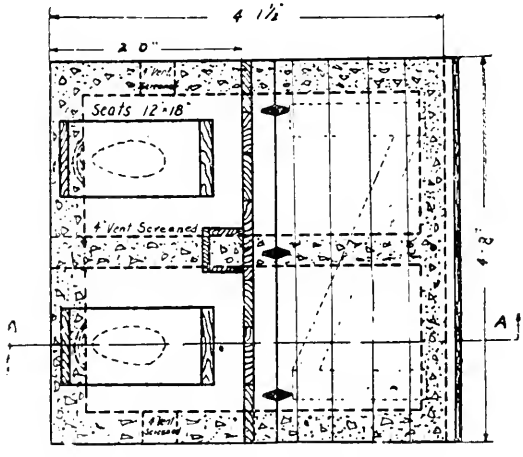
4. The can is for the reception of nothing but human filth and the necessary toilet paper. Newspapers, rags, sticks, cotton waste, or any other waste or offal must not be deposited in cans, as they clog the sewer system when emptied into the disposal plant.

5. By all means avoid the use of lime in the cans, as this destroys them in a very short time. A good can properly handled will last about two years or more. If a deodorant is desired, use some one of the coal tar disinfectants.

6. See that the top of the box, after each removal of the can, is properly adjusted so as to exclude flies.



VERTICAL SECTION



HORIZONTAL SECTION

FIG. 19. Double compartment concrete vault shown in sections.

The L. R. S. or Septic Privy

1. The working capacity of the privy must not be overloaded. The minimum standard is an active capacity of 20 gallons per person in the sedimentation chamber, provided the total active capacity of the sedimentation chamber be not less than 100 gallons.

2. A depth of liquid in sludge chamber equal to the designed working depth of said chamber shall be maintained at all times. That is, if the tank is so designed and constructed that when full the depth is 30", or other measurement, as the case may be, then that depth shall be maintained at all times. This may be accomplished by adding water at regular intervals, usually 3 to 5 bucketfuls a week.

3. Encrusted collections of fecal matter on the surface must be broken up by addition of water.

4. The operation of the septic privy can be totally destroyed in a very short time unless the following caution is heeded: Allow nothing but fecal matter, clean water, and the necessary toilet paper to be deposited in the tank.

5. Use no disinfectants or deodorants, as they will destroy the bacterial action.

6. The collection of sludge must be removed from the sedimentation or sludge chamber whenever there is reason to believe that it is hindering the operation of the septic process. This matter should be investigated at least once in every three or four years.

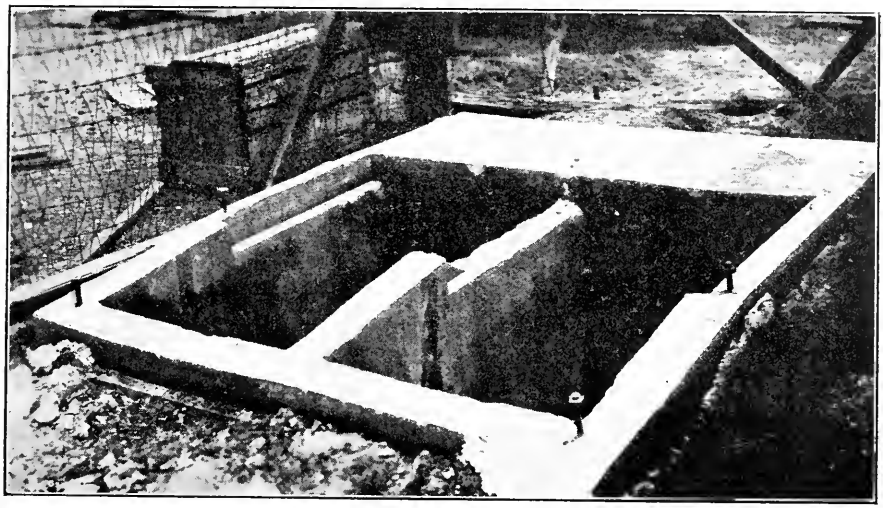


FIG. 20. Double compartment concrete vault, with top open.

The Chemical Privy (Vault Type)

1. This type of privy must not be used without chemical substance of proper quality and quantity.

2. The tank must be completely emptied before each charge of chemicals.

3. Each charge must consist of at least 25 pounds of caustic chemical, as described in the specifications, to each 125 gallons capacity or approximation thereof.

4. The chemical must be completely dissolved before placing in the tank.

5. The agitator must be worked after each time the privy is used.

6. The contents of the tank must never reach into the tube connecting the bowl and the tank.

7. The inside of the bowl must be kept free from fecal matter.

Caution: In handling the dry chemical do not allow it to come in contact with the skin. It is well to tie two thicknesses of handkerchief over the nose and mouth to prevent irritation of the air passages from the caustic dust. Should any of the chemical come in contact with the skin or clothing through splashing after being dissolved, or otherwise, wash with water and apply vinegar, lemon juice, or some other mild acid.

Chemical Commodes

1. For each five gallons capacity in the can or approximation thereof, one pint of caustic chemical as described in the specifications must be placed in the can, after each emptying of the contents.

2. The caustic chemical referred to in Rule 1 is dry caustic and must be completely dissolved in water before placing in the privy can. About three quarts of water to one pint of dry caustic is required.

3. The can must never be allowed to fill to within less than four inches from the top.

4. The privy contents must be disposed of in a sanitary manner, either by emptying into a sewer or by shallow earth burial.

5. The can must be reasonably clean before being replaced into the commode.

6. Do not use lime in the can.

7. See that the top of the commode, after each removal of the can, is properly adjusted so as to exclude flies.

8. The presence of offensive fecal odors and of fly breeding, or absence

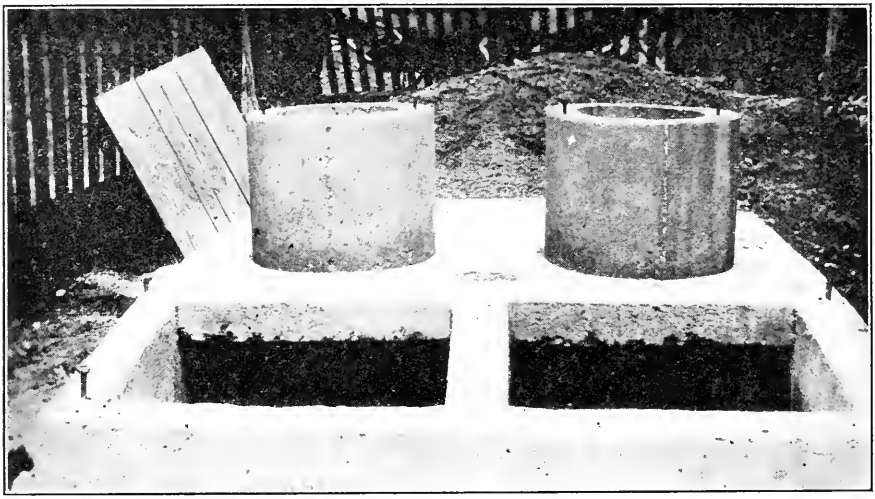


FIG. 21. Double compartment concrete vault, with top and seat risers in position.

The Double Compartment Concrete Vault.

1. Always allow one compartment to stand idle while the other is being filled, allowing storage of privy contents in one compartment through the period of filling the other.

2. Use enough dry earth or other substance to absorb the moisture from the privy contents.

3. Remove stored privy substance at intervals indicated by the filling of the compartment in active use.

of liquefaction of fecal matter in the can are evidences of improper maintenance, and of violation of the above rules.

Caution: In case of splashing the chemical upon the skin or clothing, wash with water and apply vinegar or lemon juice.

ECONOMICS OF PRIVY CONSTRUCTION AND MAINTENANCE

In the following schedule the various elements of cost for privy construction and maintenance are estimated as closely as possible and extended over a period of five years. These figures will naturally vary more or less widely on account of differences in cost of material and labor in different localities. This is especially true of labor, inasmuch as there is usually no well established standard prices for this class of work. The greatest factor of variation, however, is whether the work required for construction or maintenance is done by hired labor or by the owner of the privy himself. The calculations that have been made in the accompanying table presuppose in each instance that the labor necessary is to be hired. Whenever the work is done by the owner of the privy, labor deductions may be made from the total five year cost.

It will be further noted that the figures in the table make no provision for the building itself, the privy filth receptacle alone being considered. In the majority of cases no extra cost for this purpose will be necessary, as any existing building in a good state of repair will suffice. However, in case a new building is desired or necessary, the average cost, figured on the basis of specifications given on page 17, will amount to about $21.00, divided as follows: Cost of material, $11.00; cost of labor, $10.00.

MACHINERY AND METHODS FOR ENFORCING THE LAW

In accordance with the provisions of the law, the organization responsible for its enforcement consists of the following:

1. The Secretary of the State Board of Health.

2. Bureau of Engineering and Inspection:

(a) Chief of the bureau in charge of the work. (b) A corps of sanitary inspectors to carry out the details of the law.

ANALYSIS OF COST

Type of privy	First Cost				Maintenance Cost 5 Years				
	Total yearly cost	Cost of material	Cost of labor @ $3.50 a day	First cost complete	Cost for cleaning	Cost for operating material	Estimated cost repairs	Total maintenance cost 5 years	Total cost first 5 years
Earth pit	$ 4.50	None	$ 7.50	$ 7.50	$15.00	None	None	$15.00	$ 22.50
Box and can	11.05	$ 9.00	1.75	10.75	40.00	None	$ 4.50	44.50	55.25
L. R. S., North Carolina	7.70 to 10.10	17.50 to 40.00	17.50	35.00 to 47.00	3.50	None	None	3.50	38.50 to 50.50
L. R. S., commercial	12.10	50.00	7.00	57.00	3.50	None	None	3.50	60.50
Chemical	28.00	85.00	10.00	95.00	Insignificant .	45.00	....	45.00	140.00
Double compartment concrete vault	15.20	16.00	10.00	26.00	50.00	....	....	50.00	76.00

It will be noted that the law became effective upon the date of its passage, namely, February 24, 1919. Its requirements, therefore, are present as well as future. But in order to give every one ample opportunity to comply with it, the State Board of Health is deferring the date for insisting upon compliance with the law to October 1, 1919. Upon that date the inspectors will be put into the field.

The inspector, on visiting the home, will find the privy either sanitary or insanitary.

Privies Found Sanitary

The procedure is simple in such instances. The inspector posts the State privy license number upon such privy, after having collected the license fee of forty cents.

Privies Found Insanitary

Such privies will be found insanitary, due either to faulty construction or faulty maintenance. In such instances the responsible parties will be subject to immediate prosecution, but it will be within the discretion of the sanitary inspector to follow one of two courses, as follows:

1. If reasonable evidence is furnished to show that the responsible individual is acting in good faith, but for some unavoidable reason has been unable to meet the requirements, the inspector will be given authority to waive prosecution temporarily. In this case the inspector will collect the license fee as usual, and affix to the privy a sign bearing the words, "License pending." Upon the next visit of the inspector he will naturally expect the requirements to have been met, at which time few, if any, excuses for non-compliance will be considered.

2. All other privies insanitary in construction or maintenance will be placarded with the sign, "Insanitary: Unlawful to Use." The inspector will specify the date after which this notice becomes effective.

Procedure With Privies, "Insanitary: Unlawful to Use"

1. Where condemnation is due to defective construction, the owner will be held legally liable.

2. Where condemnation is due to defective maintenance, the user will be held legally liable.

Procedure, Residence Without a Privy

1. The Owner. It is a misdemeanor to maintain a residence coming within the provisions of this law until such time as it shall be provided with a sanitary privy, of a type approved by the State Board of Health.

Approved and Disapproved Privies

It is a responsibility upon the owner of a residence coming under the requirements of this law to satisfy himself that the type of privy which he installs is one having the approval of the State Board of Health. If it is not, the requirements of this law are not satisfied, and the case will be handled as if there were no privy at all.

It must be emphasized that the inspector will be a busy man. He will have no time for parleys on points either of construction or of maintenance. The specifications on these points, as set forth in this Bulletin, are so clear that any one who reads them can have no difficulty in settling for himself the question of responsibility in any case. The inspector will, therefore, be charged by the State Board of Health to apply the requirements of this law to the responsible party or parties without argument or hesitation.

DO IT NOW

This is the day to begin construction of a sanitary privy. Read this Bulletin and learn how it is done

The Health Bulletin

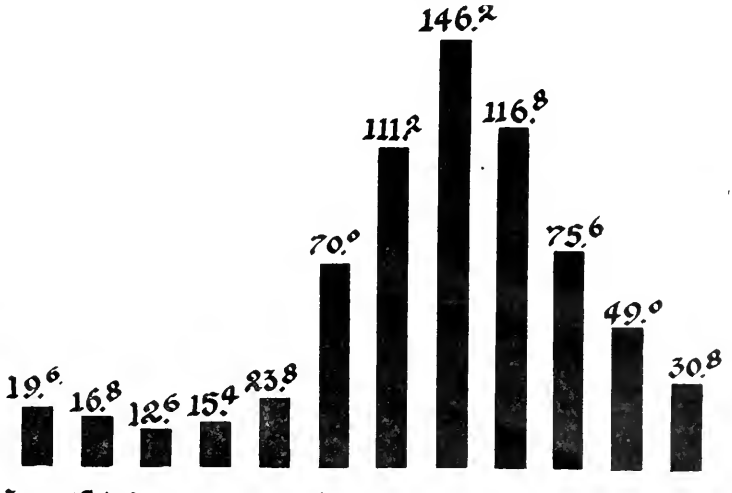
Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Vol. XXXIV AUGUST, 1919 No. 8

AVOID TYPHOID—BE VACCINATED

Average Monthly Variation In Number of Typhoid Deaths in North Carolina During the Last Five Years.



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FREE PUBLIC HEALTH LITERATURE

The State Board of Health has a limited quantity of literature on health subjects for free distribution. If you are interested in one or more of the following subjects, or want same sent to a friend, write to the State Board of Health for free literature on that particular subject.

Whooping-cough
Hookworm Disease
Public Health Laws
Tuberculosis Laws
Tuberculosis
Scarlet Fever
Infantile Paralysis
Care of the Baby
Fly Placards
Typhoid Placards
Tuberculosis Placards
Clean-up Placards
Spitting Placards
Sanitary Privies
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Teeth
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German Measles
Typhoid Fever
Diphtheria
Pellagra
Constipation
Indigestion
Infant Care
Child of Pre-School Age
Corner Stone of Child's Future
Pre-Natal Letters

SEX HYGIENE BULLETINS

Set A—For Young Men

A Reasonable Sex Life for Men.
Sexual Hygiene for Young Men.
Vigorous Manhood.
Smash the Line. (The case against the restricted district.)
List of Reliable Pamphlets.

Set B—For Public Officials and Business Men

Public Health Measures in Relation to Venereal Diseases.
Venereal Diseases—A Sociologic Study.
Smash the Line. (The case against the restricted District.)
The Need for Sex Education.
A State-Wide Program for Sex Education.
List of Reliable Pamphlets.

Set C—For Boys

Vigorous Manhood. (Especially for boys 12 years of age and over.)

Note.—For boys under 12, see "When and How to Tell the Children" (Set D); portions of "Vigorous Manhood" also may be read to younger boys. Boys 15 years and over may be given Bulletin "A Reasonable Sex Life for Men" (see Set A), at the discretion of the parent.

Sexual Hygiene for Young Men.
List of Reliable Pamphlets.

Set D—For Parents

When and How to Tell the Children.
Venereal Diseases—A Sociologic Study.
The Need for Sex Education.
List of Reliable Pamphlets.

Set E—For Girls and Young Women

Your Country Needs You. (Especially for girls 11 years of age and over.)

Note.—For girls under 11, see "When and How to Tell the Children" (Set D); portions of "Your Country Needs You" also may be read to younger girls. Girls 15 and over may be given "The Nation's Call to Young Women" at the discretion of the parent.

The Nation's Call to Young Women.
List of Reliable Pamphlets.

Set F—For Teachers

The School Teacher and Sex Education.
Sex Education in the Home and High School.
Venereal Diseases—A Sociologic Study.
Smash the Line.
The Need for Sex Education.
List of Reliable Pamphlets.

Any of the above will be sent without charge. Please send for only those bulletins for which you have definite use.

EDWARDS & BROUGHTON PRINTING CO., RALEIGH, N. C.

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. XXXIV AUGUST, 1919 No. 8

EDITORIAL

POINT OF VIEW

"Point of view" according to the dictionary means "the relative position from which anything is seen or any subject is considered." The definition, however, does not tell how important a thing point of view is: does not intimate that a correct point of view makes a man's work useful while a false point of view may doom all his efforts to failure. Public workers with a broad and sympathetic point of view do much to build up and improve living conditions in the communities in which they labor, while officials and others who do not grasp the importance of their positions may handicap progressive movements which would prove a blessing to mankind. It all depends on the breadth of his point of view whether a man is a help or a hindrance and whether his work is worth while to himself and to his neighbors. In North Carolina, point of view has played an important part in our development and we should all be thankful that the majority of our leaders have had humanitarian and broad, instead of selfish and narrow, points of view. Two little stories will illustrate some of the meanings of point of view.

It was in front of the grocery store in a small town. The story of a serious accident in which a boy had been run over and killed by a train was being told. It seems that the boy was carrying a large watermelon and had stopped on the railroad track to plug it, in order to find out whether or not it was ripe. While he was doing this the train came along and struck him. The narrator had just finished telling of the incident when a negro in the crowd asked. "Boss, did yer happen ter hear whedder 'er not dat watermelon wuz ripe?"

A teachers' meeting was in progress and a prominent school official was complaining to the teachers that at many schoolhouses the boys had broken out window-panes. The county is in a section of the state where mosquitoes and flies are found. The teachers were advised to raise money or obtain it from their school committees in order to have the windows screened so the boys could not throw rocks through them. Flies or mosquitoes were not worthy of consideration! Or, at least, no mention was made of them. The comfort and health of the pupils seemed to be small matters and insignificant when compared to damage to school property.

It is point of view which makes committeemen and school patrons build schoolhouses near the woods so that they will not need to build privies. It is no matter, of course, that the teachers and children may contract hookworm, typhoid fever, tuberculosis, or become victims of chronic constipation which may handicap them for life. These things are not considered of any

value in many rural communities; but to save a few dollars on the school building and its up-keep is something worth while! And, again, it is point of view which causes a man to pay to have his hogs vaccinated against cholera while he can't be persuaded to have his wife and children vaccinated against typhoid fever even when the health officer does it free of cost.

But, every day shows an increase in the number of people who have or acquire a good, wholesome point of view. And for this we should all be thankful.

B. E. W.

OUR INTERDEPENDENCE IN KEEPING WELL

"Now this is the law of the Jungle,
As old and as true as the sky;
And the wolf that shall keep it shall prosper;
But the wolf that shall break it must die.
As the creeper that circles the tree trunk,
So the law runneth forward and back;
For the strength of the pack is the wolf,
And the strength of the wolf is the pack."

The above lines by Kipling describe in a very striking way the interdependence of all citizens in keeping well and in educating the community in which they live and work regarding infectious diseases. We have had an excellent example in our army of what coöperation under skilled supervision means in keeping a group of men in good health and "fit to fight." Our soldiers are returning home in much better physical condition than when they entered the army. And if we do not work together to better sanitary conditions and promote health in our families and communities we are going to lose one of the most important and most pronounced lessons of the war. Right now is the time to urge our governing bodies to provide health departments with trained health officers in order that we may be kept well and allowed to produce larger results from the work we do; and this means that we can make more money and be able to save it.

You have probably heard the remark from some diseased individual, in reply to a question regarding his health: "I am pretty well *for me*." This brings up the question, how do you know you are well? or how do you know that you are sick? These things are determined by applying certain standards. These standards come from the great averages of experience of mankind. For example, we know that the normal temperature in the human being is about 98.6 degrees. We know this because the record of temperatures taken of many thousands and perhaps millions of people shows the average to be 98.6. The same thing is true when we speak of the normal blood pressure or the normal diet or anything else regarding health.

Before men are discharged from the army they are required to stand a complete physical examination in order to determine whether or not they have any hidden disease, or whether any condition exists which might later on produce ill health. A man who is found defective, even in a small degree, is given appropriate treatment and made well before he is returned to civil life. If this is important in the army and for our soldiers, why isn't it important in our counties and for our citizens?

You may be interested to know that ten counties in the State are coöperating with the State Board of Health and have provided health departments

under the supervision of trained medical men. As part of the program of work in these counties any adult citizen can go to the health officer and receive a complete physical examination free of cost. This examination is not for the purpose of making a diagnosis or of giving treatments. The individual is examined solely for the purpose of finding any latent physical defect which may exist so that he can go to his family physician or a specialist and receive treatment before the defect becomes serious or permanent. The counties with such work are, Davidson, Forsyth, Lenoir, Nash, Northampton, Pitt, Robeson, Rowan, Vance, and Wilson. Why can't other counties follow the lead of the progressive ten?

Many other, in fact any, phase of public health work will show that an individual is not independent in the matter of keeping well. And it doesn't require much study to readily see that the responsibility for the health of the citizens, whether they be rich or poor, white or black, rests upon the community and upon the public health officials. In North Carolina such responsibility is with the Board of County Commissioners who by providing funds to the County Board of Health can, in the words of chapter 62, section 9, of the Public Laws of North Carolina of 1911, "make such rules and regulations, pay such fees and salary, and impose such penalties as in their judgment may be necessary to protect and advance the public health."

B. E. W.

AN APPRECIATION

The bravest battle that ever was fought!
Shall I tell you where and when?
On the maps of the world you will find it not—
'Twas fought by the mothers of men.

JOAQUIN MILLER.

In all the great social reforms that have come as great blessings to our country the women have always furnished the initiative in thought, and most times, in action. And in their undertakings they have ever been successful. They have been successful because they were not inspired by motives of personal gain, or desires to play petty politics. Their motto has been simply to do that which was right for the great mass of humanity. And the courage with which they have diligently performed their tasks should be an inspiration to us all.

The State Board of Health is duly aware of and deeply appreciative of the endorsement given to it and its fight against disease and vice by the Federation of North Carolina Woman's Clubs in its recent session at Hendersonville, where they adopted a resolution pledging themselves to coöperate with and be guided by the State Board of Health in all health and anti-vice plans and campaigns.

The club women of the State can bring about any reform to which they set their hands in earnest, and the unqualified support of such an organization will certainly advance public health work in North Carolina.

A. J. W.

A CONVERSATION THAT TOOK PLACE IN YOUR TOWN

Typhoid: "Were you at the conference yesterday?"

Jonnie Fly: "What conference?"

Typhoid: "You don't know about it? Well, there was a big conference between the flies, the hookworms, the typhoid bacilli and the dysentery bacilli down at the mayor's open privy yesterday, to formulate some plan to retaliate against the State Board of Health for passing a law that does away with the open privy and thereby depriving us of the homes of our childhood. It simply means that if this act is enforced it will almost completely annihilate us in this State."

Jonnie Fly: "What decision did you reach?"

Typhoid: "Mr. Hookworm suggested that we boycott North Carolina and all move into the neighboring states. You know the hookworm crowd is about done for in North Carolina anyway, so they are willing to give up, and then, too, they are not willing to coöperate with us to any great extent, because we carelessly stood back and allowed the State Board of Health to almost wipe them out without even raising a protest."

Jonnie Fly: "It is true that no other state has acted so drastically towards wrecking our homes, and we could easily boycott North Carolina, but if we give up without a fight it will make the enforcement of the act much easier, and this would tend to influence other states to pass similar acts and we would then be continually on the move, and some day we would realize that our last move was close at hand. This, of course, would not occur in our lifetime, but we have to think of the future of our race. I am not willing to give up without a fight to the finish."

Typhoid: "Your position, though, Mr. Fly, is different from mine. You are not absolutely dependent upon the human excrement and open back privies for the propagation of your species and for your life's vocation, as we are. And I feel, my dear Mr. Fly, that our race is going to be compelled to follow Mr. Hookworm's suggestion. I an indeed sad, because I feel that our comradeship, the comradeship between your people and my people in this State, Mr. Fly, will soon begin to wane. And when I think of the State Board of Health, my sorrow is intensified, because I know that crowd. I know they are fearless fighters for that which they in their convictions believe to be right. And I know that they are going to enforce the privy ordinance to the letter. My despondency is great."

Jonnie Fly: "My dear friend and comrade. Typhoid, your predicament is indeed precarious; your future in North Carolina looks extremely disappointing, but remember 'A friend in need is a friend indeed,' and I pledge you and your allies, dysentery and hookworm, the support of the flies."

A. J. W.

THE VETERAN

From Bethel clean to Appomattox, through four long years, I done my turn of fightin'. I wa'n't but a strip of a boy then. Mother said I shouldn't go, but how did she know? She never had seen a war before. Well, anyhow, I found out she knowed more about it than I did. What I saw and went through with wasn't fit for a beast, much less a boy. But somehow we got through with it, and I got back home to find everything all gone but the home folks. Me and dad and brother Bill all come through pretty well used up, but all whole. 'Course,

the Yankees stole everything we had and burnt the barn, but they didn't do no harm to Mother and the kids. In them days the Germans didn't have nothin' to do with it, and so they played the game sorter fair, you know.

But say, do you know what happened along in '75, when we had almost forgotten about the war? Well, sir, the fever struck our house, and not one escaped it. Brother Bill was first, and him that had went through all that war didn't last but about two weeks. There was Bill, and me, and Mother and Dad, and Sister Sue, and Sister Jane and her two kids, and Mary, the cook, all had the fever at the same time. I ain't never seen the war do nothin' like that to a family. Well, as I was tellin' you, Bill was the first one to go, and then Sister Jane, and by and by her little girl. Even old Phil Sheridan didn't kill women and children. And me? Well, I ain't never been no account since then.

Then comes on the fuss with Spain, and my fightin' blood riz up agin, and so I got my finger into that pie, too. Tell you the truth about it, that wa'n't no war at all. It was simply a disgrace. Think of it—150 killed by bullet wounds and over 2,000 by the fever.

When this here fracus with the Kaiser and his crowd come up, Uncle Sam ruled me out, 'cause they said I was no good. But my two boys, John and Bill (that was named for Brother Bill that died of the fever), they was rarin' to go just like I did back in the sixties. I didn't mind their goin', so far as the fightin' was concerned, 'cause a man feels like he'd had a fair chance if he gets killed while he's tryin' to kill the other feller. But thinkin' back to the days of '98, when the fever hung around the camps like the breath o' Hell, I don't mind tellin' you it gave me a sinkin' feelin' in the pit o' my stomach to think of my two fine lads havin' to go into somethin' like that.

But say, folks, I've found out that it's all different now. There ain't as many gets the fever in camps now as if they'd stayed at home. John and Bill writes me about all these things, and besides I do a little thinkin' of my own when nobody's lookin'. John he tells me about gettin' vaxinated for the fever the very first day he landed in camp. 'Course, I didn't say nothin' to nobody, but that struck me like a funny way to start out fightin' Germans. Still, I knowed how vaxination keeps off smallpox, and I says to myself that there might be somethin' in it after all. Bill writes me about this, too, but tells me some other things more in my line of thinkin'. You see, I ain't never had much schoolin', so I ain't in shape to know much about such things as vaxination, but some things I can understand as well as them that's been to college. When we all had the fever back in '75, old Doc Jones said we got it from an old pond with green scum on it. He 'lowed that somehow it must have traveled through the air. When the boys all had it in the camps in '98, they told us then it come from the hot sun which we wasn't used to, and from eatin' green cucumbers and such like. Last summer, when they all had the fever over at Amos Brown's, Doc Wilkins said it come from their pig pen, which had got into a pretty bad shape, to be sure. Old Ty Foid, what's Justice of the Peace, said he knowed better. He 'lowed that the only place they could have got it from was that old pile of rotten wood that they had in the back yard. He said he guessed he had ought to know, 'cause he had the fever three times hisself. I've puzzled over the thing a heap. Sure thing, they can't all be right. Fact is,

none of these ldeers looks right to me. You'll call me an old fool for settin' up my opinion against Doc Jones, Doc Wilkins and all them army doctors, but I ain't hardly ever seen it fail that when there's typhoid fever there's plenty of flies around, and I just made up my mind to it that them pesky critters has somethin' to do with it.

Now, just as I was tellin' you, Bill writes me how things is worked in the camps. He says they fight flies as if they was Germans, and says that all the vittels is kept so that flies can't get to 'em. And he was also tellin' me about what they call latrines. I reckon they must be what we call privies, but he says they're fixed so that flies can't get in and mess over the privy stuff, like they do in these here privies of ours.

Well, I know one thing for certain. They ain't got no fever in the camps now like they used to have. The boys tells me it's due to vaxination and them latrines, and I think they're both worth tryin' at home. K. E. M.

A TWENTIETH CENTURY FAIRY TALE

Once upon a time there was a wicked, savage nation of Huns called Disease. The Kaiser, whose name was Typhoid, called together his lords and generals, among them Diarrhea, Dysentery, and Hookworm, and with their assistance set about to conquer the world. They speedily gathered around them many lords and warriors, who with their vassals eventually formed a mighty army.

The conquering armies of disease and death penetrated all parts of the world. Their spies and agents gained entrance to all public gatherings and to practically every home in the land.

It is possible that the world might have been eventually defeated had not the wicked Kaiser Typhoid and his ministers made use of an infernal engine of warfare, a bombing machine called the housefly, which flew into the very kitchens, dining rooms, fruit shops, and dairy houses, and dropped deadly bombs of pestilence and disease to kill neutrals, noncombatants, and women and children.

The hearts of the noncombatant nations, not only of the old world, but also of the new world, sickened at such infernal practices of warfare. In the new world there was a nation of lofty ideals. This nation, whose name was Sanitation, dwelt upon the continent of Education. They protested with the Kaiser against such ruthless practices of warfare, but received only insulting notes in reply. The people of this nation then realized that this was not and never had been a restricted warfare, but that it was a ruthless, savage warfare, waged with the object of conquering the world. Therefore the nation of Sanitation declared war upon the wicked Hun, in order to assist the harassed and devastated peoples of the world.

On awakening to the emergency, however, they found themselves beset with spies, under the name of open surface privies, who had long been considered desirable citizens in every community in which they were found. The true character of the open surface privy was first discovered and brought to light by intelligence bureaus called Health Departments. Their investigations revealed the open surface privies to be spies of the most despicable character. It was found that under cover of what was supposed to be legitimate business they had gained entrance to practically every home in the land and left unseen the deadly germs of disease. It was learned also that by virtue of their business

standing they had obtained positions of public trust, whereby they were sufficiently removed from suspicion, that they harbored, undetected, in and about their premises, great multitudes of marauders, and raiding parties, which had been secretly sapping the health and strength of the whole world. They also furnished landing places, food supplies and ammunition for the enemy's bombing machines. With systematic propaganda these spies led the people to believe that the tales of savagery and ruthlessness from across the water were false, in order to keep them from entering the war against the Hun. When the people of the nation of Sanitation learned all these things, they rose up in mighty anger, and cast the once trusted enemy agents and spies out from their midst to a death of disgrace.

At this time, however, the power of the wicked enemy seemed to be at its highest. The hordes of Huns had long been coming on, in drive after drive. It seemed that their enemies' resistance would soon be broken, whereupon they would be pushed into the sea. A dark cloud of dejection hung over the world. The new allies of the harassed nations found themselves unprepared for warfare, on acccount of the propaganda of the open privy. They speedily turned every effort to making ammunition and war material and training soldiers. Men, women and children worked day and night, hoping to get their armies into the field before it was too late. Meanwhile, their allies held on, being pushed steadily backward, clinging to the hope that the new ally, Sanitation, would enter the field before it was too late. Finally the armies of Sanitation, under the leadership of Generalissimo Sanitary Privy, came, and continued to come with ever increasing numbers until they occupied all parts of the field, whereupon the tide of battle turned, until in February, 1919, after having encountered countless losses, the wicked enemy saw that it was useless to resist longer, and asked for an armistice, which was granted by the General Assembly of North Carolina in February, 1919.

Peace terms were formulated by the State Board of Health and formally presented to the enemy on July 1, 1919. The terms presented shattered the power of the wicked enemy and forever banished the Kaiser Typhoid from the world as represented by the portion of North Carolina's population coming under the provisions of the new law. They also provided for the wholesale destruction of his infernal machines of warfare, including the deadly housefly. The provisions of these peace terms demanded compliance by October 1, 1919.

The following summer found Typhoid and his chiefs shorn of their homes and power. They had become outcasts, never to be allowed upon the face of the earth again.

Their wicked people are still paying the debt of reconstruction and restitution, while the world once so ruthlessly harassed and beset by spies, traitors and savagery, lives in peace and joy, protected by the league of sanitation, which is presided over by the sanitary privy. H. E. M.

CIVIC CONSCIENTIOUSNESS

BY REV. G. W. LAY.

Good health in a community does not depend alone on physical conditions, and cannot be controlled merely by efforts to enact and enforce regulations that deal with material things.

There must be, first, Civic Intelligence. All the people must be educated to know what to do and why to

do it. But beyond and above all this there must be the cultivation of the moral and spiritual qualities. The right will not win in the Health War, or in any war, unless each citizen, not only knows and holds the right, but also feels from the bottom of his soul the moral obligation as an individual to give all that he has and all that he is in order that others may live and live well.

There must be, second, Civic Consciousness, that is, the feeling that we are all members of a community and that if one member suffers, all the members suffer with it. One may have this civic consciousness and only be interested in what other people are doing for the health of the community, hoping to reap the benefit thereof. It might exist where each man was entirely selfish.

There must, then, be, third, Civic Conscience, that is, a feeling of moral responsibility for the welfare of others, a high sense of the duty that each owes to all the rest. A community that has advanced thus far is doing well. But this is not enough. I may know what to do and my conscience may tell me I ought to do it, and yet I may lack the strength of character to do as I know I ought.

There must, therefore, be, fourth, Civic Conscientiousness. This is the ultimate compelling force that drives everything before it to success. The conscientious man makes himself do that which his intelligence tells his is proper and his conscience tells him he ought to do.

This quality cannot exist with health and sanitation as its only object. If it exists at all, it will show itself in conscientious obedience to all laws, whatever their object, and only by the cultivation of a universal conscientiousness towards all duties will it be possible to produce a body of citizens devoted to the performance of those particular duties that concern the one object of the preservation of life and health.

Here is a vast field for the teacher and the writer. The schools and the press can do a noble part. But above all, it is the opportunity and the responsibility of the preacher. He who has the care of souls must also have a care for the body. To save the bodies of his people, he must first cleanse, instruct, and inspire their souls, and then, ultimately, he will save both soul and body. Health work is based on a religious foundation without which its efforts fail. When completely carried out, it is the practical application of the whole scheme of Christian doctrine and a demonstration of what follows from the Royal law: "Thou shalt love thy neighbor as thyself."

In the terrible influenza plague recently, one of the difficulties was to know what to do. There seemed little connection between this plague and material, sanitary conditions. And yet, curiously enough, those communities which had already achieved most success in health work and in lowering their death rate seemed on the whole to suffer least from this plague. There was a remarkable correspondence between the death rates of different cities in recent normal years and the rate of cases and deaths from influenza. If this be so, and the papers called attention to it, is it not reasonable to conclude that the deciding factor in both rates was the moral character of the citizens? A community that had been raised to a high level of civic intelligence, civic conciousness, and civic conscientiousness, in order to lower the death rate, possessed the very qualities which alone could be efficient in the struggle against the influenza. The qualities which made the influenza spread were ignorance, selfishness, disobe lience to

laws and instructions, and other disregard for the dangers to which one might expose others. The production of high moral character and of all the Christian virtues, which is the business of the church, will furnish the basis on which alone every successful campaign for health must be waged.

A young Hebrew once told me that his mother was so strict that she would not even eat an apple without first washing her hands and saying a prayer. If everyone washed his hands before every meal, it would be a great step forward in the prevention of disease. I thoroughly believe in the efficacy of prayer, though I do not know just how it works. But I am very sure that the man who says grace before meals, thereby acknowledging his dependence upon God and his duty towards him, is more likely than one who neglects this to be conscious of his true relation towards his fellow men. Truly, cleanliness is next to Godliness.

It takes good, conscientious men to secure good health for a community. There is no glory in it; you never know what you have done except by the bare figures of the annual death record, and you get no credit for what you have done. Besides, if ten men in each thousand have been saved, no one man feels that he was the particular one who was saved. No one feels grateful, and if any one felt grateful at all, he could only feel so in a general way towards the community as a whole. The man who picks up a piece of glass from the road does not know whose tire did not get punctured, and those who follow him are ignorant of the danger from which they were saved. But if a doctor saves a man's life by performing a difficult operation or by carrying him successfully through a dangerous illness, the doctor gets credit for what he has done and has a right to feel proud of it, while the patient will always feel truly grateful to the man who saved his life.

Prevention requires intelligence of a docile and humble kind. The man who holds tenaciously and expresses vehemently half-baked opinions on matters of which he is really ignorant, is a danger to the health of a community. He thinks he knows more than the doctor who is a specialist, and he feels that his empty utterances are entitled to respect. He opposes good doctors and is a follower of the latest school f quackery, and does not believe in vaccination against smallpox or typhoid, or that malaria is caused by a mosquito and typhoid carried by flies. He is a great clog against any forward movement. He is a wicked man. God has no use for a fool, and it is made clear in the Bible that the fool is a sinner just as plainly as that the sinner is a fool.

Success in the prevention of disease depends on that universal feeling of moral responsibility that believes in the necessity of obedience to every law just because it is the law. There is no direct connection between health and cutting across the grass and spoiling the neighbor's lawn, or dropping paper on the sidewalk. But where people perform these amiable tricks, or leave the road and make ruts in the lawn with their automobiles, or try to beat the cop and evade the traffic laws, the health record will probably be poor.

To secure health every citizen must feel that the town is his town and that he has a duty towards every one in it just as much as towards his own wife and children. He must obey every law himself and he must see that every one else obeys the law and that every law is enforced on everybody all the time. If the best citizens play cards for money or allow liquor to be

sold in their clubs or match nickels for soda water, while the poor negro is severely punished for shooting craps or for getting a drink for a thirsty stranger, it is not to be wondered at if the average man concludes that no moral principle is involved and that law enforcement is a mere matter of expediency and favoritism.

One of the greatest things that ever happened was when one of the highest ecclesiastics in Havana was arrested for not having a cover to his garbage can. He proved that he had had a cover and that he did not know it had been taken. The answer was that it was his duty and that of no one else to see to that particular garbage can; that Havana would not be kept healthy with open garbage cans, and that he must pay the fine. Unfortunately, while we may ascertain who breaks a specific law, we can seldom tell who was the direct cause of a particular case of contagious disease. Someone has caused the sickness and perhaps the death of a fellow-being, usually an innocent child. No one can be sued for damages or prosecuted for man-slaughter. The guilty escape punishment and even the consciousness of guilt. In health matters, there is no answer to the time-honored questions: "Who killed Cock Robin?" and "Who hit Billy Patterson?"

Behold on how high a plane stands the campaign for health! It fails unless conducted on the highest grounds of Christian Charity for all men. It is useless to appeal to merely selfish motives. I cannot be safe unless I make my neighbor safe; his health is necessary to my health. I must work for the good of all, even though there may be some slight *underlying selfish motive,* and thus I am compelled to live the Christian life. I am foolish if I do not protect myself absolutely against smallpox and typhoid, and, when necessary, against diphtheria; but for most communicable diseases I must depend on the condition of all in my community. Complete success will only come with entire unselfishness. I must be vaccinated against typhoid, not simply for my own sake, but to support the right, to set a good example and to prevent the possibility of giving the disease to others.

Finally, each man is personally responsible to God for his neighbor's health. I cannot put it off on "they" or "Put it up to God." That mysterious "they" is the bugbear of all reform. When a citizen says "They ought to do something," we know we have found some one who evades contentedly his own moral responsibility. "They" means "me." "They" to this man means everyone except himself. If everyone takes that ground, everyone is exempt and no one is responsible.

God is all-powerful, but He has taken each of us into partnership. It is His will that all men, including you, should be saved. But He is not going to compel it. He has left you free. You must even "work out your own salvation with fear and trembling." It is so with life and health. Do we dare say that it is God's will that the cruel murderer shot down the harmless man? Is it not then a profane impertinence to say it is God's will that a little child died of preventable disease when it was given him by another child whose parents deliberately allowed him to break quarantine and give the disease to passers-by? It is God's will that we should keep His laws and obey religiously the laws of man. If I live by the Christian law, I am working for health; and I cannot work successfully for health unless I feel my full moral responsibility to live in all ways by the Christian law.

THE AIMS OF THE BUREAU OF INFANT HYGIENE TO BE ACCOMPLISHED THROUGH COUNTY NURSES

By MRS. KATE BREW VAUGHAN
Chief of Bureau

The most important aim of all public health work is that of making stronger, better citizens. Needless to say that the great burden of this task rests upon the mothers, and they are showing continually their readiness to assume the responsibility as rapidly as they are prepared for it. The first step, then, in this branch is education—the instruction of the mother in the care of herself during the expectant period, not only that the child may be well nourished at birth, but that the chances for maternal nursing during the nine or twelve months after birth will be enhanced.

The next step is the instruction in the care of babies. The bureau of Infant Hygiene of the State Board of Health believes the best results are obtained by personal advice given by the county nurse in home demonstrations or in small groups.

The way to accomplish this may perhaps be best expressed in the following instructions, which it is hoped every nurse will have in her possession and try to live up to.

We aim—

1. To instruct expectant mothers in the hygiene of pregnancy:
   a. To encourage medical attention;
   b. Urine analysis; attention called to danger signs of pregnancy;
   c. Proper feeding, rest, clothing, exercise, etc., to insure normal development of baby and safe delivery and to make possible maternal nursing.
2. To supervise and instruct midwives:
   a. Precautions for septic conditions — method of scrubbing hands and using disinfectants.
   b. In conducting a safe delivery and advising regarding danger points at which a physician must be called.
   c. Attention to cord dressing and method of dressing the newborn baby.
   d. Introduction of two drops of two per cent silver nitrate in each eye. Furnished free by State Board of Health.
   e. Advise against castor oil or teas for baby until mother's milk is established.
   f. Establishment of regular feeding hours — 2½ hours for a newly born baby.
   g. Separate sleeping quarters for newly born baby. (Padded basket will answer.)
   h. Proper ventilation of the sick room.
   i. Proper care and bathing of the mother first 5 days.
   j. Advise against encouraging mother to leave the bed before the 10th day.
3. Encourage breast-feeding in every case.
   a. Teaching the mother the value of diet, hygiene and exercise which will enable her to nurse her baby.
4. Where artificial food is necessary, to impress the importance of modified cows' milk, the feeding to be directed by a reputable physician. In case no physician is employed, "The Cornerstone of a Child's Future," by Dr. A. S. Root, to be used as a guide.
   a. To demonstrate preparation of food, observing mother as she prepares the food until she has mastered the process.
   b. To make sure that mother understands how to care for the milk after the initial preparation — sterilized bottles, cotton stoppers, temperature below 50 degrees. Explain to mothers why boiled milk allowed in temperature above 50 degrees may become infected.
   c. Teach mother proper care of nipples and bottles.

d. To discourage use of pacifiers.
e. To insist upon regularity in feeding.
f. To forbid the feeding of solid food to children under 12 months.

5. Where artificial food is necessary, cows' milk is unobtainable, or conditions for preserving same are inadequate, nurse will advocate the use of dry milk, advising 2½ tablespoons per pound body weight every 24 hours, diluted with an ounce of water for each tablespoon of milk, milk to be prepared each feeding on this basis:
   a. The heating of milk (fresh milk boiled or dry milk) has a tendency to rob the food of the vital principles or vitamines. These are replaced by the use of small quantities (continuously increasing) of orange juice, sweet lemonade, potato water, cabbage water, or tomato juice boiled and strained.
6. Demonstration of baby comfort:
   a. Bath.
   b. Making of bed.
   c. Ventilation of room (importance of fresh air to baby).
   d. Buying or making of suitable clothing for baby.
7. Advice for the child of pre-school age as to feeding, defects, clothing and habits.
   a. Care should be taken to determine tuberculosis or syphilis in mother, baby or older members of the family. Where the fact is established, advice as to precautions and care tactfully given.
8. A thorough knowledge of all agencies in a county working for Child Welfare—charitable, philanthropic, private institutions, hospitals, dispensaries and doctors, and coöperation with same offered.
9. Organization of mothers' clubs, where none obtain, or regular meetings with organized bodies in a county.
10. Where no mothers' meetings obtain, occasional demonstrations—preparation of milk, care and washing of bottles, etc., in the homes.
11. A simple exhibition of clothing for different seasons should be given in prenatal cases.
12. Mother should be encouraged to regularly weigh and measure her baby, keeping for comparison a written report each week.

The order in which these things are taken depends upon the needs and condition of the mother and baby. Great discretion on the part of the nurse has to be used not to insist upon more being done at a time than the mother is able to understand and carry out. The main object of the work is the education of the mother and her ability to carry out instructions depends largely on her social condition.

ECZEMA

Many mothers are writing to this bureau for information regarding eczema and most of those writing seem to regard it as a trivial but irritating ailment. Many others who do not write are called upon to give it attention.

Eczema is the commonest skin disease in babies under two years of age. The skin of infants is extremely delicate and more easily affected by external irritants. While all children are susceptible, there are some especially sensitive to irritation and to digestive disturbances. It is prevalent in some families and often inherited with other evidences of diathesis. It very rarely occurs in poorly nourished children, but is common in fat, healthy-looking babies, breast-fed or bottle-fed, and it is more often on the face and scalp than upon the body, though it appears often on other parts of the body.

The face becomes raw and moist and a sticky, watery fluid comes from it. This dries and forms a thick, dirty-looking crust over the sore places. Itching is intense and causes great suffering. The baby scratches the sores and this makes them bleed.

These children cannot sleep well at night. They often have diarrhea, lose weight, and their health becomes affected.

It is often hard to say what causes eczema; it is sometimes due to overfeeding, sometimes to giving the child too much sugar or fat, sometimes to using too strong soap on the skin and sometimes to uncleanliness.

Treatment: Cut down the food in a breast-fed baby by not nursing so often. In a bottle-fed baby cut down the sugar and partly skim the milk. See that the baby's bowels move every day. *Don't wash the sores with plain water, or soap and water.* Wash them gently with equal parts of milk and water, but not often. Anoint with olive oil to soften crusts, so they may be removed in order to reach the diseased surface. Cut out some stiff pasteboard slips and bandage them around the elbow joints. This allows free use of the hands but makes it impossible for the child to reach the sores. A soothing application is composed of equal parts lime water and sweet almond oil.

Salves recommended should be applied in this way:

Make a mask of muslin for the face (if the eczema is on the face) and smear the salve on the muslin and tie it on. It should stay on day and night for a few days, until the sores are improved, and then put on every few days until they get well. Clean the parts gently with olive oil.

Holt advocates as a simple protective ointment, one containing starch, zinc oxide, or bismuth, either alone or in combination, may be used. An excellent formula is zinc oxide ointment with 2% of salicylic acid. Later when inflammation is less acute and the itching severe, tar in the strength of ten to twenty per cent may be substituted for the salicylic acid.

THE COST OF NEGLECT

Report of the Provost Marshal General:

Total men called by draft...	3,802,946
Total examined by local boards	2,510,706
Total rejected by local boards for physical reasons.....	730,756
Percentage of those examined rejected	29.11
Add 5.8 per cent rejected at cantonments (estimated)..	33.11

There is no disputing these figures. There is no sentiment attached to them. They are the cold facts obtained by military machinery. If one-third of American manhood between the ages of 21 and 31 is so physically defective as to be rejected for military srrvice, what is to be expected of those under 21 and past the age of 31?

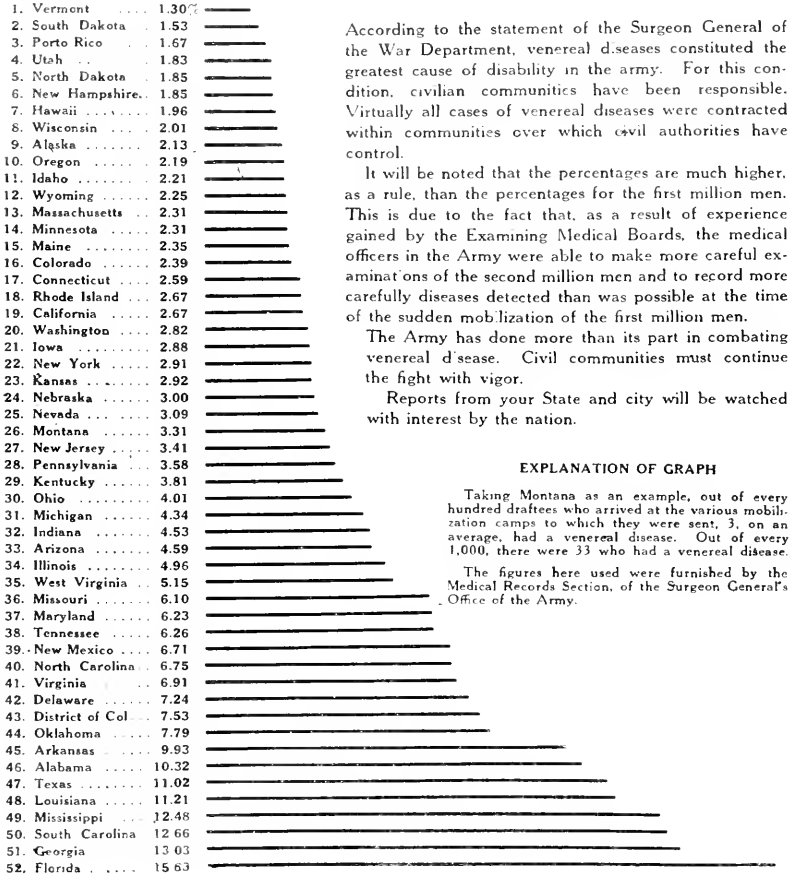
The most superficial analysis of the causes for which men are rejected for service shows that more than 60 per cent of these defects are preventable; that 30 per cent are due to poor general physical condition, which can be remedied by proper feeding, by proper attention to personal hygiene and physical training; that another 30 per cent are due to defective eyes and teeth, including bad mouth conditions; and that only 10 per cent are due to neglected surgery.

An analysis of the purely preventable defects for which these men have been rejected shows that they are not acute or of recent occurrence, but that they are chronic conditions; that is, they have existed for years, many of them from early childhood. A little more attention to the physical needs of children, correction of their minor defects while they are still easily remedied, and proper health protection of the growing boys and girls would result in a very different health and efficiency analysis of the adult population.

The Percentage of Venereal Diseases Among Approximately the Second Million Drafted Men

By States.

Examinations at Mobilization Camps showed that 5.4 per cent of these men had a venereal disease at the time of examination upon arrival in camp. This percentage includes only obvious cases of syphilis and gonorrhea and chancroid. Wassermann examinations were not given. Furthermore, this percentage does not include those who had been previously cured or who may have become infected later. The record for each State follows:



According to the statement of the Surgeon General of the War Department, venereal diseases constituted the greatest cause of disability in the army. For this condition, civilian communities have been responsible. Virtually all cases of venereal diseases were contracted within communities over which civil authorities have control.

It will be noted that the percentages are much higher, as a rule, than the percentages for the first million men. This is due to the fact that, as a result of experience gained by the Examining Medical Boards, the medical officers in the Army were able to make more careful examinations of the second million men and to record more carefully diseases detected than was possible at the time of the sudden mobilization of the first million men.

The Army has done more than its part in combating venereal disease. Civil communities must continue the fight with vigor.

Reports from your State and city will be watched with interest by the nation.

EXPLANATION OF GRAPH

Taking Montana as an example, out of every hundred draftees who arrived at the various mobilization camps to which they were sent, 3, on an average, had a venereal disease. Out of every 1,000, there were 33 who had a venereal disease.

The figures here used were furnished by the Medical Records Section, of the Surgeon General's Office of the Army.

The Health Bulletin
Published by THE NORTH CAROLINA STATE BOARD of HEALTH
This Bulletin will be sent free to any citizen of the State upon request.

Vol. XXXIV SEPTEMBER, 1919 No. 9

GO TO IT!

Here is the way a prominent merchant in one North Carolina town feels about the efforts of the State Board of Health to abolish the insanitary, open-back privy in the State. For obvious reasons his name and town are omitted. Writing straight from his heart he says:

"Seems you are going to get busy about October 1st and have some privies looked after.

"It should be DONE.

"Anything worth doing at all is worth doing WELL.

"DO IT WELL.

"My, you got a job!

"Suppose every landowner in North Carolina should see your last Bulletin. Would it not wake them up?

"Wake 'em up!

"Sheriffs of the counties ought to distribute about one hundred thousand copies at once. I will pay my part for such work to be done—and I will get out cheap, if it does the work.

"I know a man worth $25,000, five in family, one a teacher in graded school, owns a touring car, have no more privy than a monkey in Africa. His flies eat dinner with sanitary neighbors every chance.

"IS IT RIGHT

"Roll up your sleeves and,

"GO TO IT!"

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B. E. Washburn, M.D., *Director County Health Work*

FREE PUBLIC HEALTH LITERATURE

The State Board of Health has a limited quantity of literature on health subjects for free distribution. If you are interested in one or more of the following subjects, or want same sent to a friend, write to the State Board of Health for free literature on that particular subject.

Whooping-cough
Hookworm Disease
Public Health Laws
Tuberculosis Laws
Tuberculosis
Scarlet Fever
Infantile Paralysis
Care of the Baby
Fly Placards
Typhoid Placards
Tuberculosis Placards
Clean-up Placards
Spitting Placards
Sanitary Privies
Residential Sewage Disposal Plants
Eyes
Flies
Colds
Teeth
Cancer
Malaria
Smallpox
Adenoids
Measles
German Measles
Typhoid Fever
Diphtheria
Pellagra
Constipation
Indigestion
Infant Care
Child of Pre-School Age
Corner Stone of Child's Future
Pre-Natal Letters

SEX HYGIENE BULLETINS

Set A—For Young Men

A Reasonable Sex Life for Men.
Sexual Hygiene for Young Men.
Vigorous Manhood.
Smash the Line. (The case against the restricted district.)
List of Reliable Pamphlets.

Set B—For Public Officials and Business Men

Public Health Measures in Relation to Venereal Diseases.
Venereal Diseases—A Sociologic Study.
Smash the Line. (The case against the restricted District.)
The Need for Sex Education.
A State-Wide Program for Sex Education.
List of Reliable Pamphlets.

Set C—For Boys

Vigorous Manhood. (Especially for boys 12 years of age and over.)

Note.—For boys under 12, see "When and How to Tell the Children" (Set D); portions of "Vigorous Manhood" also may be read to younger boys. Boys 15 years and over may be given Bulletin "A Reasonable Sex Life for Men" (see Set A), at the discretion of the parent.

Sexual Hygiene for Young Men.
List of Reliable Pamphlets.

Set D—For Parents

When and How to Tell the Children.
Venereal Diseases—A Sociologic Study.
The Need for Sex Education.
List of Reliable Pamphlets.

Set E—For Girls and Young Women

Your Country Needs You. (Especially for girls 11 years of age and over.)

Note.—For girls under 11, see "When and How to Tell the Children" (Set D); portions of "Your Country Needs You" also may be read to younger girls. Girls 15 and over may be given "The Nation's Call to Young Women" at the discretion of the parent.

The Nation's Call to Young Women.
List of Reliable Pamphlets.

Set F—For Teachers

The School Teacher and Sex Education.
Sex Education in the Home and High School.
Venereal Diseases—A Sociologic Study.
Smash the Line.
The Need for Sex Education.
List of Reliable Pamphlets.

Any of the above will be sent without charge. Please send for only those bulletins for which you have definite use.

EDWARDS & BROUGHTON PRINTING CO., RALEIGH, N. C.

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. XXXIV SEPTEMBER, 1919 No. 9

EDITORIAL

DID MOSES KNOW HIS BUSINESS?

Thirty-five hundred years ago Moses, writing at the dictation of Omniscience, prescribed in Deuteronomy 23:12-13, a means and a manner for the sanitary disposal of human excreta. This law, divine in its origin, was regarded as necessary for a nomadic people living in a wilderness with an abundance of space and natural privacy. This law provided a manner of excreta disposal which prevented (1) through its immediate burial, infestation with fly eggs and the breeding of flies; (2) access to and contamination with flies and insects that would visit, contaminate and infest the food and drink of the people; (3) the washing of the excreta over the surface of the soil into water supplies; and (4) the contamination of the feet and other exposed parts of the body of the Israelites with the infection of hookworm disease.

Thirty-five hundred years since Moses, we find in a modern civilization, in a civilization with public schools, churches, colleges, and a great university, in every unsewered block of every village and town and city of North Carolina, many, from three to twenty, uncovered, unprotected, unhidden, buckets full, boxes full, and uncontained accumulations of human excreta, alive with maggots, loaded with the germ potentialities of sickness and death, for domestic animals to scatter and for flies to bear on encrusted legs and wings to the kitchens of all living within three hundred yards of the filth.

Moses was either right or wrong. Our General Assembly of 1919 took the position that Moses knew his business; that his law disposing of human excreta so as to prevent infection of persons by flies, water and contact, like old-time religion, was good enough for North Carolina and so our progressive State, in regulating the disposal of human excreta, came abreast of the times—the times of the Children of Israel in the wilderness three millenniums ago. W. S. R.

WHAT THE PRESS CAN DO

Fifteen million dollars can be saved for the State of North Carolina each year. In undertaking to effect that saving the newspapers of the State can play a most important part.

This is a statement in cold terms of dollars and cents of a human problem that is pulsating with life. It is figuring the economic loss to the State that is now a steady drain, and does not take into consideration the matter of broken hearts and desolated homes.

To be specific, there are approximately 3,500 deaths each year in North Carolina from fecal-borne diseases. From the same source each year there

are approximately 35,000 cases of illness.

In calculating the cost of these illnesses and deaths only an approximation has been attempted. Economists calculate that the value of an adult at the age of thirty is $4,000. In the same manner it is calculated that an average case of typhoid fever, including those who die and those who recover, costs $400. The cost of dysentery and diarrheal diseases is approximately half as much.

Making the calculation on this basis North Carolina has an annual loss of virtually fifteen million dollars, a loss that is a pure economic waste and one that can be prevented. There is no way of calculating the loss in terms of suffering and sorrow. For these we have no measure. For that matter, who can calculate the value of a life that is snuffed out? Who are we to say that a tiny babe, or a grown man, is worth so much in dollars and cents? It is presumptuous, of course, to attempt such valuation. Yet this is the only standard of measurement we have that is comprehensible, and in estimating the loss it is probable that an underestimation has been made, rather than too high a value set.

To overcome this dead loss from an economic standpoint, to effect this saving of such an enormous sum, to prevent so many hearts from being bowed down in sorrow because of the suffering and death of loved ones, is, I submit, an undertaking worthy of the best efforts of every one in whose heart there is love for others. It is an undertaking worthy of the press of North Carolina, which is guided by men and women with a large vision of life and service.

There are three primary sources of communicable diseases: secretions of the nose and mouth; insects; human excrement. From the first is spread tuberculosis, diphtheria, measles, scarlet fever, whooping cough, and the various other diseases of the respiratory organs. Mosquitoes spread malarial and yellow fevers. Through human excrement is spread typhoid fever, dysentery, diarrheal diseases and hookworm. It is only with the latter class that I am dealing.

With all reverence I say to you that the hand of God strikes down no man with typhoid fever. A loving Father in Heaven does not call a little baby to the Great White Throne through the means of weeks of sickness and suffering from "summer complaint." These come only from the swallowing of infected human excrement. To me there is no greater blasphemy than to lay the blame on the Lord.

"God helps those who help themselves" is an old saying, and true. Here is where we have a wonderful opportunity of helping ourselves and our neighbors. The careful and proper disposal of human excrement means practically the banishment from the State of these diseases. Water sewerage is not possible for every home in the State; a sanitary privy is. That way lies the economic saving of fifteen millions of dollars, and the adding of untold happiness to our people.

It is true that every case of typhoid fever or diarrhea did not have its origin from an insanitary privy. It is also true that after the State has been sanitated there will continue to be sporadic cases of fecal-borne diseases. But it is quite certain that the open back, insanitary privy is the chief source of propagation for the diseases of fecal origin in North Carolina. In abolishing this abomination we save life and promote health.

There is nothing new in this. It is no impractical theory of some dreamer. It is just fact, recognized through the centuries by those who stop to think.

The trouble is that so few ever really think.

Away back in the early dawn of the race Moses, the great lawgiver, ordained, as we read in Deut. 23:12-13: "Thou shalt have a place also without the camp, whither thou shalt go forth abroad: and thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee."

The General Assembly of the State of North Carolina in its session of 1919, some three thousand years later, has enacted a law one section of which reads as follows: "Every residence located within three hundred yards of another residence must have an improved privy of a type approved by the State Board of Health."

Frankly, in undertaking to carry out the provisions of this law the State Board of Health feels that it is undertaking one of the biggest pieces of work for the protection of the public health that has been inaugurated during a period of ten years that has been by no means inactive. It more intimately touches the homes of North Carolina than any previous health legislation. The enforcement of the law will require an enormous amount of real work, and even more of tact and discretion.

The greatest obstacle to the enforcement of this law is ignorance and indifference on the part of a large portion of the State's population. If the people as a whole can be interested, if they can be told just what the law is, and the why and the how of it, there is little danger of failure with regard to this measure.

How to reach the greatest number of people in the shortest time with the facts about sanitation, and what the law requires, is the problem. The State Board of Health naturally turns for aid to the press of the State. For years the State press has effectively helped every effort of the State Board of Health in its work of promoting the public health. There has been no factor so potent for the upbuilding and improvement of North Carolina as its daily and weekly newspapers. No one has more cause to realize this fact, and I am sure no one has more appreciation of all that it means, than have the officials of the State Board of Health.

Therefore, with the present big problem, the State Board of Health comes to the men and women who direct the power of the organized press of the State and asks their help, confident that it will be given generously as it has been given in the past. The end sought is that our people may have life, and have it more abundantly.

R. B. W.

A HANDBOOK ON CANCER

A new handbook for the medical profession, issued by the American Society for the Control of Cancer, entitled "What We Know About Cancer" has been published by the American Medical Association press, and the State Board of Health has a supply on hand for free distribution to any physician who requests the same.

This handbook deals with the entire cancer problem in short, concise and practical way. It states simply and clearly what every doctor ought to know about the cancer problem in general, and the different types of cancer as well, without incorporating so much of the purely technical as to make it unreadable and unintelligible to all save cancer research workers. The entire booklet can be read in thirty to forty minutes, and it contains information that would require hours of read-

ing to digest from voluminous texts, and yet it contains all the practical information necessary for the general practitioner.

The contents are classified under the following seven heads:

1. Early consideration.
2. Early diagnosis and treatment.
3. Precancerous condition.
4. Carcinoma of different organs.
5. Sarcoma.
6. Other malignant tumors.
7. Treatment or inoperable and recurrent cancer.

The information is authoritative and when given to your cancer patients you know you are absolutely correct. The advice or treatment above would make of it a valuable collection of data, based on the past experiences of the cancer experts of the world.

No well qualified physician ought to be without it. A. J. W.

WHAT ONE NEWSBOY DID

Now that the State Board of Health is slowly perfecting an organization under the new law providing for the examination of school children, many things are happening which more and more vindicate the wisdom of the Legislature in providing for free dental treatment of a limited class of young school children regardless of financial or social standing of the children. One of the latest arguments is contained in the following human interest story, tucked away in an obscure paragraph, in a report of the school nurse for the city of Asheville, made to the Bureau of Medical Inspection of Schools. The nurse says that "the interest manifested in the care of the teeth by the children has been most encouraging. A little boy in one of the lower grades needed dental work done but his pride would not allow him to accept charity from even a dentist. By arising early and selling papers he has saved enough to have the work done, and on inspection days at his school he proudly displays those clean teeth and is most liberal with his advice to the other boys to do likewise."

This is the spirit that is manifested all over North Carolina among the children of every age, sex, race and color. No child wants to be singled out before his fellow pupils as an object of charity; but when the State is providing this treatment at public expense and when the rich man's child along with the poor man's child presents himself for treatment by the school dentist, it is recognized by the most ignorant and sensitive as a public obligation, and therefore there is no stigma attached.

Only a limited number of little boys in the State of North Carolina could possibly have the opportunity of earning extra money with which to pay for dental work. For 99 per cent. of them the money for this service must come out of the family treasury, and if the family treasury is empty the necessary dental work for the children is delayed and in, literally, thousands of cases never done.

The teachers, the school authorities, the county authorities, wideawake people in every profession, occupation and calling, in every county of the State should do all in their power to coöperate with and aid the State Board of Health in making available tc as many children as possible the free dental treatment provided by the Legislature, and also strive to get the parents of children who need operations to take advantage of the club operations conducted by the State Board of Health. G. M. C.

A. P. H. A. IN NEW ORLEANS

The next annual meeting of the American Public Health Association is to be held at New Orleans, Louisiana, October 27-30, inclusive.

STATE PROTECTS YOU AGAINST YOUR NEIGHBOR'S FILTH

Recently when I was returning from a trip to a certain town in the eastern section of the State, I had a very interesting conversation with a traveling man. I happened to run across him at a junction point where we were compelled to wait four hours for our train which was delayed on account of the high mark which the waters of Little River had reached.

As a result of our delay we were compelled to seek a nearby hotel at which we might purchase an evening meal, and it was during this hour of refreshment that I had an interesting discussion with this traveling man about hotel inspection and the new sanitary privy law.

When I took my seat at the table I noticed a painful expression on this gentleman's face; a second look convinced me that it was an expression of disgust and revulsion. I thought probably he was offended at my presence, but while I was deciding whether or not to move my seat to another table, he addressed me as follows: "This is the filthiest hotel in North Carolina. The State Board of Health ought to inspect it and condemn it." My personal vanity was then relieved because I knew the look of disgust was caused by the eating place we were forced to patronize. I told him that I was a representative of the State Board of Health, after which we exchanged views relative to the hotel inspection law and the new sanitary privy law. I tried particularly to impress upon him the importance of the privy law, in preventing typhoid fever, dysentery, hookworm disease and other preventable fecal and filth-borne diseases.

He said, "Hotel inspection is more important to me, because I have sewer in my house." I said, "My friend, did you ever have a case of typhoid fever in your home?" to which he reluctantly replied, "Yes, my son, William, who is eleven years old, had typhoid fever last July." I asked him what kind of people lived on the street behind him. He then described a condition that is typical of every town in North Carolina—the main street, where the more fortunate people live, with its sewer main and all the homes connected with it, while in the rear, on the same block, are eight homes with as many open back, overflowing, filthy, stinking, germ laden, fly breeding surface closets. Yet this intelligent man was falsely impressed with the idea that because his house was connected with a sewer main he was protected and the eight surface closets of his neighbors were powerless to harm him. I said "My friend, where did your boy get typhoid fever?" He replied, "I don't know." I then explained to him how his son contracted typhoid fever from his neighbors' open closets—that even though his home was sanitary, he was not protected against his neighbors' filth and he was powerless to protect himself. The only thing he could do by saying anything to his neighbors about their filthy closets would be to start a neighborhood row. I then explained to him how, by this new privy law, the State is going to protect him against his neighbors' filth, by making his neighbors install sanitary closets that will make the spread of typhoid and dysentery impossible, and thereby insure him that his family will in the future be spared from further unnecessary expense and anxiety like that incurred last July when William was sick.

This man's case is typical of hundreds of annual occurrences. His own home was sanitated, yet through the

carelessness and ignorance of his neighbors typhoid fever was thrust into his home. He needs protection. You, "Mr. Head-of-the-House": you and your famiy need protection, because you are in the same fix as my "traveling" friend. You are entitled to it, and we are going to give it to you by seeing that your neighbor either connects to the sewer or builds a sanitary privy. That's what we mean by "State Protects You Against Neighbor's Filth."

My friend, the traveling salesman, said: "My case, though, is an unusual one, and why is it necessary for the State to undertake this problem when the cost of everything is so high?" I replied, "Your case is not unusual. It is only typical of what exists at thousands of North Carolina homes today. It is necessary for the State to protect its citizens because our latest statistics show that during the year 726 people died from typhoid fever, while 7,260 people had the disease; that 607 people died from dysentery, while 6,070 had the disease; and 2,226 babies under two years of age died from enteritis or dysentery, while 5,000 must have had these diseases. All of these diseases are of fecal origin and therefore they all originate from the careless disposition of human filth, and this occurs principally through the open-back, surface closets. These diseases are draining the State's vital resources, both economic and human, and they can and must be prevented. Let's figure the yearly cost of these diseases —18,330 cases of sickness that cost, in medicine, doctor's bills, time lost from work, etc., let's say the ridiculously low figure of $25.00 per case. This equals an expenditure of $467,250.00. Three thousand five hundred and fifty-nine lives lost. We will value them at the lowest estimate placed on human life—$1,700.00 each —and this would total $6,049,600.00, making a total loss of $6,516,850.00. If we prevent one-third of this loss we will save the State $2,138,950.00. The State will probably spend $35,000.00, which will be raised by the license fee of 40c, in the enforcement of this act, so you see the sum spent is insignificant compared to the returns we may expect." A. J. W.

THE LABELED PRIVY

There may be many types of privies, but there are just two kinds. Either a privy is sanitary, or it is insanitary. Either it is propery constructed and maintained in accordance with regulations adopted by the State Board of Health, or else it is not. There is no half-way state. The label on the privy tells the story.

The labeled privy is an innovation in North Carolina, and in the United States. Heretofore there have been privies that were good or bad, and that could be easily recognized as such by any passer-by. But there were also many privies that could not be so easily classified. Many that looked all right were quite the contrary. In the future there will be no difficulty about this. The label will tell at a glance.

This will be true all over North Carolina with the exception of two entirely different classes of communities. The law enacted by the last Legislature specifies that every residence located within three hundred yards of another residence must have an improved type of privy approved by the State Board of Health. A city having a population of twenty thousand or more may be exempted from the operation of the law provided its government officially requests such exemption before October first. The law does not apply to farms where residences of owner and tenants are within the distance specified. But elsewhere, all

over the State, in city, in town, in village, in rural community, the label must go, bearing witness to the world that the privy to which it is affixed is either fit or unfit for use; that the privy is either a protection to the health of the folks living close by, or else it is a source of danger to the lives of every resident. There is no discrimination. Upon the privy of the rich and the poor, of the white and the black, the label must show.

The label will be affixed by a special inspector representing the State Board of Health. These inspectors will be officers of the State of North Carolina, acting under special authority conferred by the General Assembly of the State. It will be their duty to carefully examine each privy to ascertain, first, if it is properly constructed, and, second, if it is properly maintained. In accordance with their findings the privy is labeled.

The labels are of two kinds, each quite distinctive. One has blue letters on a white ground and bears the legend "Licensed Privy No.——, North Carolina State Board of Health." The other has black letters on yellow ground and bears the legend "Insanitary Privy, Unlawful to Use, North Carolina State Board of Health." The white label is a silent declaration that the owner and the tenant of the property are fully complying with the law that seeks to abolish the source of typhoid fever, "summer complaint," and allied diseases. The second shrieks aloud the warning that it is upon the property of a person who has not complied with the law, or that it has been misused by a person wantonly careless, so that it has become a hotbed for the propagation of disease and death. The story the label tells is simple, and one that can be understood by any person.

The labeled privy will begin to appear in North Carolina on October first. At that time the inspectors of the State Board of Health will begin their duties in the field, working all sections of the State and making as rapid progress as possible. The label is the sign of their work. Thereafter inspections will be made from time to time, from two to four times a year, or as often as practicable.

Each year in North Carolina there are approximately 3,500 deaths and 35,000 cases of illness caused by fecal-borne diseases. Among these are typhoid fever, hookworm disease, diarrhea, colitis, "summer complaint" among children and other intestinal diseases. These are caused in just one way, by swallowing infected human excrement. They can be prevented by the proper disposal of excrement.

Against these diseases the labeled privy gives protection or warns of danger. The blue and white label spells safety. The black and yellow spells danger. The blue and white label means the saving of an enormous amount of money lost through illness and death. But much more than that, it means the saving of heartaches, the saving of homes, less sorrow and more joy for the people of the State. The black and yellow label will be the more conspicuous by the infrequency of its appearance. R. B. W.

THE SANITARY INSPECTOR

The sanitary inspector is the field representative of the State Board of Health in carrying out the provisions of the state-wide privy law. For the purpose of identification, each sanitary inspector will carry upon his person a card bearing his photograph and a statement of his identity, certified to by the Secretary of the State Board of Health. He will also wear at all times when on active inspection duty a blue-and-white arm band on the left arm, bearing the words, "Sanitary Inspector."

Each sanitary inspector is a man familiar with the details of privy construction and maintenance and with the general principles of sanitation. Each man is carefully selected after an exhaustive investigation of his character and experience.

The State will be divided into ten districts, to each of which there will be assigned a sanitary inspector who will be directly responsible to the Bureau of Sanitary Engineering and Inspection for the sanitary conditions within his district. Each inspector will go into his respective district on October 1, 1919, to begin the inspection of privies in accordance with the provisions of the state-wide privy law.

The inspector will proceed in accordance with the following:

Privies Found Sanitary

The procedure is simple in such instances. The inspector posts the State privy license number upon such privy, after having collected the license fee of forty cents, for which a receipt will be issued, bearing a serial number and the privy license number, which will be recorded in the office of the State Board of Health.

Privies Found Insanitary

Such privies will be found insanitary, due either to faulty construction or faulty maintenance. In such instances the responsible parties will be subject to immediate prosecution, but it will be within the discretion of the sanitary inspector to follow one of two courses, as follows:

1. If reasonable evidence is furnished to show that the responsible individual is acting in good faith, but for some unavoidable reason has been unable to meet the requirements, the inspector will be given authority to waive prosecution temporarily. In this case the inspector will collect the license fee as usual, and will affix to the privy a sign bearing the words, "License pending." Upon his next visit he will naturally expect the requirements to have been met, at which time few, if any, excuses for non-compliance will be considered.

2. All other privies insanitary in construction or maintenance will be placarded with the sign, "Insanitary: Unlawful to Use." The inspector will specify the date after which this notice becomes effective.

Procedure with Privies, "Insanitary: Unlawful to Use."

1. Where condemnation is due to defective construction, the owner will be held legally liable.

2. Where condemnation is due to defective maintenance, the user will be held legally liable.

Procedure, Residence Without a Privy

1. The Owner. It is a misdemeanor to maintain a residence coming within the provisions of this law until such time as it shall be provided with a sanitary privy, of a type approved by the State Board of Health.

Approved and Disapproved Privies

It is a responsibility upon the owner of a residence coming under the requirements of this law to satisfy himself that the type of privy which he installs is one having the approval of the State Board of Health. If it is not, the requirements of this law are not satisfied, and the case will be handled as if there were no privy at all.

IT CAN NOT BE TOO OFTEN EMPHASIZED THAT THE CONSTRUCTION OF A SANITARY PRIVY SHOULD NOT BE DEFERRED UNTIL OCTOBER FIRST, BUT SHOULD BE ATTENDED TO PROMPTLY, INASMUCH AS THE STATE-WIDE LAW BECAME EFFECTIVE UPON THE DATE OF ITS PASSAGE, FEBRUARY, 24, 1919. In waiting until October first to begin the inspection of privies, the State has

given ample time for construction or repairing privies in accordance with the rules and regulations of the State Board of Health. The inspector will therefore be charged by the State Board of Health to apply the requirements of this law to the responsible party or parties without argument or hesitation. H. E. M.

THE SIN OF MODERN DENTISTRY

BY G. W. HOLLIDAY, D.D.S.

The greatest sin of modern Dentistry is committed against children. Nearly every dentist in the land refuses to work for them because they are such disagreeable patients. The fact that they are disagreeable can not be denied, but when a dentist tells a mother that temporary teeth will be all right without treatment he is making a statement that can be denied.

Recently there has come under my observation an eight-year-old boy with three of his second molars in extremely bad condition. The pulps in two were nearly exposed and aching and the third was abscessed with a swollen place on the gum as big as an almond and a profuse stream of pus constantly flowing into the mouth. I began mildly to censure the mother for neglecting his teeth. But she ably defended herself by saying she had carried the boy to two dentists and they both refused to work for him, assuring her that they were only temporary teeth and that it would be all right to leave them untreated, for they would soon be lost. It is absurd enough to refuse to do the work for children in this condition, but it is an unpardonable crime to teach the laity such false ideas about the care of children's teeth.

In the summer of 1918 I examined the mouths of over 600 school children. In practically every case where there were badly decayed teeth and two or three abscesses the child suffered from headache, intestinal disorders, nervous irritability, stomatitis and tonsilitis. There were two under the age of twelve who had carried five or six abscesses for several weeks. Both had undergone operations for appendicitis.

There is little doubt that such abscesses are the sole cause of the heart lesions which so suddenly and prematurely clip the thread of life. The late Theodore Roosevelt carried a blind abscess twenty years, and authorities claim this is the indirect cause of his untimely death.

If an "ounce of prevention is worth a pound of cure," why not give the children a dose? In their ignorance they are not able to defend themselves. They have a right to the best there is, especially to the truth about their teeth.

Editor's Note.—The above article was pulished as the leading editorial in *Skull and Bones*, the college paper of the Medical College of Virginia, in its issue of May 23, 1919. Dr. Holliday is one of the instructors in the Dental Department of that institution, and has had a great deal of experience in treating the teeth of children. He is now doing some special work for the North Carolina State Board of Health in Guilford County.

BAD EYESIGHT AND CROSSED EYES

BY H. M. BONNER, M.D.

Bad eyesight is due to disease of the eye—past or present, or to an error in the makeup of the eye. The clear surface of the eye in front of the pupil may have been the seat of an ulcer in days gone by, and the ulcer gotten well, but all ulcers getting well leave a scar. Whether the scar is white and ugly or almost imperceptible depends on what germ caused

the ulcer and how intelligent was the treatment.

If the scar is small or just on the edge of the pupil, or if the scar is fine, hardly to be seen, the eyesight is disturbed. If the scar is thick and covers the area of the pupil, the eye for all practical purposes is blind. These scars sometimes cause dancing eyes. Useful vision can frequently be afforded these cases by operation.

Bad eyesight may be due to disease on the inside of the eye (in the back of the eye), the outside of the eye being apparently normal. On the other hand, bad eyesight may be due to what is known to eye men as the "sick" eye, (the nearsighted eye).

The child may have been nearsighted from birth, or the eye may have been of normal length until it started to school—nearsightedness developing by use (school myopia). The child that is nearsighted at birth does not see so well as the child that develops this condition at the school age. In both cases, the outer coat of the eye is weak and tends to stretch more and more until after the child is of age. The eyes grow larger from before backward.

The farsighted eye did not grow long enough—hence it is the short eye. It will never grow longer unless some disease attacks it. If the eye is just a little short, the child will see perfectly well, and by reason of its shortness will give rise to no trouble, but will require reading glasses at an earlier age than the eye of normal length.

If the eye is "moderately" short, one eye will probably cross (not always). The crossed eye, staying crossed all the time, is not used and goes blind by non-use at about seven years of age, sometimes a little later. The other eye will see as well as anybody's eye.

If both eyes are *very* short, neither eye will see well, not half so well as the normal eye. A few of these eyes will cross—not one, but both. These children look at you first with one eye then with the other. These children cannot read at the usual distance, but hold their books close to the eyes, and the parents think them nearsighted. They do not see clearly, but in diffusion circles. They are "falsely" nearsighted.

In the moderately short eyes with one eye crossed all the time, the crossed eye can be straightened by glasses up to six or seven years of age, in nine cases out of ten, and the vision in the crossed eye will be preserved (about as good as the other).

In the alternating cross in which the child looks at you first with one eye then with the other, the eyes can be straightened by glasses up to twelve or fifteen years of age, and the eyes can be made to see wonderfully better.

These children with very short eyes are frequently clumsy until after they have proper glasses.

In the case of the nearsighted eye, the eyes should have intelligent, careful and thorough examination, and the parents should have such advice as will tend to preserve the vision and tend to avoid further lengthening of the eyes as much as possible, and the child should have that glass which will best conserve its vision.

Other eye troubles affecting school children that are due to errors in the makeup of the eye come from "astigmatic errors."

These erors give rise to headache, red eyes, sore, scaly eye lids, and to crops of styes (one stye after another). Sometimes, as the result of astigmatic error, the child squints. The headache and other reflex troubles above mentioned may be relieved almost or altogether by proper glasses.

One observer of large experience in the medical inspection of school chil-

dren says that at least four-fifths of the habitual headaches occurring in school children are due to eye strain.

FEEDING THE BABY

BY MRS. KATE BREW VAUGHN

"Does God fix the death rate? Once men were taught so, and death was regarded as an act of Divine Providence, often inscrutable. We are now coming to look upon infant mortality as evidence of human weakness, ignorance and cupidity. We believe that Providence works through human agencies, and that in this field, as in others, we reap what we sow—no more, no less."—*Dr. L. Emmett Holt.*

If asked what one thing in my opinion causes more deaths of babies under one year in North Carolina, than any other, I'd say artificial feeding, or the giving of solid food by mothers who do not know that there is any danger in this sort of food. With a faith that is frightful some mother whose baby frets a little, gets a couple of bottles and nipples and stirs up some of one of the dozen patent foods on the market, and confidently believes she is doing all that is humanly possible to start the weak child off right. The more ignorant people are of health problems, the more inclined they seem to believe in the efficiency of "mother instinct" to guide them in raising their babies. If they start to raise chickens these days, and have any money invested in the venture, they attend lectures by county agents, subscribe for poultry magazines, and in one way or another get real information to save the money invested, insure success and increase profits. "Mother instinct" would be considered nonsensical in poultry work and is no more dependable in raising babies than chickens. Mothers who add to natural mother love all the real knowledge regarding care and feeding of babies obtainable, and follow the advice secured from experts, will find it a rather difficult job to raise a baby. It is not to be wondered at, then, that so many babies die needlessly but surely, because mother is too engaged or too little informed to give that intelligent care which a thrifty poultry raiser gives his flock.

The different methods employed in feeding babies are—maternal feeding (mother or wetnurse), mixed feeding, that is, maternal feeding supplemented with some artificial food, and artificial feeding exclusively.

Maternal nursing is the natural and the ideal method of infant feeding. Every mother should nurse her baby unless there is some very grave objection, assented to by the attending physician. Physicians strive to have mothers nurse their babies, but frequently do not see the patient sufficiently often to guide and influence them. If husbands knew how important maternal nursing is, and on what foundation its competency rests, there is reason to believe that many more mothers would enjoy that immunity from hard labor, fatigue, worry and grief necessary to its success. To these latter may be attributed the necessity for resorting to supplementary feeding, or weaning babies and putting them on artificial food entirely. Husbands would procure proper diet, rest, regular habits, sleep and a simple life for the wife, if they realized that four-fifths of the deaths under one year of age are infants who are artificially fed. In addition to the success attending maternal nursing we have the financial cost of artificial feeding to militate against.

The most important advice given a mother must be such as to cause her to strive to nurse her baby, and to do so, follow as nearly as possible rules to increase her own health. This nursing should not be supplemented by any solid food, and if given regu-

larly every three hours until baby is three months of age and every four hours thereafter, feeding seven times in twenty-four hours until three months old and six times daily after that age to nine months, five times daily after nine months with baby sleeping alone in well ventilated room. The mother should procnre eight hours of nnbroken rest at night, which, together with proper food and freedom from hard work ought to make it possible for her to nurse her baby until its ninth month in winter, and every effort should be made to continue to the twelfth month in summer.

Where it is shown that a baby is not gaining in weight, and this condition lasts for three weeks, it is safe to suppose that mother's milk is insufficient, it is then necessary to give two feedings of artificial food, following regular feeding and sleeping hours.

The best supplementary food is modified cows' milk, boiled and kept cold until used, and then reheated. For the modification of cows' milk this Bureau suggests "The Cornerstone of a Child's Future," which will be sent on request.

Nothing is better established than the close relation existing between artificial feeding and diarrheal diseases. It is however not the artificial feeding as such, but ignorant and improper feeding, which causes the high mortality. Among infants who are properly fed on artificial foods, diarrheal diseases are common. It is criminal negligence on the part of a parent to put a child on a food of which they know practically nothing.

Many men are prone to give babies bites of solid food because the little tots put out their hands. These same men would not think of opening a young calf's mouth and ramming hay or corn down its throat. A little reflection will prove that a calf is quite as capable of digesting hay at three weeks, as a baby of six months is able to digest biscuit, candy or any of the many articles of food given it by fond relatives.

I am anxious to see the father become vitally interested in the rearing of the babies and believe that it will have a wonderful effect on reducing death rate. A sick baby is not only pitiful to see and sad to contemplate, but is an evidence of poor business sense. A sick baby is the cause of much lost time by mother, loss of sleep and rest by family and entails financial loss by requiring medical attention. A well baby is a joy, the cause of much congratulation to parents, increases their self respect, and, while requiring intelligent care, demands less actual nursing attention of mother and practically no expense for medical attention.

NORTH CAROLINA STATE BOARD OF HEALTH
Bureau of Infant Hygiene, Raleigh, N. C.

Please send me a copy of the following bulletins without charge:

PRENATAL CARE	Cornerstone of Child's Future
INFANT CARE	How To Keep the Baby Well
Child of Pre-School Age	Advisory letters (for expectant mothers)

Please place cross opposite bulletins wanted.

NAME .....

Address .....

Age Of My Baby .....

Date of Confinement .....

BARLEY, OATMEAL AND RICE WATER

The best general diluent for cows' milk in infant feeding is a cereal gruel in which the starch has been dextrinized or rendered soluble by action of diastase. Gruel made from any cereal renders curd of cow's milk more flocculent and increases the quantity of tissue building protein which the infant can digest. This amounts to fifty or one hundred per cent, which is of great value in feeding.

Diluting cow's milk, which contains less soluble nutriment than woman's milk, reduces the quickly absorbable part of the food to almost nothing. This then is partially replaced by the digested starch of the dextrinized gruels, which is easily absorbed and assimilated. The youngest infants can usually assimilate these gruels. No other form of nourishment is so well borne in many cases.

Barley water may be made either from grains or from barley flour. When grains are used, the following formula is used:

2 tablespoons pearl barley
1 quart water
pinch salt.

Boil six hours and keep quantity of liquid up to quart by adding water from time to time. Strain through coarse muslin cloth. The time for cooking may be decreased if pearl barley is soaked in water two to three hours before boiling (the water used for soaking should be thrown away). When this is cold it makes a thin jelly.

An identical product may be easily obtained by using barley flour:

1 level tablespoon barley flour
12 ounces of water.

Cook twenty minutes. A thicker jelly may be made by doubling amount of barley flour. Rice, oatmeal, or wheat water may be made in same manner. These waters or jellies are useful in feeding healthy babies of five or six months or over. Also good to be given in case of indigestion when milk must be omitted or used very weak. When there is a tendency to constipation, oatmeal may be used; when a tendency to looseness, barley is always preferable.

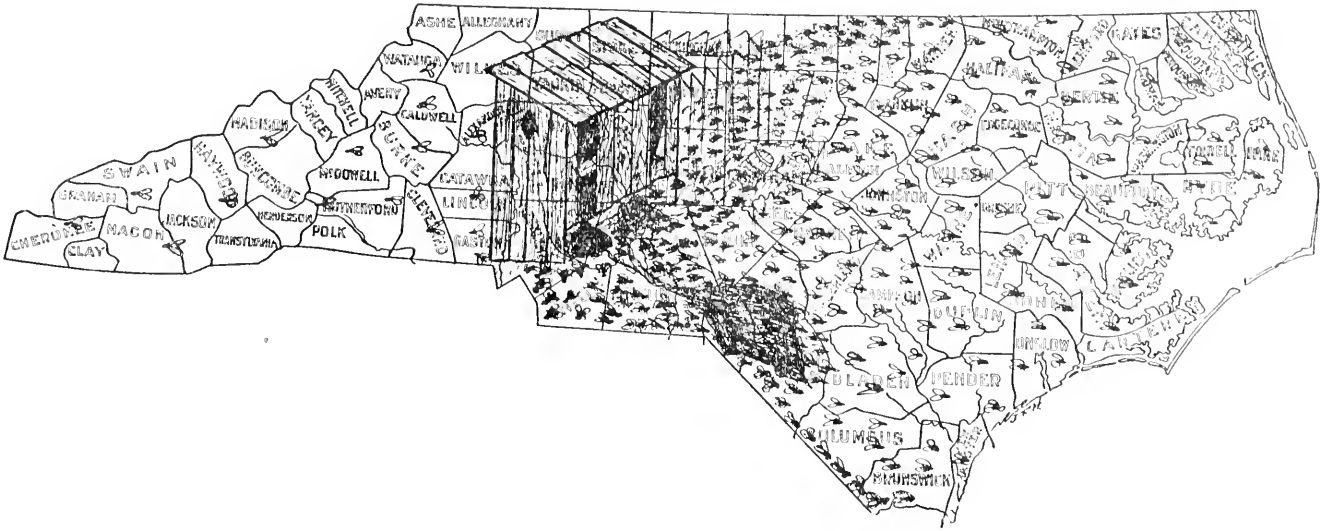
LIME WATER MADE AT HOME

Get a lump of clean lime which has not been exposed and pour on a quart of water in open vessel and allow to slake. When this is completed and lime has settled, pour off clear liquid at the top, as this contains potash, soda and other soluble impurities in the lime. Stir up the lime with second quart of water and pour off as before. This will leave the lime quite pure. The lime may then be placed in a large mouth quart bottle or fruit jar filled with water. When the lime water is clear it may be poured off into any convenient bottle for use and more water poured on the lime. This may be repeated as long as any lime remains undissolved, but it is well to use a new lump of lime every two months or so.

Mothers make a mistake in nursing baby too long. Dislike on the child's part to a change of food or difficulty of obtaining that food is no excuse for nursing after twelve months.

Remember that with a baby on an exclusive boiled milk diet, scurvy is guarded against by giving from two to six tablespoons diluted orange juice, sweet lemonade, or where these are not obtainable, juice of fresh or canned tomatoes, heated to boiling and strained. Baby one month old can bear one teaspoon, increasing daily according to age.

THE INSANITARY, OPEN-BACK PRIVY MUST GO!



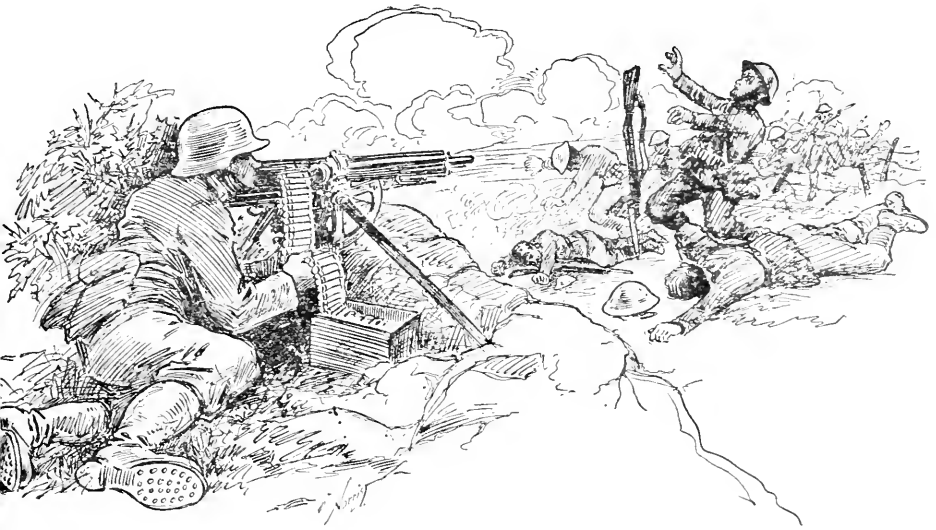
Out from this abomination flows a steady stream of death and desolation, spread throughout the State by the deadly fly. It costs North Carolina approximately $15,000,000 each year—and 3,500 deaths and 35,000 cases of illness. Away with it!

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Vol. XXXIV | OCTOBER, 1919 | No. 10



THE WAY THE GERMANS DID IT AT CHATEAU-THIERRY

During the recent war approximately 1000 men from North Carolina were killed in battle.

THIS BULLETIN WAS PREPARED JOINTLY BY THE HEALTH AUTHORITIES OF VIRGINIA, NORTH AND SOUTH CAROLINA

THE WAY NORTH CAROLINIANS DO IT AT HOME

During the epidemic last fall and winter 13,644 North Carolinians laid down their lives to a "spit-borne" disease—influenza!

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. XXXIV OCTOBER, 1919 No. 10

EDITORIAL

WILL THE EPIDEMIC RECUR THIS WINTER?

The epidemic of influenza will recur this winter, if the germ that causes it is not worn out in killing people, if we have no artificial means—quarantine or vaccination—for controlling the disease, or if it has not already affected all of the population that is susceptible. But note the three "ifs"; any one of them can prevent or limit the recurrence of the epidemic. It is, therefore, necessary, in arriving at a satisfactory answer to our question, will the epidemic recur this winter, that we understand the three possible factors that limit the duration of epidemics. As suggested, these three factors are:

First: The loss of virulence by the infective germ which causes an epidemic as a factor in the cessation of the epidemic, is an extremely remote probability—almost too remote to discuss. The writer is unable to find any references in the literature available to him on this question; indeed, the science of bacteriology teaches the reverse, that infective germs gain rather than lose virulence during an epidemic. Germs are small vegetable forms, and it is a matter of common observation that successive generations of plants, the soil in which they grow remaining the same, become more vigorous rather than less vigorous. It, therefore, does not seem reasonable nor probable that epidemics, including influenza, stop because of the exhaustion of the infective germs.

Second: Artificial means, such as quarantine and vaccination, may be effectively applied in the control of some epidemics, as diphtheria, typhoid, scarlet fever, yellow fever, etc., but there is no evidence to show, and there are no health officers of dependable reputation who believe, that any epidemic of influenza has ever been or can be controlled or stopped with our present means. The most that can be done by artificial means, such as preventing public assemblages, is to retard the progress of an epidemic so that available medical and nursing care may be adequate to the emergency.

Third: The consumption of the infective material, susceptible fuel, rendering it immune like the unstricken portion of the population, is, by the exclusion of the other two possible factors, the responsible factor and the sole factor in limiting the duration of an influenza epidemic. To recur to the illustration above used: The farmer knows what clover sick land is; that it is land on which clover has been grown for a number of years until some of the chemical ele-

ments of the soil necessary to the life of the clover has been so completely consumed by the successive crops that the soil can no longer produce the clover which for several seasons grew luxuriantly; and in the same way and for the same reason the soil becomes sick, unable to produce any crop raised continuously upon it for a number of years. So with epidemics; they can begin, spread, and exist only on non-immune, susceptible populations, and when the susceptible population has been affected and made immune, the epidemic, under natural laws, must stop.

Now comes the real question: What percentage of the influenza susceptible population did the epidemic of last winter affect? On our ability to answer this question would seem to rest our right to draw conclusions as to the prevalence of influenza this fall and winter. The history of influenza extending back over a period of 800 years and recording about 100 epidemics, indicates that an epidemic usually involves about 40 per cent of the population. Recalling the more recent epidemics (that of last year excepted), the epidemics of 1890, '91, and '92, and that of 1900, '01, and '02, we had an involvement during the entire course of these epidemics of perhaps 40 per cent of the population, possibly 50 per cent. In both of these last two mentioned epidemics there was during the several years of their prevalence a total of less than 100 deaths per 100,000 population. In the epidemic of last year there was an involvment of at least 35 per cent of the population, and there were 400 deaths per 100,000 population. These figures would indicate that the epidemic of last fall and winter consumed the major portion of the susceptible material, and that there remains but a small percentage of susceptible material to be affected this fall and winter. It, therefore, appears reasonable to assume that we need not look for more than one-seventh, certainly not more than one-fifth, of the cases of the disease and deaths from the disease that we had during the last year. It is likely that we will see local and, in some places, rather intensive epidemics; however, these local epidemics will in nearly all cases occur in those places that were, comparatively speaking, but slightly affected last winter, and, fortunately, there are only a few such places.

On the other hand, judging from the teachings of history, we must expect the pneumonia death rate for this winter to be exceptionally high. In the epidemic of 1899 to 1892 we find that while that epidemic stopped in the year 1892, the pneumonia death rate in '93, the year following the epidemic, was unusually high.

The above has been written with a considerable degree of hesitation; in fact, with a distinct embarrassment, feeling that in setting forth our rather hopeful attitude toward the possible recurrence of influenza this fall and winter we would discourage preparations for meeting epidemic emergencies, that we would substitute optimism for preparedness, hope for safety. Therefore, it seems well to point out the fact that the history of this disease teaches consistently, almost without any exception, that its epidemics extend over several years, and from a study of recent articles on influenza it appears to be the belief of the majority of the health officers of this country that we shall see a recurrence of the epidemic this winter. Under these circumstances, our attitude should be one of hopefulness, our position one of safety.

INFLUENZA

INTRODUCTORY

Historical: Man has had a long and bitter experience with influenza. Historical record describes the disease over a period of eight hundred years, during which time there have occurred about one hundred world-wide invasions, or pandemics. In pandemic form the disease has suddenly appeared, struck down millions, buried hundreds of thousands, and gone, leaving man tragically impressed with its wholesale destruction and puzzled as to its real nature.

Definition: Influenza is a disease characterized by its tendency to appear in world-wide epidemics, that is, pandemics, involving usually from thirty to fifty per cent of the population. The disease has a marked tendency to involve the respiratory organs and differs usually from colds and bronchitis in the more marked prostration which it causes.

CAUSE

Communicable: The disease is communicable. No disease spreads so rapidly and involves so large a percentage of the population as does influenza. The communicable character of the disease is a matter of common observation. On this point there is no question—all agree.

Source of Infection: Because (1) of a considerable amount of unfounded popular speculation as to the source of infection in this disease and (2) on account of an **apparent** conflict of certain recent and important experiments with the generally accepted scientific position that the disease is carried through the secretions of the respiratory passages, it seems desirable here to point out the basic facts as to the source of infections generally, and then by a process of elimination reach a satisfactory conclusion as to the source of the infection in influenza. There are four principal sources of infection: (1) discharges from the bowels and bladder, excrement infections; (2) infections from the blood, the blood being conveyed from the sick to the well by suctorial insects, as in the case of malaria and the mosquito; (3) infections from the discharges of the genital organs, venereal infections; and (4) discharges from the mouth and nose, spit, and the secretions coughed or sneezed out through the mouth and nose.

Now by elimination: First, influenza is not an excrement-borne disease. If it was, it would prevail where and when typhoid fever, dysentery and cholera, the excreta diseases, are found. Those places with good water supplies, with sewerage, with few flies and with well-regulated milk supplies would escape, and those places lacking in these sanitary conditions would be hard hit. Influenza, as we all know, involves alike cities that have little or no excreta diseases and cities that have a high death rate from such diseases. And again, excreta diseases are warm weather diseases, coming on the wings of the fly and leaving with him, whereas influenza is, for the most part, a cold weather disease. Second: influenza is not an insect-borne disease. Insect-borne diseases are tropical or semi-tropical in their distribution, whereas influenza is world-wide in its distribution, and absolutely ignores the geographic lines and conditions of climate and season that determine the habitat and activity of insects. Third, influenza is not a sex disease. It involves both sexes alike, disregards the active

period of sex life, and makes no distinction between the chaste and the unchaste.

Thus we arrive by exclusion at the only conclusion that is tenable and a conclusion that is accepted by all students of this disease, namely, THAT THE SOURCE OF INFECTION IN INFLUENZA IS THE MATERIAL SPIT AND SNEEZED OUT, OR TRANSFERRED TO THE HANDS.

Infectious Stage of Influenza: Information on this point is capital for dealing with the all-important matter of prevention. Recently some intensely interesting experiments have been done which strongly indicate, if not prove, that the INFECTIOUS STAGE OF INFLUENZA IS, AS A RULE, BEFORE THE SYMPTOMS OF THE DISEASE APPEAR.

The experiments above referred to were performed by eight carefully trained, thoroughly qualified medical officers of the Navy and the U. S. Public Health Service, four representatives of each branch of the government.

The experiments were carried out with two hundred volunteer men whose ages ranged between eighteen and thirty years, the most susceptible age for influenza, and who, after careful questioning, gave no history of having passed through an attack of the disease. Of the two hundred subjects for the experiment, one hundred were selected from in and around Boston, and one hundred from in and around San Francisco.

The report of the investigators says, with respect to the selection of cases of influenza to which the volunteer subjects were exposed:

"We always kept in mind the fact that we have no criterion of influenza; therefore, I would like to emphasize the fact that we never took an isolated case of fever, but selected our donors from a distinct outbreak or focus of the disease, sometimes an epidemic in a school with one hundred cases from which we would select four or five typical cases in order to prevent mistakes in diagnosis of influenza."

The influenza cases varied in duration from one to three days, some of the cases being in the earliest hours of the disease, that is, easily within the first day.

The investigators tried by every conceivable means to transfer infection from the sick to the volunteers. They took the secretions, coughed up material, from the nose, throat and lungs, mixed it in solution, put it in atomizer, and sprayed it in the throats, noses and eyes of ten of the volunteers. At first they used fifteen drops of the infected solution, and in a later experiment used ninety drops, so much that some of it was swallowed. In neither of the experiments did any of the volunteers contract the disease. The investigators then took nineteen volunteers directly to the bedside of the patients and with swabs transferred secretions from the noses and throats of from two to three influenza patients to the nose and throat of each of the nineteen volunteers. None of the volunteers showed the slightest evidence of the disease, and they were all held under closest observation for more than a week. Next the investigators took the blood from patients through hypodermic syringes and injected it directly into the veins of volunteers with the same negative result as in the foregoing experiments. The remainder of this series of experiments may be given in the words of Dr. M. J. Rosenau, Professor of Preventive Medicine at Harvard University, and one of the medical officers of the Navy interested in the investigation:

"The next experiment was designed to imitate the natural way in which influenza spreads, at least the way in

which we believe influenza spreads, and I have no doubt it does—by human contact. This experiment consisted in bringing ten of our volunteers from Gallops Island to the U. S. Naval Hospital at Chelsea, into a ward having thirty beds, all filled with influenza.

"We had previously selected ten of these patients to be the donors; and now, if you will follow me with one of our volunteers in this ward, and remember that the other nine were at the same time doing the same thing, we shall have a picture of just what was happening in this experiment.

"The volunteer was led up to the bedside of the patient; he was introduced. He sat down alongside the bed of the patient. They shook hands and by instructions, he got as close as he conveniently could, and they talked for five minutes. At the end of five minutes, the patient breathed out as hard as he could, while the volunteer, muzzle to muzzle (in accordance with instructions, about two inches between the two) received this expired breath, and at the same time was breathing in as the patient breathed out. This they repeated five times, and they did it fairly faithfully in almost all of the instances.

"After this had been done five times, the patient coughed directly into the face of the volunteer, face to face, five different times.

"I may say that the volunteers were perfectly splendid about carrying out the technic of these experiments. They did it with a high idealism. They were inspired with the thought that they might help others. They went through the program with a splendid spirit. After our volunteer had had this sort of contact with the patient, talking and chatting and shaking hands with him for five minutes, and receiving his breath five times, and then his cough five times directly in his face, he moved to the next patient whom we had selected, and repeated this, and so on, until this volunteer had had this sort of contact with ten different cases of influenza, in different stages of the disease, mostly fresh cases, none of them more than three days old.

"We will remember that each one of the ten volunteers had that sort of intimate contact with each one of the ten different influenza patients. They were watched carefully for seven days—and none of them took sick in any way."

By the process of elimination which we followed in arriving at the conclusion that the infection of influenza exists in the secretions of the nose and throat and mouth, and in the light of the experiments above described WE SEEM FORCED TO ONE OR ALL THREE OF THE FOLLOWING CONCLUSIONS AS TO THE SOURCE OF THE INFECTION:

(1) **Influenza is an infectious disease,** the infectious agent existing in the respiratory passages of persons usually before they are affected with the symptoms of the disease.

(2) **Influenza is an infectious disease,** the infectious agent existing in the respiratory passages of persons who are themselves immune to the disease, but who are carriers of the infectious agent.

(3) **Influenza is an infectious disease,** the infectious agent existing in the respiratory passages of both (1) and (2), that is, susceptible persons prior to their illness with the disease, and immune persons who are carriers, but not victims of the disease.

Mode of Infection: There are four ways in which infectious secretions from the nose and mouth may be transferred to others: (1) spray-borne infection; (2) dust infection; (3) direct contact; and (4) indirect contact infection.

Spray-Borne Infection means that the discharges from the mouth and nose are expelled in acts of coughing and sneezing, and sometimes in loud talking, and are conveyed by currents of air to another person. These discharges are in the form of microsopic droplets, many of which are visible even to the unaided eye when caught by sneezing or coughing against a mirror. Recent evidence tends to show

that the infected droplets are not, as a rule, expelled on a level from the mouth and nose more than eighteen inches before they begin to fall toward the floor. Other evidence indicating the circumscribed area in which the infected droplets are active is the experience obtained in the treatment of different infectious diseases, known to be carried by droplet infection, in the same hospital wards and in beds only eight or twelve feet apart and surrounded by screens only six or eight feet high. Under such an arrangement a child with whooping cough, who is susceptible to measles, may be placed in a neighboring bed to a child with measles, who is susceptible to whooping cough, without danger of transfer of infection. This hospital practice, which is now becoming quite general, could not be carried out if infected droplets floated for any considerable period of time in the air, or if such droplets were thrown any considerable distance from the person expelling them. Where a person cannot cover the mouth and nose with a handkerchief in acts of coughing and sneezing, the head should be held toward the floor so that the droplets will be directed downward.

Dust Infection means the expulsion in acts of coughing, spitting and sneezing of the respiratory, nasal and oral, secretions, the drying of these secretions on the floor, street, or elsewhere, and the grinding of them by feet, brooms, dusters, and other objects into dried, floating particles of infected dust, some of which ultimately reaches the air passages of another person.

There is this great difference between spray-borne infection and dust infection which should not be lost sight of: in spray-borne infection the infectious agent is in a moist condition and reaches the second person in a short time after expulsion. The infectious germ is fresh, moist, and in a condition but little changed from that in which it existed in the infected person. In dust infection, on the other hand, the infectious germ has been separated from its normal habitat and food supply for hours, or days. It has been exposed to the air, and in many cases to the sunlight, and is, therefore, a weakened, enfeebled, sick germ. The germ in the infected droplet is more restricted in its area of infectivity, but is probably more infectious, while the germ in the dust has a wider area of infectivity, but is less infectious.

Direct Infection means the transfer of respiratory secretions from one person to another in acts of kissing. In this way we have the possibility of massive infection with fresh infectious material.

Indirect Contact Infection means the transfer of infectious agents from an infected to an uninfected person in one of the following ways:

(1) Eating and drinking utensils: common drinking cups, insanitary soda-fountains and insanitary eating places afford abundant means of indirect contact infection. An infected person uses a drinking cup or a glass at a soda-fountain, or a plate or a knife or a fork or a cup at a restaurant, and these things, without being sterilized, are served to a second person, who becomes infected. At soda-fountains and in restaurants the wash water in which the unsterilized and infected utensils are dipped and washed becomes more and more heavily polluted and infected, and more dangerous the longer it is used—its spit content becomes denser and deadlier all the time.

(2) Hand infection: bacterlological examination of the hands of the aver-

age person shows the hands to be contaminated with most of the germ-life which is ordinarily found in the nose and mouth and throat; moreover, there are more of these germs on the hands in the cold months of the year than in the summer months, for the reason that in the cold months there is more mucous secretion, more coughing and sneezing, and greater contamination of the hands with spit. The habit that some people have of "smothering" the cough or sneeze by placing the hand over the mouth brings about a heavily contaminated condition of the hands. The spit contaminated hand passes its infection in hand shakes, and in handling those things, such as door knobs, pencils, street car supports, etc., that others must touch. The distance between the infected hand and the mouth and nose of the second person is easily bridged by both the imagination and the germ.

The importance of indirect infection has recently been greatly emphasized in a report of an investigation carried out by two Army officers, Col. Chas. Lynch and Lt. Col. James G. Cumming. These officers observed the relative prevalence of influenza among 66,000 troops, which could be divided into two groups of approximately 33,000 each, according to whether or not their eating utensils were sterilized after each meal and before food was served a second time. The officers found that infiuenza was five times more prevalent among the 33,000 troops who used eating utensils that were **not** sterilized than among the 33,000 troops whose eating utensils were sterilized before food was served. The two groups of soldiers lived otherwise under practically the same conditions.

Conclusion as to Method of Infection: Influenza is conveyed through infected secretions of the respiratory passages, probably, as a rule, from persons who either do not themselves suffer from the disease or who have not at the time developed symptoms of the disease, and which are passed to another, either in infected droplets, dust, direct or indirect contact.

Incubation Period: By the incubation period we mean the period elapsing between the time a person is exposed to an infection and the time such a person shows symptoms of the infection. In influenza the incubation period is exceedingly short, and this is one of the important factors in the rapidity of the spread of the disease. The period of incubation in this disease is regarded as usually between thirty-six and seventy-two hours, frequently forty-eight hours.

Germ, or Infectious Agent: Dr. William H. Park, Director of the laboratories of the New York City Health Department, one of the best known and one of the most reliable authorities in this country on the subject of bacteriology, or germ diseases, in an article published in August this year, in which he reviews the various investigations and literature bearing upon germs possibly related to influenza, concludes his article with these words: "Our final conclusion is, therefore, that the micro-organism causing this epidemic has not yet been identified." This is also the conclusion of a commitee of sixteen prominent public health officials representing and speaking for the American Public Health Association.

PREVENTION

Our ideas of prevention must naturally rest upon what we know or believe as to conditions which cause the disease. From what has been said in regard to the cause of the disease there seems to be but two ways for

preventing influenza: one rests with the individual and the other with society.

Individual: If an individual could isolate himself absolutely on an island during the prevalence of an epidemic of influenza he would escape. His liability to the disease is in direct proportion to his intimate association or contacts with others. Ordinarily, a susceptible individual who has one hundred more human contacts during the day than another susceptible individual is one hundred times more liable to become a victim of the disease. It is, therefore, apparent that the individual can do much toward protecting himself by reducing his human contacts, particularly his association with crowds, to a minimum during the course of an epidemic.

Social: Society may lessen its liability to this disease and the other spray-borne infections by eliminating the dirty and dangerous practice of promiscuous coughing and sneezing and spitting. This custom will gradually die out as the average citizen becomes more intelligent and realizes the danger of spray-borne infections, and when there develops a critical and unfriendly attitude on the part of the majority of citizens toward the man who coughs and spits without using a handerchief, or at least turning his head toward the ground, or who, selfishly thinking of himself and disregarding the rights and health of others, attends public assemblages to interfere with the accoustics of the place, and with both the comfort and the safety of his neighbors.

SYMPTOMS

The symptoms of influenza are those of an ordinary "cold in the head" (coryza) or "cold in the chest" (bronchitis) with this difference: In influenza the constitutional symptoms, the prostration, the general, as contrasted with the local, symptoms predominate. As a rule the onset of the disease is abrupt and the constitutional symptoms, the chilly feeling, the fever, the headache, the backache, and pain in the limbs, are so pronounced as to usually suggest the correct diagnosis of the disease to the patient himself. As this is intended to be a popular and not a medical discussion of the disease we shall avoid going into scientific detail in the discussion of the symptoms.

COMPLICATIONS

Uncomplicated influenza rarely ever kills; but from one to three per cent of influenza kills through a common and very fatal complication, namely, pneumonia. In the Army camps from eight to fifteen per cent of the influenza cases were complicated with pneumonia. In civilian life, and in the absence of hospitalization, perhaps pneumonia was not more than half so frequent a complication as under the conditions of military life, that is to say, pneumonia was a complication in probably from four to eight per cent of the cases. The pneumonia complicating influenza differed both in symptoms and in the appearance of the lungs from the ordinary lobar pneumonia and the ordinary broncho pneumonia. It usually made its appearance from three to five days after the onset of influenza. The pneumonia was a highly fatal form of the disease, terminating in death in from twenty-five to thirty per cent of the cases.

DIAGNOSIS

The two diseases from which influenza must be differentiated are ordinary colds and bronchitis. As already stated, the difference between influenza on the one hand and colds in the head and chest on the other hand is

the more marked constitutional involvement, the more pronounced chilliness, fever, and general pains in influenza than in the colds. However, there is no diagnostic criterion for influenza, such as we have in finding the germ of diphtheria, or tuberculosis, or malaria, in those diseases, or the Wassermann reaction in syphilis. Between epidemics it is impossible to separate mild cases of influenza, cases where the constitutional involvement is slight, from colds and bronchitis; during epidemics most cases of colds and bronchitis are "lumped in" with the prevailing disease, being regarded as influenza with mild symptoms.

TREATMENT

There is one DO and one DON'T in the treatment of this disease which the intelligent layman should be aware of.

The DO: To quote Dr. Herrick, of Chicago, one of the leading physicians of that city:

"There is, however, one feature of the treatment of influenza on which all agree, namely, the importance of early rest in bed and the continuance of such rest until fever, cough and other symptoms have for several days disappeared. It is a common experience for the patient who does not at once give up when attacked by the disease, or who leaves his bed early and attempts to go to work the moment he thinks he has the requisite strength, to suffer from a recurrence of symptoms, possibly to have pneumonia appear, or to be incapacitated on account of persistent cough, irritable heart or nervous and muscular weakness. A few days added to the period of rest would often save the patient from a protracted convalescence or prevent serious sequalæ."

The DON'T: One of the leading authorities on drug action in this country, Dr. Solomon Solis Cohen, of Philadelphia, expressed the feeling of a large group of medical men with exceptionally good standing in their profession when he said:

"Antipyrin and acetanilid were at first advocated by great authority, but their deadliness was soon recognized. Unfortunately, in Philadelphia at least, that lesson was forgotten. If I may judge from what I frequently heard in the consultation room, there was a wide-spread tendency to use two very harmful drugs, aspirin and phenacetin. . . . Not that everyone died who received these drugs; quite a number survived both the disease and the medicine; some, no doubt, to suffer later from weakened heart and nerve depression. But in the majority of the cases in which they were used, these drugs deprived the patient of his chance to recover. Of that, I have no doubt. Salicin and certain of its derivatives, namely sodium salicylate and quinin salicylate and cinchonidin salicylate (not aspirin, remember—that is a dangerous cardiovascular depressant) were very useful, not as specifics, but as aids."

VACCINATION AGAINST INFLUENZA

Dr. G. W. McCoy, Director of the and the leading authority of the United United States Laboratory of Hygiene, States Government on the subject of vaccines, in concluding an article entitled "Status of Prophylactic Vaccines Against Influenza" published in the Journal of the American Medical Association August 9th, says:

"IN EVERY CASE IN WHICH VACCINES HAVE BEEN TRIED UNDER PERFECTLY CONTROLLED CONDITIONS, THEY HAVE FAILED TO INFLUENCE IN A DEFINITE MANNER EITHER THE MORBIDITY OR THE MORTALITY."

The man with the concealed pistol is dangerous, but the man with the uncovered cough or sneeze is deadly.

MANAGEMENT OF INFLUENZA EPIDEMIC

What the State Board of Health is Prepared to Do in Assisting Counties and Towns in an Epidemic of Influenza

In a general way, the work of the State Board of Health in an epidemic of influenza may be classified under two headings, namely, relief and advisory.

Relief: In the absence of known methods of preventing or cutting short an epidemic of this disease, and in the presence of an overwhelming number of cases of influenza, as in the epidemic of last winter, the work of The State Board of Health must be largely directed to relief. Relief work in this disease was during last year, and in the case of severe local epidemics this year will continue to be, largely rendering assistance to stricken communities in securing the necessary medical and nursing attention and, sometimes, supplies of drugs.

In assisting communities in securing additional physicians and nurses, the State Board of Health will serve as a clearing house, having already arranged with a number of doctors and nurses for their services at a mutually agreed upon compensation, and with the understanding that these doctors and nurses will accept assignments under the direction of the State Board of Health for emergency service in influenza. The stipulations agreed upon are actual expenses and $15 per diem for doctors and $5 per diem for trained nurses. Assignments of doctors and nurses for emergency service in an epidemic will be made as follows:

The official representative of the county or town will call upon the State Board of Health for such medical and nursing assistance as is needed. The State Board of Health will recognize, therefore, as official calls, requests from the chairmen of boards of county commissioners, the county health officer, and mayors or health officers of towns and cities. In the confusion of the epidemic last year, calls for assistance reached the Board of Health from all sorts of people, men and women, white and colored, official and non-official. Some calls were made by persons whose advice and whose diagnosis of local needs were faulty. Therefore, in dealing with epidemic conditions this year, the State Board of Health wishes to emphasize the importance of emergency calls for assistance being made through the regular official channels. Townships needing assistance will get in touch with the chairman of the board of county commissioners and have him call the State Board of Health. Towns needing assistance will get in touch with the mayor and have him communicate with the State Board of Health.

In assigning doctors and nurses to stricken communities, it will be understood that the financial responsibility, assumed by the State with the doctor or nurse assigned to a stricken district, will be taken over by the official making the call. It will be further understood that on the arrival of the doctor in a stricken community, the official representative of the community will instruct the doctor to keep an itemized account of all expenses, to render medical need at the regular rates for physicians' calls in the community, to keep an account of all collections and all unpaid visits, the account to be turned over to the official representative of the community on the completion of the doctor's assignment. It will be further under-

stood that in case the doctor has collected less than $15 a day and expenses, the responsible official of the town or county will pay him the difference. In case the doctor's accounts amount to more than $15 a day and expenses, the surplus will be used by the community for other relief work. In the case of nurses assigned to stricken communities, the official making the call will assume all the financial responsibility which the State Board of Health carries with the nurse, and will make such local arrangements to meet the expenses and pay of the nurse as the community forces may decide upon.

The above arrangement with respect to financing a supply of relief physicians and nurses has been adopted for four reasons: First, it proved entirely satisfactory last year; second, it is necessary, the State Board of Health being financially unable to assume the responsibility of paying for all the medical and nursing care which may be made necessary under epidemic conditions; third, the need in an epidemic of influenza in North Carolina is not money, but medical assistance. There were few individuals and, so far as we know, no communities in North Carolina that suffered in the epidemic last year on account of limited finances. The individuals and communities had the money to pay for doctors and nurses. The trouble was that there were not doctors and nurses to be had for the money in hand. The State Board of Health, therefore, in meeting local calls for assistance, recognizes the character of the call, that it is for medical and nursing service and not for financial help. Fourth, if, as was the practice in a number of states whose state board of health had large emergency funds, the State should furnish free doctors to stricken communities, there would be practicing in that community local physicians making their regular charges in competition with emergency physicians equally capable making no charge at all, and this would result in the local physician working under unfair competition, losing a fair and just compensation when he was most needed, and in the free horse pulling the heavier part of the load. For the two classes of physicians, the local and the emergency physicians, to work on the same remunerative terms means an equitable distribution of work.

Advisory: The advisory work of the State Board of Health will consist of two parts:

(1) General educational work carried on by the preparation and publication in the Bulletin, special pamphlets, and leaflets, and through the newspapers of the State, of articles descriptive of the disease, and suggesting the best ways and means by which both the individual and society may conduct themselves under epidemic conditions.

(2) Conferences with any community, county, or city that finds itself in the grip of an epidemic and desires the services of a representative of the Board of Health for conference and assistance in arranging for the local plan of work described briefly but clearly on pages 14 to 15 of this Bulletin.

A final suggestion: The mayors of towns and cities, the chairmen of boards of health, and local health officers, in communicating with the State Board of Health with respect to a local epidemic of influenza, should not hesitate to use the telegraph or telephone at the expense of the State Board of Health when time is a factor in dealing with the local condition.

WHAT A COUNTY OR TOWN SHOULD DO IN CASE OF AN EPIDEMIC OF INFLUENZA

Should influenza again visit the State in epidemic form and become as widespread in certain counties and towns as it was during the fall of 1918, it will again become impossible for the local medical and nursing professions to meet the demands made upon them by the sick. This will make it necessary for the people of each community to organize and care for themselves. In order that such organization may be uniform and thorough it is necessary for it to have official supervision, and such supervision should, and can only, be given by the county or by an incorporated town. The responsibility for the health of the people—the responsibility for this organization—rests, under our State law, upon the Chairman of the Board of County Commissioners for the County and upon the Mayor for a town having a separate organization.

In addition to organizing for relief work the County or Town should employ temporarily, at least, an experienced nurse to arrange for home nursing courses for instructing the women and girls, and should pass regulations forbidding the use of the commou drinking cup and the common towel.

To prevent the unnecessary spread of the disease and to care for the sick, for which the county and the town are responsible, the Chairman of the Board of County Commissioners and the Mayor should arrange for the following organizational and educational work in each county and town:

1. Information should be given the people regarding influenza, its prevention and cure, and the probability of its return during the coming winter. Such educational work may be done through newspaper articles, through notices read at schools, churches, and other public meetings, and through the distribution of bulletins prepared by the State Board of Health and placards prepared by the County Board of Health.

2. Classes should be organized to teach volunteer lay nurses the essentials of home nursing. This can easily be arranged in counties or towns having active health departments. The Red Cross is at present assisting in this work in a number of places in the State. A suggestive outline for a course in home nursing is given in this number of the Bulletin.

3. The Superintendent of Public Welfare, or some other energetic citizen, should be appointed County Supervisor of the health organization work. The duty of the County Supervisor should be to appoint a Local Supervisor in each township and through these organize the people of each school district and each town for relief work. The Township Supervisors should organize the following community committees, with definite duties for each to perform:

a. INTELLIGENCE COMMITTEE. The chairman of this committee should be especially active and intelligent, thoroughly acquainted with the community, and able and willing to gather accurate information daily regarding the sick. This committee should report daily to the Township Supervisor upon the number of new cases, the condition of previous cases, any emergency need for food, medicine, or nursing aid, or money. In communities with a great many people sick at the same time this committee can, through home

visits, ascertain which patients are most in need of a visit from a physician or nurse and, in this way, provide medical attention for the most serious cases.

b. NURSING COMMITTEE. This committee should have a list of all available persons in the community who will volunteer to do ordinary nursing in cases of need. Many persons ill with influenza do not need the services of a trained nurse, even if one could be obtained, but many families do need the simple home attentions which can and should be supplied through this committee. In an epidemic there is always great need for emergency housekeeping and for visits at country homes of people who will care for livestock, provide wood and water, and other such essentials. This committee can greatly decrease the number of relapses from influenza and the large number of deaths occurring during these relapses.

c. FOOD COMMITTEE. This committee should supply simple, wholesome food to families in actual need. In some communities of North Carolina during the last epidemic the entire membership of families was stricken at the same time and compelled to go without proper food and home attention because there was no one able to either prepare food or go out and ask for aid.

d. TRANSPORTATION COMMITTEE. This committee should be prepared to furnish means of conveyance and a local guide in case either a doctor or nurse is sent to the community from some outside point. It should also be prepared to meet the needs of the other four committees.

e. FINANCE COMMITTEE. This committee should secure voluntary contributions for the necessary relief of afflicted families in the community which may be destitute. There are likely to be families who are temporarily in need of assistance because of the epidemic.

In addition to the organizational work, the County Supervisor should keep in touch with the State Board of Health and keep the Board informed of conditions in his county. He should also be of assistance to the County Health Officer or County Physician and the County Board of Health in enforcing ordinances enacted by the Board.

4. The County Board of Health should enact and enforce ordinances forbidding the use of the common towel and requiring all soda fountains and cold drink stands to use individual paper cups, saucers, and spoons. Sterilizers for soda fountain glassware are of very doubtful efficacy and should never be relied upon. No chances should be taken—paper cups should be required.

This Bulletin tells you how to protect yourself. The Lord helps those who help themselves.

What the Individual Should Do in Protecting Himself from Influenza

TEN SIMPLE BUT VITALLY IMPORTANT RULES

INFLUENZA IS CONVEYED BY THE SECRETIONS OF THE NOSE AND MOUTH

1. AVOID PEOPLE WHO ARE COUGHING OR SNEEZING.
2. DO NOT ATTEND CROWDS OR LARGE GATHERINGS INDOORS OR OUTDOORS.
3. KEEP THREE FEET FROM PERSON TALKING.
4. WHEN YOU COUGH OR SNEEZE, COVER YOUR NOSE OR MOUTH WITH A HANDKERCHIEF, OR TURN YOUR FACE DOWNWARD.
5. DON'T USE CUP OR OTHER EATING UTENSIL USED BY OTHERS WITHOUT THOROUGHLY WASHING AND BOILING IT.
6. DON'T PUT INTO YOUR MOUTH FINGERS, PENCILS OR OTHER THINGS THAT DO NOT BELONG THERE.
7. WASH YOUR HANDS BEFORE EATING.
8. EAT PLENTY OF SIMPLE, NOURISHING FOOD.
9. SLEEP AND WORK IN ROOMS FILLED WITH FRESH AIR, BUT KEEP THE BODY WARM.
10. IF YOU GET INFLUENZA, GO IMMEDIATELY TO BED TO WARD OFF PNEUMONIA, AND STAY IN BED SEVERAL DAYS AFTER FEVER SUBSIDES TO AVOID SUBSEQUENT WEAKNESS.

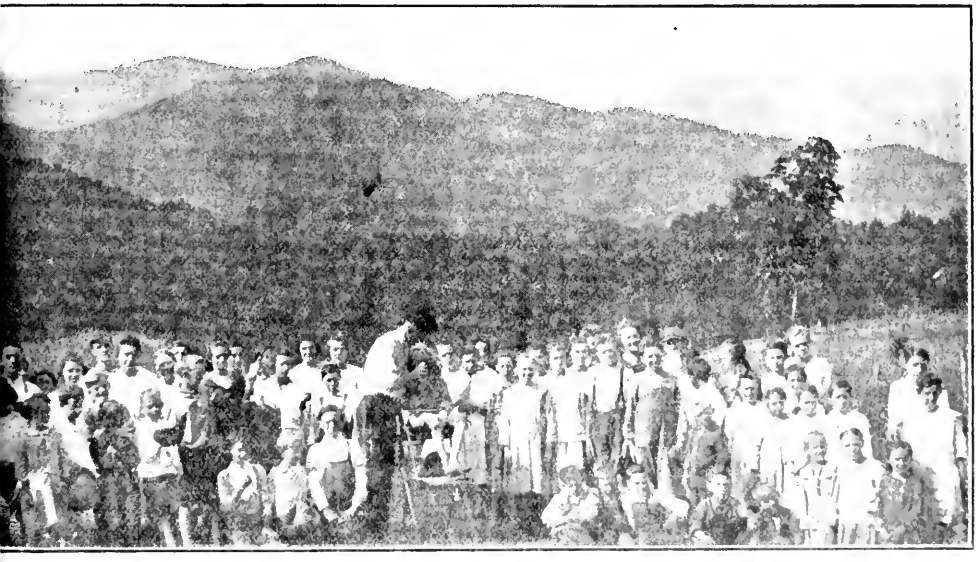
MEDICAL INSPECTION OF SCHOOLS NUMBER

The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Vol. XXXIV NOVEMBER, 1919 No. 11



North Carolina State Board of Health Free Dental Clinic for School Children in Macon County, September, 1919. In our opinion, it would be hard to present a more pleasing picture than this photograph of Dr. S. L. Bobbitt, representing the Department of Medical Inspection of Schools of the State Board of Health, hard at work literally making "better teeth" for this group of school children gathered from among God's eternal hills at a rural schoolhouse seven miles from Franklin.

DEVOTED TO THE CONSERVATION OF NORTH CAROLINA'S GREATEST RESOURCE HER CHILDREN

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EXPLANATORY

The illustrated part of this issue of the Health Bulletin, together with a portion of the text, is a simple description of how results have been attained by the Department of Medical Inspection of Schools.

There may be, and probably are, many better ways of getting this work done for the children, but the fact is we are kept so busy doing the things clamoring for attention that we have little time and less inclination to undertake to tell other folk what they ought to do.

We wish to take this means of recording our full appreciation for the help and encouragement of so many people, especially those who have sacrificed time and money in making the tonsil clinics a success. To the dentists who have helped our field workers, the teachers, health officers, physicians and specialists, who have made the work possible, and especially to the newspapers who have rendered invaluable service, to one and all we wish to express our sincere thanks.

We hope to expand and extend this service to reach every North Carolina school child that needs it. Therefore, we solicit suggestions and constructive criticism from every citizen of the State interested in our children—and who is not interested? In other words, while we carefully refrain from preaching, we want everybody to be free with his advice to us. We may not accept it—all: but we may take some of it with much resulting good.

The editorial and all other matter in this issue of The Bulletin, except where credit is otherwise specifically given, was prepared by Dr. George M. Cooper, Director of the Department of Medical Inspection of Schools.

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. XXXIV NOVEMBER, 1919 No. 11

NOT ABLE TO PAY!

Classification of School Children Into Well-to-do and Indigent is Un-American, Un-Democratic, Un-Christian

No zygodactyl bird of the order Psittaci ever told himself "Pretty Polly!" with more satisfaction than otherwise responsible people derive from mouthing "Not able to pay." It is unction to their souls. It is balm for many a troubled conscience.

"O, yes, this hospital offers free treatment to those who are not able to pay," says the President of the Board of Visitors, adding, of course, "except a small fee to take care of incidentals."

"Special provision for those who are not able to pay"; "the worthy poor"; "children of the poor"; "for charity," are a few of the canting generalities which cover a multitude of the sins of omission.

The North Carolina State Board of Health is neither Bolshevik nor Prussian: nor is its mission the setting of a wrong world right. But some of us who have played the game of life in the rough—who have practiced medicine and occasionally ourselves bound up a wound, as well as sat on "the rail" and watched the big men operate—have so often been balked in a sincere attempt to render honest service by the trite, satisfied reply, "Oh, yes, if he is not able to pay," that we have become convinced that the expression itself is a howling hypocrite.

Suffering humanity means just exactly nothing to us, but suffering individuals whom it is partly our duty to assist mean everything. This peculiarly applies to the correction of common physical defects of thousands of school children in North Carolina.

About three years ago, upon completion of the medical inspection of 3,847 school children in one county by a representative of the State Board of Health, in which 1,187 of them had serious decay of permanent teeth, and 315 were badly in need of operations for removal of diseased tonsils, we received the following letters.

First letter from the head of a family:

I would be very glad to have my boy treated for defective tonsils and adenoids. I know that it needs to be done, and has for a long while, but I am not financially able. I have two other boys in the same condition, age 3 years and 1 year. I have written to Dr. B..... of ..... (a specialist in a near-by city) in regard to the matter and he said it would be cheaper to have it done at home.

Respectfully,

R. No. 1. .....

Just a fair sample of how anxious most of us are to work for those who are "not able to pay."

Second letter, from a widow in a different section of the same county, received a few days later:

In regard to the recent medical inspection of ..... County, it was

found that Jane ..... has defective vision. I have consulted Dr. ....., of ..... Financially I am unable to have this defect corrected. I am very anxious that this be corrected. I am appealing to you, the State Board of Health and ..... County to aid me in having this work done at the earliest date. Let me hear from you. I remain,

Respectfully,

(Mrs.) .....

The above letters, typical of many received by the Board of Health during the past several years, led us to see the absolute necessity of establishing dental and surgical clinics, especially for the rural counties and sections. But there is not one person in twenty who will admit to his own State in a confidential letter that his child needs the service. On account of the Americanism of parents the children suffer on in silence with the door of opportunity shut in their faces forever.

Looking back over the files, we recall that the writer, upon receipt of the letter from the widow, immediately made an appeal to the chairman of the board of commissioners of that county, one of the best men and officials in the State, who courteously replied: "An investigation of this case is being made, both in its specific instance and as representative of a class, and a report of its conclusion will be made to you as a matter of public interest."

Doesn't that sound fine—and natural? Investigate to see if she were "able to pay!" As we have never received any report, the investigation, perhaps, is still in progress. But, would a report after three years do the little girl's eyes any good now? All of which leads us to the heart of the whole matter. Who is to decide who "is able to pay"? One doctor told the writer once that if a fellow had "more than one razor-back hog and three dogs, d—d if he didn't have to have his money."

When the Rochester free dental infirmary for school children was first organized the standard established for those "able to pay" was the children of parents with a total family income of twenty dollars a month per capita. For example, two brothers, each married and having a wife and two children, living in houses exactly alike in the same block, sent their children to the same school. One worked in a bakery at seventy-nine dollars a month. His children were entitled to free treatment. The other brother worked at an ice factory at eighty-one dollars per month. He was deemed "able to pay" and his children were denied the free treatment.

Absolutely ridiculous, isn't it? Any attempt to classify public school children, the adopted wards of the State of North Carolina, into well-to-do and indigent is un-democratic, un-American, un-Christian and must inevitably end in confusion and failure.

Whose duty then must it be to see that every child is given an even start in the race? Clearly that of the Public, the State.

The logical solution is a free hospital and dental infirmary at every county-seat town, providing free dental and surgical service to every school child regardless of class, color, social or financial standing. It is a public responsibility and the public must meet it. On this rock we build our platform. Here we shall fight it out, hoping that in a few years no little one with defective vision in North Carolina shall have to walk in the shadow or grope in darkness while some Board officially decides the question as to whether or not its daddy or widowed mother is "able to pay."

Finally, in the language of the great Aycock in his last speech prepared just before his death,

"It undoubtedly appears cheaper to neglect the aged, the feeble, the infirm, the defective, to forget the children of

this generation, but the man who does it is cursed of God, and the State that permits it is certain of destruction.

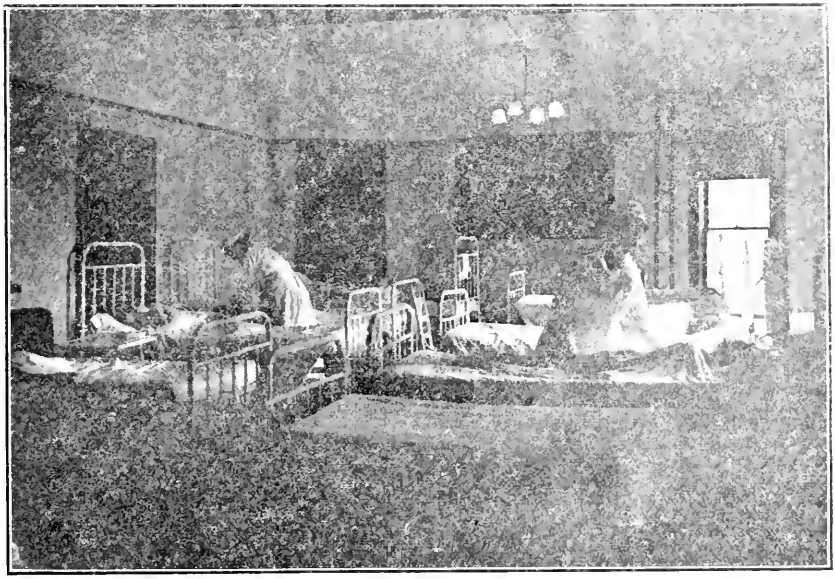
"Equal! That is the word. On that word I plant myself and my party—the equal right of every child born on earth to have the opportunity to burgeon out all that there is within him."

STATE MEDICINE

The State Board of Health is finding daily what every physician practicing in the smaller towns and in the country has always known, and that is the urgent necessity for hospital and medical service which will reach the great majority of the people in time to prevent neglect and suffering, especially among children. It is one of our immediate sociological problems that must be settled. The great mass of the medical profession cannot continue, under the new economic conditions that must prevail in the world from now on, the heroic sacrifices they have been making for a thousand years. The responsibility must be shifted to the public.

No human being when stricken with disease should have to get in a bread-line, so to speak, before getting medical aid. Dr. Richard Cabot, of Massachusetts, one of the most eminent physicians in the world, has recently declared (we quote from memory) that—

"The doctor of tomorrow will be a public official, answerable to the State, and his service will be free to the people, paid for by themselves through public funds exactly as the judges or other public officials."



Ward in the hospital at Waynesville, where a State Board of Health "Tonsil Club" was conducted on June 27, 1919. Seventeen school children were operated on here that day with good results. Misses Nora Pratt and Cleone Hobbs, State Board of Health nurses, in charge.

And is it not inevitable? The change must come. It may be soon, it may be long delayed; but come it must.

Wealthy people there will be always. Physicians and surgeons with great private incomes we shall have forever.

Therefore there will never be any lack of incentive to personal endeavor on the part of the profession, for the reward will be sure.

This discussion therefore concerns principally two classes of people in North Carolina:

First. Ninety per cent of the physicians, the William McLures of the profession, the physicians who patiently labor in good weather and bad, who cheerfully answer the calls of their patients day and night, are continually called on for sacrifices both personal and public—Good Samaritans whose lives are shortened through hardship and exposure, and who finally lay down their hypodermics and join the caravan which travels only in one direction, leaving the widow to spread out the little life insurance as far as possible.

Second. The other class is the ninety and nine who go to make up the great middle and lower part of our State's real people, who find the world a struggle from the start. This applies to the more than half of the State's population who are born without inheriting means and who are forced to start life with a handicap, and more especially does it concern the big majority of the people who must live away from the centers of population and who are often forced to suffer without medical aid.

Somewhere between these two extremes of sacrifice is a common ground and it must be found.

This particular editorial outburst is due to the following letter recently received by one of the State Board of Health school nurses. It is simply one of a thousand experiences the past summer similar in character, occurring in every part of the State.

....., N. C.,
9-25-1919.

DEAR MISS W.....

I received your letter today and so very sorry to learn that the throat and nose work had already been done. Dr. H..... advised me to take my two children to the Johns Hopkins hospital, he said they were needing attention bad. And as I had sent two older children to that hospital and borrowed every penny of the money to send them I simply am not able to send these two there. And the children are needing attention so bad they have not been able to attend one day of the public school, and will not attend untill they get attention. So you see how I feel about not having the work done while the Sergeons were doing the work this time. I'm so worried about it. I'll be so glad when you visit the schools in these parts, it's so very far to the nearest physician, the children are so neglected.

Miss W....., please don't be offended at my sending stamps for you to register letter to me as I sure want to take the children next time, and register letter so I will be sure to get it, and be sure to let me hear from you four or five days before the sergeons are to do the work as the mail is handled carelessy sometimes. I can't rest a minuit untill I have the children tended to. So I hope you can understand and sympathise with me tho' a stranger.

Thanking you in advance for any information,

I am very sincerely,
MRS. R..... C.....,
N..... N. Carolina.

The writer of that letter lives in the mountains of western North Carolina, twenty-five miles from a railroad.

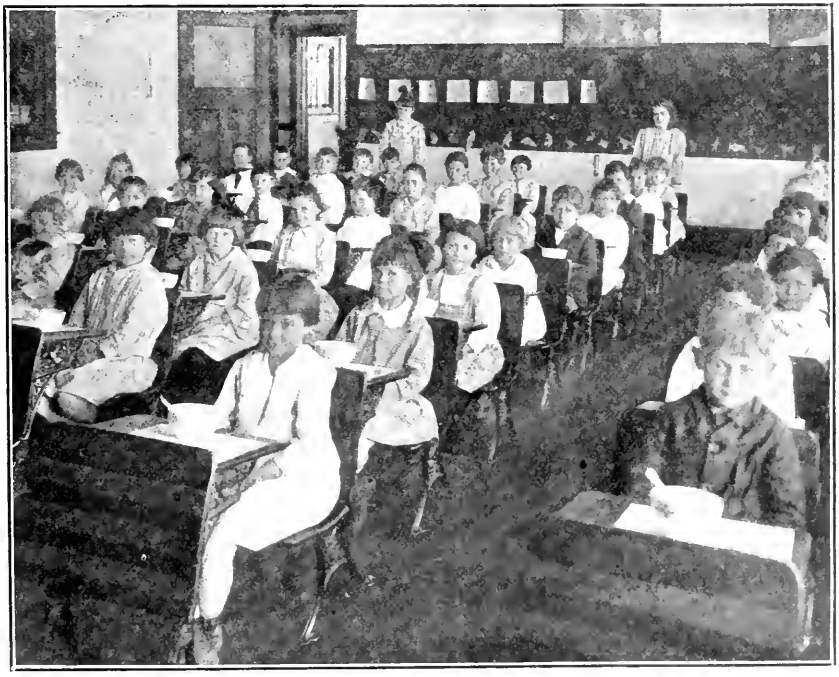
The parents of such children may or may not be "able to pay" (there is no means of getting away from that damnable expression); but the Department of Medical Inspection of Schools of the North Carolina State Board of Health will not lose any time finding out that fact. So long as we can scrape together enough dollars to attend to the necessary details, and so long as we can find specialists of ability with hearts that beat in response to individual suffering and who are not "out for the cash," all such calls so eloquently voiced as the cry in that letter for helpless children will be heard and answered in the affirmative. It mat-

ters not if the father is the "raggedy-man" or the town's rich man living in the big house on the hill.

THE TEACHER WAS FIRED

A wee little worm in a hickory-nut
Sang, happy as he could be:
"Oh, I live in the heart of the whole round world,
And it all belongs to me!"
—JAMES WHITCOMB RILEY.

A few weeks ago the writer visited the dentist conducting a State Board of Health Free Dental Clinic at a rural school in an eastern county. Several mothers were present with their children, and while awaiting their turn at the dental chair the conversation turned to general school topics, such as the antique desks and poor heating arrangements, in an otherwise good three-teacher building in a well-to-do community. Knowing the young lady who was principal there the past year to be an exceptionally capable woman, we inquired how it was she did not get in behind the committee and make them bring the equipment and surroundings up to match the building. The question happened to be directed to the wife of the chairman of the committee.



One practical way to solve a difficult problem. Children in the William Hooper School of Wilmington enjoying their hot lunch. See article elsewhere in this issue of the Bulletin on "The Hot Lunch," by Mrs. Estelle T. Smith.

"Oh, the committee couldn't stand her. So they fired her in the middle of the session."

With considerable amazement, we inquired what sort of conduct the teacher had been guilty of to merit such drastic punishment.

Replied Mrs. Committeeman:

"The first thing she did was to demand that two pit privies be built on the schoolhouse plat, and you know they would have cost forty dollars at least, and Buck [her husband] said it was a useless waste of money, and so paid no attention to her. The next thing she demanded was three-jacketed stoves, one for each room."

At this point another woman from the same neighborhood interrupted excitedly:

"Cousin Buck said he never heard of such a thing!"

But the blow that shipped the teacher back to Pa's for the remainder of the school year came down on her like a thousand brick, when she forced the pupils to sit quietly at their desks at noon and spend twenty minutes eating their lunch, packing the scraps back into the baskets to be carried home for the pigs, thus teaching a practical lesson in thrift. The prevailing custom, of course, as in most rural schools, was for the children to scatter around on the cold ground outside regardless of weather, taking pot luck with the tribe of dogs always on hand.

To shorten this story, it may be said that the Chairman called a meeting of the Committee forthwith and informed the principal that she was "fired," to take effect at once. Traditions must be upheld, and none so sacred as the way their daddies have always run the average school, be it city, town or country,—in the opinion of the school board the teacher is employed chiefly to obey orders. We were just warming up to remark that they would still be ploughing with wooden sticks if somebody had not had the courage to at least try something else, when Mrs. Committeeman's ten-year-old boy was called by the dentist. Four of the child's permanent teeth were found badly decayed. After an hour's hard work on the front porch of this schoolhouse that hot July day, seventeen miles from the county-seat, three of the four teeth were saved for the child; but the fourth tooth had to be extracted, thus making one-quarter of his mouth a cripple for life. At this point we demanded to know why the head of the family and chairman of the school committee did not have interest enough at least in his child's teeth to come to the dispensary. The answer was that he was spending a month at one of the expensive health resorts in western North Carolina.

Here is a man worth fifty thousand dollars. A successful farmer, owning one of the finest farms in his county (to prove it his barn is twice as big as his dwelling house); educated at one of the great State colleges. Educated did we say? Graduated is the word to use. And yet his college training and his success as a farmer have not taught him a thing about the great fundamental things of life, not even to the point of caring for the health of his own child. As a school committeeman he is a tyrant. At home he is a kind father, but indifferent to the essentials of fatherhood.

This man's type is duplicated in every township in the State, otherwise some other story would have filled this space. Find him and see if he cannot yet be *educated.*

PENCILING THE CHILDREN

Early in September a nurse doing school inspection work for the State Board of Health in a small town wrote the county physician of that county the following letter:

"There have been several reported cases of diphtheria here, and certainly there appears to be a good deal of sore throat going the rounds. Dr. T..... on his own initiative, so I am told, visited the school here to examine the throats of some first-grade children, being zealous for the good health and protection of said children. He used his pencil as a tongue depressor, going from one child to another with the

same instrument (a lead pencil) and wiping it off on the sleeve of each respective victim. He examined a number of children in this manner. The teacher suggested they would soon get some tongue depressors. But he went again next day, I believe it was, and took some sticks he had prepared, using them over and over again on a number of children. Some clean depressors were then urged upon him, and even with these in plenty he persisted in using these on more than one child. He probably was bent on inoculating them with, at least, the proverbial peck of dirt. Can you do anything to stop such criminal practice on innocent children? This is fine preface for my work, where I urge individual use of cups, spoons, and everything of the sort. I have this information first-hand."

The county physician thus appealed to, and, by the way, one of the best and most efficient in the State, immediately wrote us to this effect:

"I see nothing that I can do in this matter, any more than swear to myself and refer this letter to you for your consideration. Any publicity from me on this in the way of going after such personal ignorance or carelessness would, as I see it, be worthless, but I think that your office should promptly and properly bring to task men who would practice such ungodly methods."

The only comment we can make on such procedure by a man holding license to practice medicine in North Carolina is that better men have been hanged for less grave offenses. The only fit place for such a man to be turned loose is in the penitentiary or a hospital for the criminal insane. As publicity is a cure for a good many evils, in future it will be the policy of the State Board of Health, when authentic evidence of such practice is presented, to publish the whole affair, giving names and places.

It is interesting to note that the same physician stirred up his town some six months ago by stating to the parents of a child who was paralyzed

North Carolina State Board of Health Free Dental Clinic for School Children. The dentist and a bunch of his little patients, after the work is over, at the Park Avenue School, Asheville, August, 1919. Photograph also shows Mr. Weber, Superintendent of the Asheville Schools, and the school nurses. Children are never afraid of Dr. Schultz, not even the little tot on bottom row, who is "just visiting."

as a result of diphtheria, that the paralysis "was caused by the antitoxin" and that the child "did not have diphtheria." As a matter of fact, which the most prejudiced physician must admit, diphtheria antitoxin can no more cause paralysis than could the same amount of cold water. The simple fact is that either through ignorance, or prejudice, or carelessness a diagnosis had not been made until the consulting physician called in at the eleventh hour insisted on using antitoxin. The paralysis following proved beyond a doubt that the child had diphtheria and that the antitoxin was simply used too late to be effective. Osler once stated that as a fact there are more cases of paralysis noted since the use of antitoxin became general than before, for the reason that the patients which now have antitoxin administered and are later paralyzed were the ones that previous to the use of antitoxin always died in the acute stages of the disease, never living long enough for the resulting paralysis, because of the severity of the attack.

O, Childhood, mortal man will probably never know the crimes committed in thy name!

ABOU BEN ADHEM

ABOU BEN ADHEM (may his tribe increase!)
Awoke one night from a deep dream of peace,
And saw, within the moonlight in his room,
Making it rich, and like a lily in bloom,
An angel writing in a book of gold.
Exceeding peace had made Ben Adhem bold,
And to the presence in the room he said:
"What writest thou?" The vision raised its head,
And with a look made of all sweet accord,
Answered: "The names of those who love the Lord."
"And is mine one?" said Abou. "Nay, not so,"
Replied the angel. Abou spoke more low,
But cheerily still, and said: "I pray thee, then,
Write me as one that loves his fellowmen."
The angel wrote and vanished. The next night
It came again, with a great wakening light,
And showed the names whom love of God had blest,
And, lo! Ben Adhem's name led all the rest.

—LEIGH HUNT.

OUT AMONG THE FOLK

Letters and Reports, Boosts and Bumps; But All More or Less Personal, and Interesting

REPORT OF WILKES NURSE

Covers a Period of One Forenoon in County School

I went to Mount View Saturday morning, September 27, 1919, for special examination of thirty-three school children who have not been examined in school. Obtained the names from

Dr. Schultz and Superintendent Wheeler, together with a few of the children treated during one week in July in the North Carolina State Board of Health Free Dental Clinic at Farmville. A handsome bunch of "better teeth" children.

Dr. Reece, the dentist for the State in this county. Sent notices to the parents to meet me at the public schoolhouse. It is not in session and will not be until November 1st. Has been suspended since September 1st. Exactly one-third responded by coming. Most of them had dreadful throats. The last one who came in before 1 p. m. was a pitiful looking woman and child dusty and travel stained. The others had gone and I was alone in the schoolhouse waiting for any others who might come. The child was a boy nine years old. His mouth was open. I looked at his throat. I don't think I have ever seen a worse throat. It was almost closed. The tonsils met at one point. The other part was submerged, pushing against the pillars of the throat so they bulged and looked taut and shiny like a balloon. I asked the mother how far they came and she said eight miles. I asked her how she came and was amazed when she replied, "We walked." The child was lying on a bench. I questioned her and found out that she had four children. That her husband worked at a sawmill for $1.50 a day, and they owned forty acres of land. She said her husband was not well, had dropsy in his feet sometimes. She said she had been telling her husband for some time something would have to be done for the child. He cannot talk plain and chokes when he is asleep. His pillow is always wet with saliva. Dr. Reece treated his teeth.

The child gave Dr. Reece the wrong postoffice address the reason I called them to this place. The postmaster sent it to the right postoffice although directed to the wrong.

Before I knew of all this I asked her if they could afford to pay and she said yes, they would manage it some way. After I found out I told her we would do him free.

I have shed the first tears I have shed in this county over this incident. That is saying a lot.

Sincerely,

CLEONE E. HOBBS.
State School Nurse.

We suppose an investigation would be in order in this case, or at least a committee appointed to place a value on the forty acres and to inquire about the whereabouts of the mule before arranging for a life-saving operation for that boy. But we will cheerfully leave all that to the coroner, or somebody. Our business is to try to get the child treated before it is too late.

CIRCUS DAY IN ALAMANCE, FODDER PULLING IN WILKES, AND TOBACCO CURING IN PITT

Dentist reporting for one week from Alamance said:

"Finished Hawfield school and moved to Pinetop Friday morning where I was scheduled to be Friday and Saturday. Found school closed and teachers and children had gone to Burlington to see circus."

Certainly more cheerful than a report from there one year ago would have been. Then the schools were closed on account of influenza. But it is not encouraging from a "better teeth" standpoint. However, what excuse could the "Old Boys" at Pinetop have found for going to the circus if the children had remained in school?

From Wilkes the nurse reported on one occasion, "I do not know how many of the schools are stopping, a month, for 'fodder pulling,' but I believe a majority of the country schools." Later experience proved her prediction abundantly correct. But we respectfully pass that report on to Dr. Clarence Poe and his corps of *Progressive Farmer* workers, with the suggestion that they keep up the fight against the foolish practice of fodder pulling by anybody, let alone by the children who ought to be in school. Lay it on, Poe! The darkest hour of course is said to be before the dawn breaks.

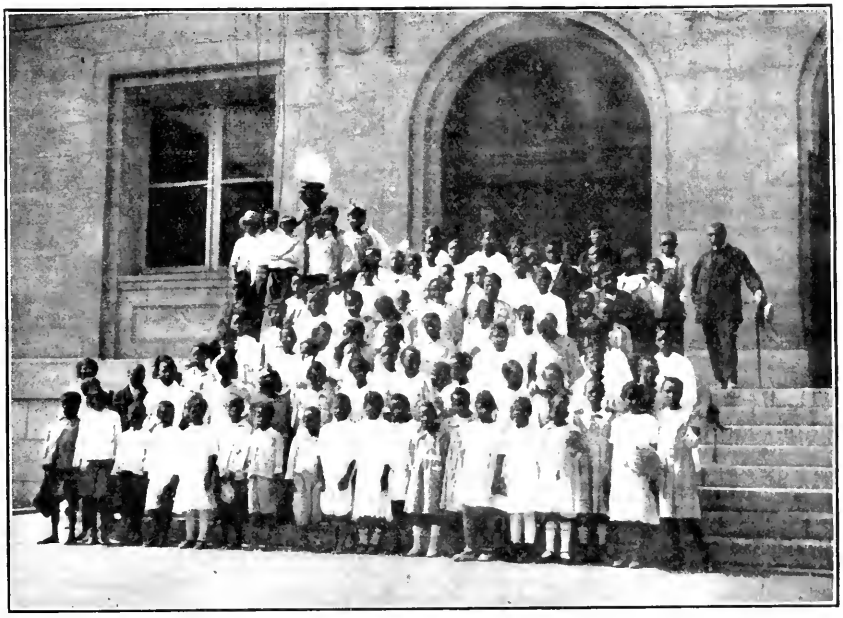
From Pitt the dentist reported in July that:

"Tobacco curing is the order of the day in ..... neighborhood. Worked there two days; first day very little response, although one family of seven children, four between 6 and 13, and therefore entitled to treatment, lived just across road from schoolhouse. Father said all were busy in tobacco and unless I moved my outfit across road and worked at noon none of them could come. All had teeth in deplorable condition. None in this community seem to appreciate the need for such work for the care of their children. What a contrast to the experience at Grifton. There they have a splendid school building, everybody was interested, and Prof. W. G. Coltrane was there to give me plenty of assistance. It does not seem possible that the two places could be in the same county."

There you have an unconscious diagnosis and prescription all in one short letter. If every school district in North Carolina had a W. G. Coltrane or a G. R. Wheeler in it as head of the schools, in ten years the course of North Carolina history would begin to be written in a different vein for the next thousand years.

There is no better place than just here to state again that a majority of men who are really able to take their children to dentists regularly for dental treatment never do it, and it requires the hardest sort of urging to get these same people to take their children to the free clinics and get the advantage of absolutely free treatment.

Men who would walk a mile to pick up a nickel in the road will suffer a free clinic to be held within a hundred yards of their door, and unless some public worker urges them to take advantage of thirty dollars worth of free work for their children's teeth (and it will be worth that many thousands to the children later in life), they passively fail to take advantage of the opportunity. This we find to be the prime need for educational work. Our idea is to get the little fellows of six years old into the dental chair, and therefore make a dental patient for some dentist at regular intervals for life.



Some of the negro school children appearing at the Free Dental Clinic at Durham during the week in September, 1919.

LONESOME?

As a rule we pay no attention to knocking, seldom ever read the lambastings we get, and never worry about it. But the following little extract from a letter received just before going to press is interesting enough to pass on:

"I want to tell you about a specialist in this State 'knocking' State work while operating on patients who were found and examined by the State School Nurse and who persuaded them to have the operations done. They paid forty dollars apiece, besides railroad fare, a little over one hundred miles, hotel bills, etc."

In the first place this specialist is lonesome, and in the second "there's a reason" for his knocks, and the reason would be very interesting to all the general practitioners of medicine and most of the people in his section.

A BIG COUNTY SUPERINTENDENT OF SCHOOLS

One of our dentists at work in one great county in July wrote that "the two people in this county who seem less interested in this movement than anybody in it are . . . . . ." (here he

named the county superintendent of schools and the president of an educational institution). All of which leads us to remark that in closing this section with the publication of the following unsolicited letter of Mr. M. D. Billings, of the Macon County schools, we are introducing one of the greatest county superintendents of schools in North Carolina:

"DEAR DR. COOPER:—I am just writing you a word to say that you might have sent some one else as good as Dr. Bobbitt, but you certainly couldn't have sent any one who could have done the work any better than he is doing it. He is as near 100 per cent efficient as a man can be. He works from eight to twelve hours, and it is work, too.

"I shall be glad to help him in any way I can. I am letting a part of my regular work go so long as I can help any in this, because I know the work the doctor is now doing is more badly needed than anything else at this time.

"The people are friendly and anxious for the work to be done, and the more they hear of the class of work being done by the doctor the more anxious they are for him to reach them.

"I know just the proposition you have to face, and know what it means to try to do a lot of work with limited capital, but if it can be done at all, I would like very much to have him for at least nine weeks. This will make it possible for him to get into all the schools of the county, and the work is so badly needed. I wish you could be up here for a few days and see just what is needed and what he is doing."

AN APPRECIATIVE LETTER FROM WILKES

DOUBLE CREEK SCHOOL,
W. L. BREWER, *Prin.*
ROSEFARM, ABSHERS, N. C.,
September 10, 1919.

DR. G. M. COOPER,
Director Med. Insp. Schools,
Raleigh, No. Carolina.

DEAR DR. COOPER:—I am writing to say that we had Dr. J. F. Reece with us last week. The doctor is a genial good man and soon won the confidence of the children. Some of the patrons of the school were out to meet the doctor and heard his talk to the school, which was just splendid. He treated 98 of our pupils, and the work is greatly appreciated. The children were so anxious to have their teeth treated that they could hardly wait until they were called. This is one of the greatest things the State could do for the children, and it is to be hoped that it will not only prove a very great blessing to the individual child but to the State as a whole, for healthy children are the State's best assets.

Kindest regards and best wishes for your success in this great work, I am

Cordially and sincerely yours,
W. L. BREWER.

PITT AND CHEROKEE

We are here publishing two personal letters, both illustrative of what this department has been and is trying to do. We have many like them, but these two representing the extremes of the State seem to state concretely just the kind of encouragement we need for this work. When everything gets "balled up" and we open a batch of complaints and criticisms from sordid, selfish persons in the morning's mail, there is generally a letter of this character to balance, which makes the fight seem after all worth while.

FROM CHEROKEE

During the early part of September Miss Birdie Dunn, a State Board of Health school nurse, wrote from Cherokee as follows:

"This was a very interesting week. I cannot make more than one rural school a day and do my duty toward the children. All of the schools I visited the past week were done on horseback, the only means of transportation in this section. The children behave splendidly, in spite of wild rumors as to stripping them, vaccinating, etc. They soon discover I am quite harmless and are intensely interested in themselves and others. They crowd around and many of them confide

symptoms which you know is the acid test of a child's confidence. I am expecting to work next week in arranging for the clinic on the 20th."

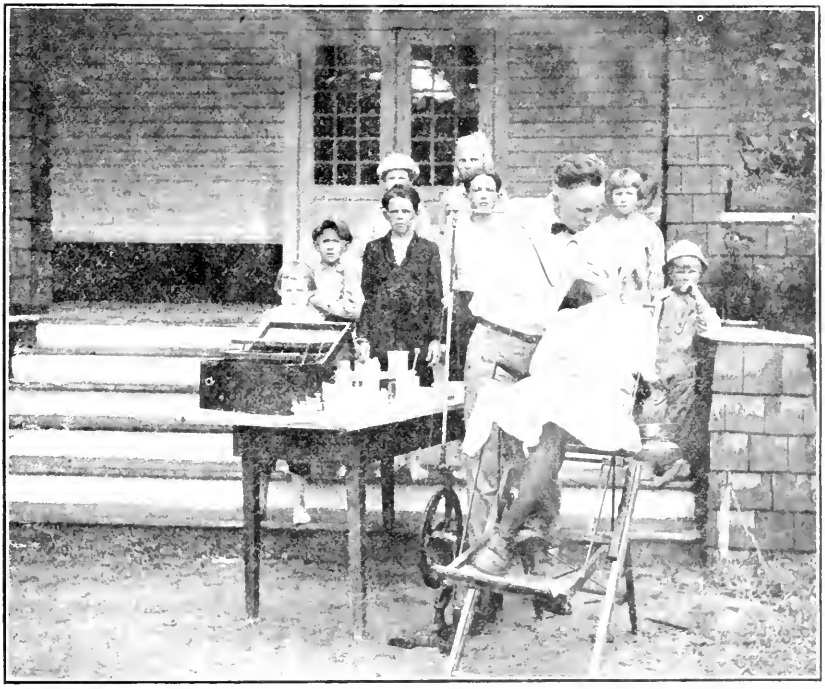
In a later letter, written two days after the tonsil clinic was held, Miss Dunn wrote:

"We had a good response here considering everything; 38 children were operated on and everything went well. Today, answering a complaint from a specialist as to our not discriminating against children of well-to-do people, I told him that these clinics are relieving a few, but educating whole communities, that eventually they would voluntarily, and at a sacrifice, present their children to specialists for private treatment, and that but the smallest per cent now accepting this service would, without it, never have treatment at all."

FROM PITT

In July we received the following letter from Prof. W. G. Coltrane, head of the Grifton schools:

DEAR DR. COOPER:—We had a very successful dental clinic here the latter part of the week. The parents and children were very much interested in the work. Dr. Schultz seems to be doing fine work and the people liked him just fine. He worked three days as hard as he could and had a day's work to do when his time was out. I don't believe there is anything more important in the school work than to look after the children's teeth and to teach them to take care of the teeth; therefore I wish to express my appreciation for the work you are doing. I will be ready at any time to coöperate with you in this work.



Photograph in July, 1919, of Dr. G. W. Holliday and his "waiting list" at a North Carolina State Board of Health Free Dental Clinic for School Children, conducted at the Proximity Cotton Mills, near Greensboro. Many persons and agencies contributed to the wonderful success of our efforts in Guilford the past summer, but the chief credit belongs to the dentist for capable, painstaking work, and to Dr. William M. Jones, County Health Officer.

About five years ago you came to Elm City and made a medical examination of the school children. I have two boys, and you advised me that they had enlarged tonsils and adenoids. You also suggested that I have them operated on. I did so, and they have improved wonderfully. The older boy is one of the finest physical specimens to be found anywhere. He is nearly 13 years old now, weighs 90 pounds, is well muscled and is as hard as a brick. He is working in the field this summer. Last year he led the class when they took the seventh grade county examination. This year he won the medal for declamation. My younger boy has improved wonderfully. Dr. ....., of ....., operated on these boys and I think is a slick operator. I hope you will come down to see us as we would like to talk with you about the work.

Yours very truly,

W. G. COLTRANE.

It is needless for us to say that an unsolicited letter like the above is worth much fine gold.

TEACHER'S HEALTH CERTIFICATES

Taking effect October 1, 1919, the law now requires a teacher to file with the county superintendent of schools a health certificate stating freedom from tuberculosis or other contagious disease. Below we are publishing the proper form upon which this certificate may be written. The signature of any reputable physician should be accepted by the superintendent. In preparing the form to be used we have not undertaken to prescribe how a physician may reach his conclusions, but properly leave that for each physician to decide for himself. The law requires that when a teacher presents himself or herself to the county physician or county health officer, whether a whole-time official or not, he must make the examination without charge to the teacher. This is fair because the law is primarily devised to protect the public. The Attorney-General has ruled that the county commissioners must provide the compensation to be paid the county physician for the work, when not a whole-time official, and if not covered in the regular contract to perform the duties of county physician. Of course, when a teacher prefers the examination by a private physician the compensation is a matter entirely between the teacher and the physician.

This is the form of the certificate:

[PUBLIC LAWS OF 1919.]

Teacher's Health Certificate

TO WHOM IT MAY CONCERN:

THIS IS TO CERTIFY *that I have made a thorough physical examination of*

.....

....., *N. C., and find.....to be free from tuberculosis, or any other contagious disease.*

(Signed)....., *M. D.*

Address....., *N. C.*

Date.....19.....

SHOP TALK

We hope a great many people in each of the one hundred counties where agents of the State Board of Health and dentists sent out through this department have not already worked will be interested in this service. The question to be asked is, How may our county obtain this assignment? The answer is that the first thing to do is see that a correct list of schools, together with the correct number of pupils enrolled and the name and post-office address of each teacher, are mailed to the Bureau of Medical Inspection of Schools at once. This information must come through the office of the county superintendent of schools. The law now requires that each teacher of a grade or school shall then fill out cards which will be supplied by the State Board of Health, one card for each child. The information

desired must be carefully obtained and recorded. This is now only required once every three years, and is of the utmost importance and value. It requires about thirty minutes to properly complete this examination, and a special effort when possible should be made to get the mothers present for the examination. As soon as the cards are all properly filled, the matter should be sent direct to the Bureau of Medical Inspection of Schools of the State Board of Health, Raleigh.

In future, positively no schedule for a county will be arranged and no dentist, nurse or other worker will be assigned until cards from every school, white and colored, are in the office at Raleigh. The only exception to this rule will be in case of cities or counties with well organized health departments, with whole-time health officers in charge who have suitable filing cases to take proper care of these records while left in the county.

The fund available for this work is very much limited, but we are doing our best to get as much real work done for the school children as possible. In several counties it is proposed to supplement the State funds, and thereby get an extension of the time the nurse or dentist may spend in the county. This can be done through the Board of County Commissioners, Board of Education, Betterment Association (if county-wide) or private funds. Preferably, of course, the public funds should be used. Such an extension makes for a much more thorough job on account of additional time.

It is necessary for us to have notice of the desire and provision of such an extension at least six weeks in advance.

In conclusion, for the benefit of those not keeping in touch with the efforts along this line, we may state here that this service by the dentist and nurse is free to the school children of all classes, from the poorest to the wealthiest; we know no class in our endeavors to help defective children.

POINTEDLY APPRECIATIVE

A letter from a good woman to our dentist at work in her town:

"May God bless you."

From Superintendent M. K. Weber, head of the Asheville schools:

"Permit me to express my keen appreciation and deep satisfaction in the plans that led to the selection of Asheville as one of the cities of the State in which you have established dental clinics.

"The first week of the clinic, closing Saturday, with 260 children registered at the one building alone, clearly demonstrated the great value as well as the need of this work. With this almost startling object lesson of the urgent need I wish to join in an unanimous public sentiment and appeal to your office to extend the time of this clinic in Asheville for at least two weeks."

From Dr. F. L. Hunt, Secretary of the State Board of Dental Examiners:

"I had the pleasure of visiting the clinic being conducted by Dr. Schultz in one of the Asheville schools yesterday, and am certainly pleased with the work being done."

From Doctor Warren W. Way, Rector of St. Mary's:

"I have requested every teacher in the St. Mary's faculty to comply with the State law for public school teachers which requires a health certificate. I think it a wise law."

From Prof. C. C. Wright, head of the Wilkes County schools:

"I am writing to know if you can let Dr. Reece stay with us through the first week in November? I have done the very best I could in making his itinerary, and am only sorry that I cannot send him to all the places clamoring for him. He has done excellent work and our people are well pleased and want him back."

ABOUT BOYS AND GIRLS

Topics of Vital Interest to Every Teacher, Parent, and School Child Discussed by Thinking Men and Women

HEALTH, DISCIPLINE AND TRAINING FOR ALL CHILDREN

By Roland F. Beasley,
State Commissioner of Public Welfare.

If you are one who believes that the State's children are its most precious possession, your heart must thrill and your mind obtain a new satisfaction by reason of the plans that are now on foot in our State to carry physical health, mental training, and moral discipline to every child within our borders.

If you are one that does not see the great vision of child welfare now breaking upon the world, you should get on your knees and ask God to set you right on what His Son meant when He said, "Suffer little children to come unto me."

No longer is a wayward, neglected or undisciplined child defined as a criminal by the laws of North Carolina.

By act of the great Legislature of 1919 there is now a juvenile court in every county in the State and a county superintendent of public welfare. The clerk of the Superior Court is ex officio judge of the juvenile court and the county superintendent of public welfare is ex officio probation officer of the court. This is the machinery which the State has provided for caring for all children who are without natural guardianship.

The court is charged with the duty of seeing that opportunity for physical health, moral discipline, and mental training is secured for such children. The court has all necessary power to do what it thinks best for the child.

The court has jurisdiction over every child under sixteen years—

(*a*) Who is delinquent or who violates any municipal or State law or ordinance or who is truant, unruly, wayward, or misdirected, or who is disobedient to parents or beyond their control, or who is in danger of becoming so; or

(*b*) Who is neglected or who engages in any occupation, calling, or exhibition, or is found in any place where a child is forbidden by law to be and for permitting which an adult may be punished by law, or who is in such condition or surroundings or is under such improper or insufficient guardianship or control as to endanger the morals, health or general welfare of such child; or

(*c*) Who is dependent upon public support or who is destitute, homeless or abandoned, or whose custody is subject to controversy.

The juvenile court principle is now being applied all over the United States and in foreign countries. It is one of the great forward steps of the age, and the most important advance in court methods in many years. It can be no more checked than the public school. It is here to stay and be improved.

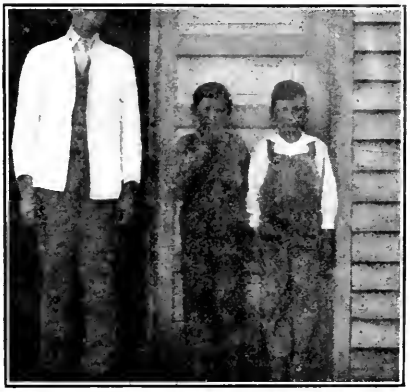
The juvenile court can't save every child; but it has been proven that when the system is properly carried out it will save 75 per cent of them. That is more than worth the money.

It costs the taxpayers ten times more to capture, try, punish, and maintain an adult criminal than it does to save a juvenile delinquent.

The court stands in the relation of parent to such children, and will discipline, guide and control them through probation just as a wise father would.

The court may punish a child if it is necessary, but wayward children are more in need of wise guidance and just discipline and friendly help than of punishment.

The judge is the kind and wise father, the probation officer is the big brother of the boy who is about to be lost. Both are studying ways and means to make a man of him.



Dr. J. F. Reece, conducting a North Carolina State Board of Health Clinic, together with a couple of his little patients, was called to the door of the Sulphur Springs School in Wilkes County. The little fellow with his hand against his face has just "got the worst of it," but he is glad it's over now. Preventing premature loss of teeth on account of neglected decay is the keynote of this whole movement.

Do you believe in saving boys and girls whose parents let them go astray, or who have no parents?

If you are a Christian, you certainly ought to pray for and encourage this work, for it is Christ's work.

If you are a good citizen you ought to help it, for you believe in having good citizens and not bad ones.

If you are a taxpayer you ought to stand by this work, because it is cheaper to save a boy than to maintain a lifelong lawbreaker.

If you are a mother you ought to help, because every wayward child is a burden to some mother-heart.

If you are a man you ought to help, because this is a practical application of the brotherhood of man.

The juvenile court is really a part of the educational system. It carries opportunity to children who otherwise would not have it.

The juvenile court does not ask what can be done *to* a child, but what can be done *for* him—to make a man or woman instead of a human wreck.

THE DAY NURSERY

An Urgent Necessity in Industrial Communities

By KATE BREW VAUGHN.

Too many women employed in our factories are mothers of small children, who, on account of conditions, are left at home, cared for by the oldest of the group; sometimes the children are locked in the house, and not infrequently have in the mother's absence become holocausts in a burning building; sometimes in summer the little fellows are tethered to a tree in the yard until the mother's return. All of these methods are a grave injustice to the children, a hardship on the mother, and a short-sighted economic policy on the part of the manufacturer. The last suffer most from the "floating" propensities of the operative, who seems to drift from village to village looking for a safe place in which to live.

A comparatively few manufacturers in North Carolina have within a year equipped an old building or built a new one as a day nursery. Many more are signifying their intention of doing so. A properly ventilated and equipped day nursery for infants and small children, in the care of a kindly, trained woman, with regular three-hour periods of freedom to mothers to visit the nursery and breast-feed their babies; regular

meals, baths, supervised play and medical attention for the older ones will require the expenditure of money and thought, but it will in the end prove not only a satisfactory contribution to humanity and command respect, but will actually prove an economic saving. If the mills are to absorb more and more of the mothers and the schools are to be filled with responsible, normal children, this is an absolute essential in North Carolina.

THE COUNTY SUPERINTENDENT OF SCHOOLS

By W. H. PITTMAN,
Chief Clerk, State Department of Education.

The county superintendent is a busy man if he is properly coupled up with his job. His job demands all of a full man's brain, energy and conscience. Health? Why yes, he must be well. The new law requires that he be examined annually. Of course he will welcome a free physical examination, for it is worth money to him. He will likewise see to it that his teachers are examined free. He knows how much of their efficiency depends upon their physical fitness. He will set the example for teachers and he with the teachers will set the proper example for pupils—all must be examined. The superintendent is the keystone of the arch. He will require each teacher to file with him a certificate showing freedom from tuberculosis or other contagious disease, and he will see that the physical examination of each child is carried out in conformity with the spirit of the law. He will do this because of his recognition of the basis of physical soundness for efficient school work. He must realize the importance of this if he would perform his whole duty in the matter of equalizing educational opportunities for the children of his county.

Time and energy on his part spent in coöperation with the health authorities in instructing his teachers as to their duties in this important matter will give increased efficiency in the attainment of the very end for which the public school is established. Full cooperation with the health authorities in this matter and thorough supervision of his teachers' work in this respect, is the measure of his duty in medical inspection in his county.

THE HOT SCHOOL LUNCH

By MRS. ESTELLE T. SMITH,
District Demonstration Agent.

A serious problem presents itself when we consider the thousands of school children who daily depend on the box luncheon for one-third of their food supply. So considered, it should be as important as that of providing any other meal. That this is not the view taken by the majority of people is, I am sure, apparent to all of us.

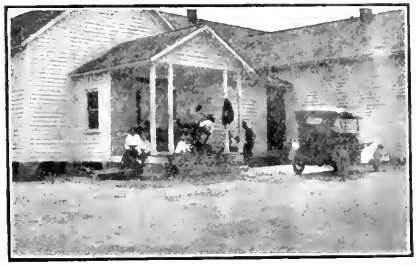
One of the biggest worries of the mother is what to feed the baby, but when a child reaches school age the general impression seems to be that he has the properties of an ostrich, and that anything that comes handy will do for his school lunch. This is a great mistake, for the school child is at the stage of development at which he begins to work his brain, at the same time he must be studied and given the food which will make him grow and thrive mentally as well as physically.

The expensive machinery of education is wasted when it operates on a mind listless from hunger or suffering from indigestion. Much thought must be given to the selection of food suitable for the needs of the school child.

A well balanced selection of foods is the important requisites of a school lunch. This does not necessitate a great variety or quantity. The lunch

should contain muscle-building and heat and energy-producing foods. Mineral matter is also necessary as this builds the bones and develops the teeth.

This balanced lunch can best be carried out in the "Hot School Lunch." It is impossible to make strong, healthy young animals of our children unless we provide the right kind of food.



Photograph showing Dr. J. E. Osborne conducting a North Carolina State Board of Health Free Dental Clinic for the school children of the Hayne District in Sampson County, July, 1919.

A cold lunch is unattractive and unappetizing. A school lunch should please the palate and at the same time meet the bodily needs.

It has been found possible to work out a definite plan for lessons in the preparation of practical dishes which can be used to supplement the lunches brought from home.

Each week a committee could be appointed to take charge of the work for that week, planning which pupils shall bring supplies, which prepare and serve food, and which attend to clearing up. One day each week the lesson should be demonstrated by the teacher taking thirty (30) minutes or more, and this lunch dish could be served each day for the remainder of the week. This plan may be modified to suit conditions.

The hot school lunch means increased mentality, increased vitality, better attendance, less incorrigibility, higher average in scholarship, better team work, reaction on home life.

EXPERIENCE OF THE HOOPER SCHOOL

"They are happier." That is the remark made by the teachers of the seven first and second grades of the William Hooper School of Wilmington, N. C., after hot lunches had been served to the children for two weeks.

This work was started last year under the direction of Miss Annie Lee Rankin, City Demonstration Agent of Wilmington, with the coöperation of the school officials, the parents of the children and the Red Cross.

There had been more influenza in this section of the town and there were more undernourished children. The basement of the school was equipped and one hot dish each day was served, hot chocolate or cream soup, this being prepared by a committee of women from Wilmington, who were interested, and the mothers of the children in the school, three hundred to three hundred and fifty being served each day. Some thought the children would not care for soup, but after it was once tasted there was no further trouble. By using two large home-made fireless cookers the soup could be started the day before and finished up in a short time. In serving, cups and bowls were carried to the room in large baskets and the bread carried on trays. The soup was put in large pitchers and served in the room. Each child had a sheet of paper on his desk and that protected the food from the top of the desk. One teacher had the children ask a little blessing before having their lunch together.

The teachers said the children attended school better after the serving of the lunch was started. Lunch was sold to the older children, and while the first week only one dollar ($1) was collected, the second week showed twelve dollars and a half ($12.50) to have been collected.

DEFECTIVE HEARING

"One might think that most cases of defective hearing would at once become known to a teacher. The diffidence of many children, however, prevents them from acknowledging that they do not hear well, so that it requires considerable observation on the teacher's part to detect all those with defective hearing. Besides the necessity for having the ears of all such children examined by a competent ear specialist, such disposition in the classroom of the children so affected must be made as will overcome, as much as possible, the handicap—that is, they must be placed at the desks nearest the teacher."—*School Health News, New York.*

SCHOOL MEDICAL INSPECTION

By TALIAFERRO CLARK,
Assistant Surgeon-General, U. S. P. H. S.

ADVANTAGES

The health of the growing child determines largely the health and bodily vigor of the grown man. The community, therefore, can take no more important step to insure the future efficiency of its citizens than that of growing healthy children. In the present state of society an intelligent supervision of the health of the children during the period of school life is probably one of the most potent measures for this purpose and is recognized as such by law in an increasing number of the States of the Union. This is especially true since in but a very few fortunate communities is any attention whatsoever given to general health supervision of children during the impressionable preschool age covering the period from 2 to 5 years of age, inclusive.

Intensive studies of the physical conditions of children in many places have shown large numbers of them to have physical defects which were previously unrecognized and unsuspected. Many of the defects thus shown are preventable and remediable. Their persistence results not only in reducing individual efficiency but also, in the aggregate, in reduced national efficiency, as is so clearly shown by the high percentage of those found unfit for military service in the physical examinations conducted under the selective service law.

The conditions under which children assemble in school, and not the school itself, are largely responsible for much of the sickness contracted during the period of school life and for the persistence of physical defects. The control of adverse causes during this period not only exercises an immediate beneficial effect on the health of the children but serves most effectively to teach them the principles of personal hygiene, the nonobservance of which is now believed to be mainly responsible for the large annual increase in the number of deaths from degenerative diseases that occur later in life.

Experience shows that the failure to prevent and correct impairment of hearing and vision and to detect abnormalities of color perception, to secure dental attention, to alleviate postural defects, to place the normal child in an environment best suited for physical development, greatly restricts the range of industrial, business, and professional opportunity in adult life. Moreover, a number of defective children are unable to take full advantage of their educational opportunity. They fall behind in school work, become discouraged because unable to keep pace with normal children in their classes, and ultimately quit school poorly prepared for useful citizenship. It is of prime importance to the community, therefore, to take cognizance of those possibilities in order that steps may be taken to prevent them.

DUTIES OF THE SCHOOL NURSE

The school nurse should be directly responsible to the school physician for the proper discharge of her duties. Her activities should supplement those of the school physician and correlate with them. She should have sufficient training to carry out the routine treatment of minor ailments in necessitous children under supervision of the school physician; she should be required to visit the parents of ailing children, when necessary, to instruct them in the care of the sick and in the prevention of disease; she should "follow up" children recommended for treatment by the school physician to induce parents to carry out his recommendations in case of their failure to do so; she should from time to time visit children who have been excluded from school for purposes of treatment, to insure their return without undue loss of time; she should be required to visit children absent from school for three successive days from unexplained causes, and in case of sickness make inquiry as to its nature in order to guard against communicable diseases; she should report the results of follow-up work to the school physician so that they may be properly recorded. The services of the school nurse may be advantageously used during the vacation period in infant welfare work, or in some other form of community health supervision.

Nettie McCormick Industrial School Building at Burnsville converted into a temporary hospital for a five-day State Board of Health Tonsil and Adenoid Clinic the latter part of July, 1919. Seventy-five Yancey County school children were successfully operated on for removal of tonsils and adenoids at that time.

THE RURAL SCHOOL AND THE KINDERGARTEN

"Please do not forget the rural schools in this movement," a Texas mother writes to those in charge of the kindergarten campaign now at its height in Texas. "I have just read where you are launching a movement for better kindergarten work in Texas, and I want to wish you godspeed. I am a country mother with two small sons, and I have a horror of putting them in a school knowing they will have to sit on a seat from 8 a. m. until 4 p. m. with perhaps two or three 10-minute reading lessons and maybe a little number work. I believe every rural school should have a kindergarten teacher. They might combine kindergarten and first-grade work."—*School Life.*

RESULTS

Report of Children Treated Through the Department of Medical Inspection from January 1 to October 1, 1919

We are here setting forth a brief report of the results of our efforts in getting defective children treated after having been found defective.

Believing that no matter how valuable advice may be it is worthless if not taken, it has been our policy to follow advice with treatment, whenever possible. In this feature of the work we have consistently refused to classify school children into rich and poor. The child of a delinquent father, no matter what his financial standing, shall not suffer for the lack of corrective measures which may be in our power to offer. Indeed, the ideals of Calvin H. Wiley, the great educator, who spent a lifetime in attempting to free the State school system from the stigma of charity, embodied in the classical old phrase, "The Free School," are and have always been our own, both personal and professional. Dr. Edgar W. Knight in his "History of Public Education in North Carolina," a book by the way that should be in the possession of every teacher in the State, says of the first of Wiley's difficulties in the beginning of his official duties as State Superintendent of Public Instruction in 1853, that he had "'to purge' the idea of public education of the *fatal* taint of charity once adhering to it, and to lift it 'from the position of a beneficence to a class to that of a fundamental interest of all the State.'" And again, "He (Wiley) believed that education should be universal, free, and open alike to all, both rich and poor."

Shall we, as public health officials and as members of the great medical profession, go back and adopt the prevailing ideals of a century ago in dealing with helpless, handicapped school children. No! Wiley's educational platform of 1853 is our public health platform in 1919. "Universal," "open alike to all." On the basis just stated we have conducted this department this year and the report by counties is here given.

TONSIL AND ADENOID CLUBS

Recognizing that at least 75 per cent or more of the children found most seriously needing operative treatment could never be brought to a specialist for operation, even when within financial reach, we have devised the club plan for bringing the specialist to the child. Briefly, we fit out some place like an armory, or any building capable of being heated and lighted properly and where quiet and privacy may be had. The equipment consists of cots, sheets, blankets, towels, pus pans, hot water bottles, etc. An extra room is fitted with table to use as operating table and a heater for sterilizing instruments. The children are required to come without breakfast, are put to bed after a final examination by the specialist, and the operations are all done for the day for as many children as the operator may be able to take care of. The number done in one day by one man has varied from 9 to 23. The children are all put to bed and a trained nurse remains on duty with them all night. As a rule they are able to go home the day following the operation. Under no circumstances are they allowed to go home, especially in the country, until the day after the operation. The specialists are employed for the work by the day or by the trip. About 80 per cent of the children oper-

ated on are charged a fee of about $12.50, the remaining ones are charged nothing. The operator does not know, nor does any of the assistants in the clinic, except the nurse who arranges for the clinic and attends to details, which children pay the fee and which do not. By this plan a large number of children who could otherwise have never had the chance are reached and get the benefit of a major operation by a good operator.

The State Board of Health has been employing good specialists who volunteer their services for this work.

Clinics were held in the following counties:

	Children operated on
Sampson—March 21	14
Sampson—June 3	17
Sampson—June 4	19
Gaston—May 1	5
Pitt—May 24	9
Pitt—June 5	14
Pitt—June 6	15
Haywood—June 20	15
Haywood—June 29	17
Haywood—July 7	16
Swain—July 11	17
Swain—July 12	17
Transylvania—July 22	12
Transylvania—July 23	15
Transylvania—July 31	10
Transylvania—Aug. 1	13
Transylvania—Aug. 2	18
Transylvania—Aug. 7	29
Transylvania—Aug. 9	13
Yancey—July 29, 30, 31, Aug. 1, 15, 16	75
Madison—July 28	21
Madison—July 29	13
Madison—Aug. 14	12
Madison—Aug. 15	14
Madison—Aug. 16	15
Mitchell—Aug. 28, 29	33
Northampton—Aug. 27	21
Northampton—Aug. 28	19
Hertford—Aug. 29	23
Jackson—Sept. 17	20
Cherokee—Sept. 20	32
Cherokee—Sept. 21	6
Macon—Sept. 20	14
Macon—Sept. 27	9

Thus it will be seen that a total of 612 children had the advantage of this important throat operation as a direct result of the activities of this department in fourteen counties. The operations have been successful and with the exception of a few troublesome hemorrhages after the operation no complications have resulted. This record we feel exceedingly proud of.

We have made no mention here of the activities of many local health departments which have had many children treated and of the great numbers of private patients treated as a direct result of the systematic plan of medical inspection of school children now conducted through the teachers by the State Board of Health.

In addition to the operations performed the nurses of the department have reëxamined 10,803 children and made 65 talks to people in every conceivable kind of community and to every age and class.

One of the most encouraging features anywhere is the establishment in the city of Asheville of an emergency hospital with full equipment for the treatment of school children. This very forward step was made possible through the generous action of the city board of commissioners, who provided the funds. Their action was a just tribute to the excellent work done there by Dr. Margery J. Lord, school medical inspector, and Misses Pearl Weaver and Jane Brown and Mrs. Hanna, the school nurses, who have done wonderful work.

If space permitted and we knew the names of them all, we would like to publish the names of the scores of people in all the named counties who have helped us with their money, their time, and their labor and their encouragement and moral support; but we shall have to be content with assuring them that their aid is fully appreciated and we shall try to pass it on by doing more and better work in the future in the name of Him who said,

"Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

DENTAL CLINICS

Equipment for permanent dental school clinics has been installed at Kinston, Salisbury, Winston-Salem and Durham, all paid for by the health departments, the equipment of the first three places being partly paid for by the State Board of Health and the International Health Board. The infirmary at Durham was equipped solely by the health department there, upon the proposal by the State Board of Health that it would pay the expenses of the dentist for the first three months work, provided the Durham authorities would continue the service at its own expense. The proposal was accepted and thus on July 1 was begun what is the first permanent infirmary to be open for a full year. Most acceptable work is being done there with fine public response. The local chapter of the Red Cross at Fayetteville provided permanent equipment there last winter and good work was done by local dentists. As a result of the splendid work done at Asheville by Dr. A. M. Schultz, representing the State Board of Health, with the hard work and able assistance of the local nurses and Dr. Lord, a permanent infirmary will soon be equipped in the splendid new high school building. This will be open to children of city and county. As we go to press, it is learned through Dr. C. C. Hudson, the City Health Officer, that Charlotte will very soon have a permanent equipment and the State Board of Health will offer the same assistance as at Durham and Asheville.

Beginning with the opening of the first permanent infirmary in the State to begin work on January 1 at Salisbury, followed one month later at Winston-Salem and two months later at Kinston, with nine dentists in the field all the time during the summer, working all their time, much progress has been made. A total of 9,628 children have been treated from January 1 to October 1. With the exception of the three months at Salisbury, for which the State Board of Health paid only one-fourth, the remainder of the work has been done at the expense of the Bureau of Medical Inspection of Schools of the State Board of Health.

The work from its beginning in July, 1918, has been done without having any precedent to follow. Mistakes have been made, difficulties of every conceivable character have been encountered. It may be that a better way of getting at this big undertaking might have been devised; however, no one offered to work it out for us. But to sit still and allow 80 per cent of the school children in North Carolina with defective teeth to continue to neglect them and make no earnest effort to really offer them substantial assistance did not exactly coincide with our idea of public service. So a beginning has been made. Some time wiser heads with more experience will work out a perfect method and they will be blessed by their generation. Our idea for this work is a permanent equipment in the high school building of each county-seat town provided by the local authorities, together with heat, light and water, and a State-wide organization of capable dentists maintained, paid and directed by the State Board of Health, who shall do all the work necessary for all the school children between 6 and 12 years old in each county every year, the children being brought to the county seat exactly on the plan followed by the health officer in Forsyth or the county superintendent of schools in Macon. Such equipment costs but a few hundred dollars and will last with care for years. The State could maintain an organization capable of getting this job done each year as it should be done on a surprisingly less amount of money annually

than is spent each day for coca-cola and tobacco in North Carolina.

With proper attention to food selection and the feeding of babies, with regular visits to the dentist before school age, with an arrangement like the outline above, in twenty-five years North Carolina would be one State with good teeth. We have not only proved that the plan is practical, but cheap as present values go.

Talk it over and let us hear from you, you people out in the State who think and do things.

For the information of those especially interested we are below submitting a detailed report of dental work from January 1 to October 1:

County	*No. children treated*
Alamance	401
Buncombe	539
Cherokee	349
Cumberland	427
Durham	509
Forsyth	942
Graham	304
Guilford	836
Lenoir	469
Macon	671
Mitchell	391
Northampton	324
Pitt	665
Rowan	878
Sampson	899
Swain	84
Wilkes	513
Yancey	427
Total	9628

In nearly every instance everything was done for each child possible in a dispensary of the nature conducted, but a great many children were referred to private dentists in all these counties. The work in Rowan was, as previously stated, the only instance where the whole expense was not borne by the department of Medical Inspection of Schools of the State Board of Health.

The Buncombe work was confined to the city of Asheville, and the Guilford work does not include all of Greensboro. At this writing (October 6) dentists employed by the State Board of Health solely are at work in Guilford, Alamance, Swain, Pender, Jackson and Wilkes. At Durham, as stated, the City and County Board of Health is continuing for the entire year most excellent work, six days in the week, in its new permanent infirmary. The same is being done in the same way for six months at Winston-Salem by the local city and county departments of health.

It is hoped to extend the service during the winter and early spring to Duplin, Lee, Moore, Union, Person, Wake, Randolph, Richmond, Columbus, Bladen, Craven, Carteret, Pamlico, Halifax, Cleveland, Montgomery, Edgecombe, Orange, and possibly a few other counties.

FREEDOM

They are slaves who fear to speak
For the fallen and the weak:
They are slaves who will not choose
Hatred, scoffing, and abuse,
Rather than in silence shrink
From the truth they needs must think.
They are slaves who dare not be
In the right with two or three.

—JAMES RUSSELL LOWELL.

LAUGH, LITTLE FELLOW

By Wilbur D. Nesbit

LAUGH, little fellow, laugh and sing
And just be glad for everything!
Be glad for morning and for night,
For sun and stars that laugh with light,
For trees that chuckle in the breeze,
For singing birds and humming bees—
Be one with them, and laugh along
And weave their gladness in your song!

Let nothing but the twinkle-tears
Come to your eyes these happy years,
When you are free of task and toil
And all the frets that come to spoil
The hours of folk whose feet have paced
The road along which all must haste.
Laugh, little fellow, for it drives
The shadows out of other lives.

Go romping care-free as you will
Across the meadow, up the hill,
And shout your message far away
For all the world to join your play.
This is the time for laughter: now,
When Time has not set on your brow
The finger-prints that come with care
And leave abiding wrinkles there.

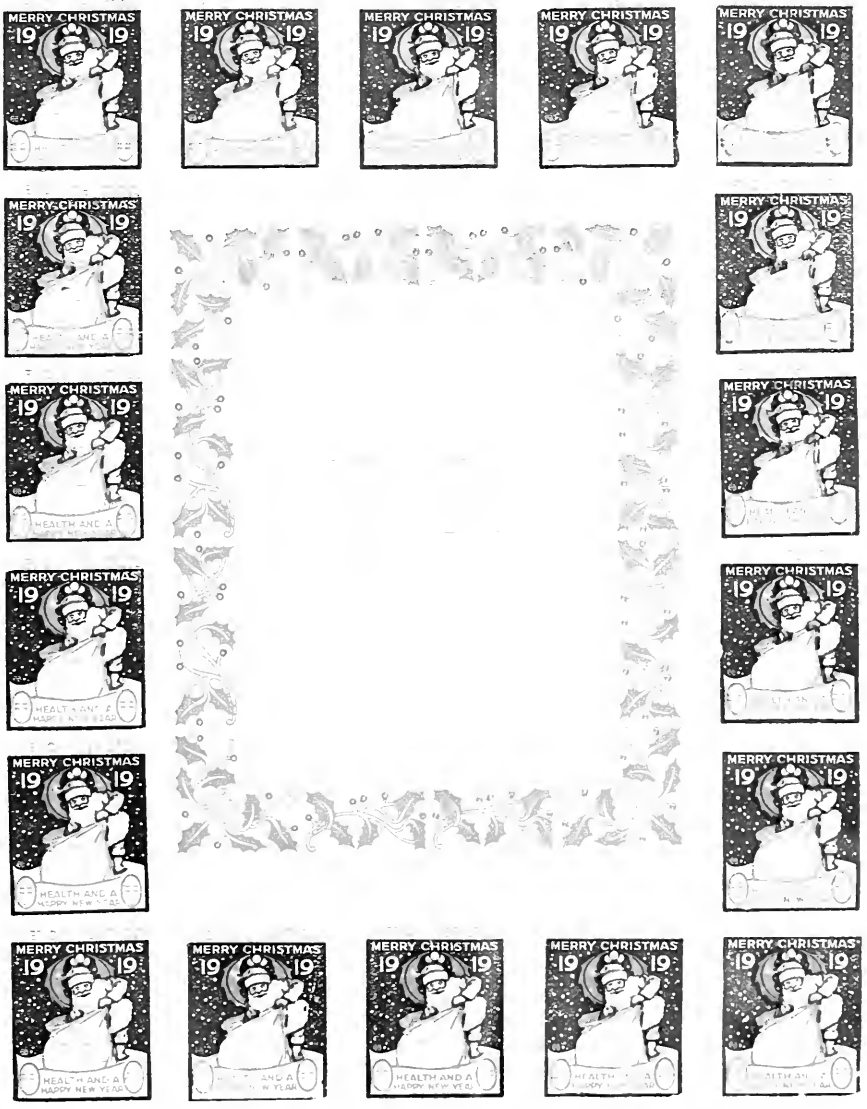
Laugh, little fellow, laugh and sing
And coax the joy from everything!
Take gladness at its fullest worth
And make each hour an hour of mirth,
So that when on the downward slope
Of life the radiant sky of hope
Will bend above you all the way
And make you happy, as today!

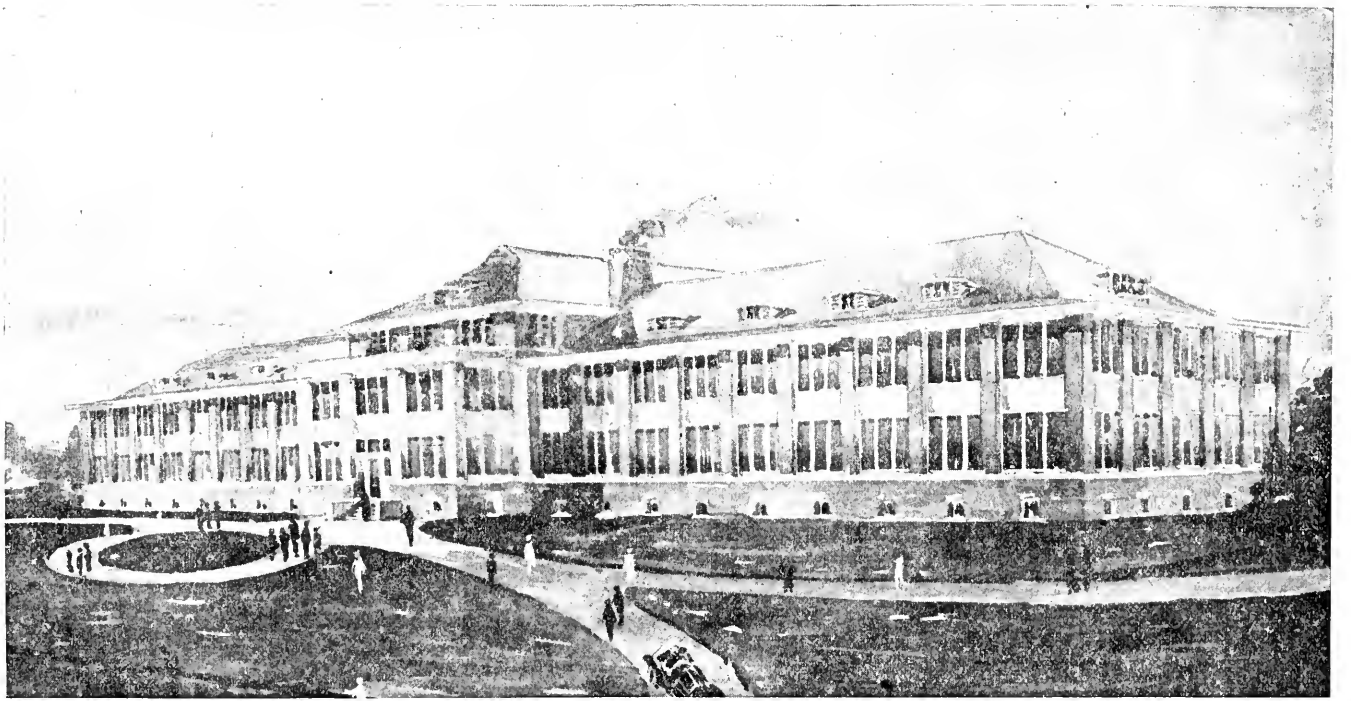
The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Vol. XXXIV DECEMBER, 1919 No. 12





NEW BUILDING IN COURSE OF CONSTRUCTION AT SANATORIUM

Will provide offices for administration, reception room, library, and beds for sixty-eight additional patients

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THE NEXT TO GO!

Leprosy, smallpox, yellow fever, typhoid, these in turn have scourged the world, but they in turn have been conquered by science.

Now tuberculosis goes to the block. There must be no reprieve, no pardon. Tuberculosis can be prevented and can be cured. To make the fight against the white plague a success each one must do all possible.

Last year in North Carolina 3,391 people died from tuberculosis. At the same time there were more than twenty-seven thousand open and active cases of the disease in the State. Compared with four years ago this is a decrease both in deaths and cases of about twelve per cent. Yet the loss in the state is appallingly large.

The frightfulness of it comes home to all of us when we stop to think. Nearly every one of us has a loved one, a friend or an acquaintance who is suffering from this disease. We see the outward marks growing more noticeable as the ravages of the disease progress and we pity and wonder a little just how long before the funeral.

It doesn't enter our head to do much to prevent the wounded one from becoming a fatal casualty, nor to prevent others from becoming infected. Yet tuberculosis can be prevented, and can be cured. A death from it is utterly useless. The other diseases that have scourged the world are under control, and now tuberculosis must be made to follow the others.

In this we can all assist. The first ten days in December there will be on sale here the Red Cross Christmas Seals. Each seal is a penny's worth of cure and prevention. Chiefly from the sale of these seals are derived the funds with which the campaign against tuberculosis is conducted. Our people can use Red Cross Christmas Seals and help.—R. B. W.

DEATHS DECREASE

A decrease of approximately twelve per cent in the number of deaths caused by tuberculosis in North Carolina during the past four years is shown by a comparison of the figures.

The total number of deaths from this cause in the state for the year 1915 was 3,710. In 1918 the total number had been reduced to 3,391, a difference of 319. This reduction, considering the steady increase in population during the past four years, means an even greater proportionate decrease in the tuberculosis death rate.

The decrease obtained is undoubtedly largely due to the energetic campaign waged by health authorities throughout the state. This has included a wide educational campaign to instruct in methods of prevention and cure, the holding of clinics for the discovery of the disease, the installation of public health nursing in many communities, and the establishment of sanatoria for the treatment of the disease.

Careful observations and experiments have demonstrated that the ratio of active open cases of tuberculosis to deaths are as eight to one.

This means that while more than three thousand died in the state during the past year there were at the same time in excess of twenty-seven thousand suffering with the disease, and menacing the health of many thousands of others.

Tuberculosis is preventable and curable. To save the unaffected from danger of infection and to more adequately care for those stricken is a duty laid upon the state which it is beginning to effectively discharge. But only a beginning has been made. There is need for additional sanatorium facilities, for more field workers and especially public health nurses to reach those who may be affected.

—R. B. W.

THE TRAINING SCHOOL FOR NURSES

The Training School for nurses of the North Carolina Sanatorium for the Treatment of Tuberculosis is chartered by the State of North Carolina. It gives a two years course, and is affiliated with general hospitals for third year course. The school is in good standing with the State Nurses' Association.

The school furnishes text books to its pupil nurses, as well as collateral reading. It gives deserving and capable girls who have had tuberculosis a chance to enter an honorable and remunerative profession. While it does not limit its course to nurses who have had tuberculosis, yet most of the pupil nurses are from this class. To such it gives an opportunity of growing strong while they work and study, always under the guidance and watchful care of physician and head nurse.

A graduate of the training school is now in charge of a sanatorium. Another will be occupying a similar position by January, 1920. For the next ten years there will be more demands for our nurses to fill such places than we can supply. One of our graduates is our laboratory technician, and in addition to the chemical and microscopical laboratory is fast gaining a working knowledge of the X-Ray laboratory.

The school also has a post-graduate course of four months for graduate

NURSING STAFF AT STATE SANATORIUM

nurses, giving a certificate on satisfactory completion of the course.

The teaching faculty consists of: Dr. L. B. McBrayer, dean; Dr. P. P. McCain, vice dean; Miss Mamie O'Kelly, RN, superintendent of training school; Miss Elizabeth Connolly, RN, assistant superintendent of training school; Dr. J. L. Spruill; Dr. R. A. McBrayer; Miss Maude Mann.

—L. B. McB.

TUBERCULOSIS WORK BY THE WHOLE-TIME COUNTY HEALTH OFFICER IN CO-OPERATION WITH THE STATE BOARD OF HEALTH

It was recognized by the State Board of Health that no County Health Department is complete without a properly organized campaign against tuberculosis. It was also recognized that the average doctor did not have sufficient training in medical college to enable him to make a diagnosis of pulmonary tuberculosis in its early stages. Hence the Bureau of County Health Work of the State Board of Health made an agreement with the Bureau of Tuberculosis of the State Board of Health, the same being approved by the State Health Officer, that all whole-time health officers co-operating with the State Board of Health should be given a course in tuberculosis at the State Sanatorium, and that the said health officers would put on a campaign against tuberculosis in his county. For post-graduate course of instruction see article in this issue of the Bulletin on "Clinics at the State Sanatorium" by Dr. P. P. McCain and for the plan of procedure, see article in this Bulletin on Forsyth County, and also article on "Unit of Tuberculosis of State Board of Health," by Miss Rose M. Ehrenfield, State Director of Public Health Nursing.

In addition, the Sanatorium agrees with the health officers to send a member of its staff for consultation on doubtful cases where such doubtful cases can be gotten together in groups of five or more. It also provides that cases in less than groups of five or more may be sent to the Sanatorium clinics for examination. There

SERVING OVERSEAS
Miss Connolly, Dr. R. A. McBrayer, Miss O'Kelly

BACK ON DUTY
Miss O'Kelly, Dr. R. A. McBrayer, Miss Connolly

still remain a few cases doubtful. These may come to the Sanatorium for study over a period of ten days or less when these few remaining will be cleared up.

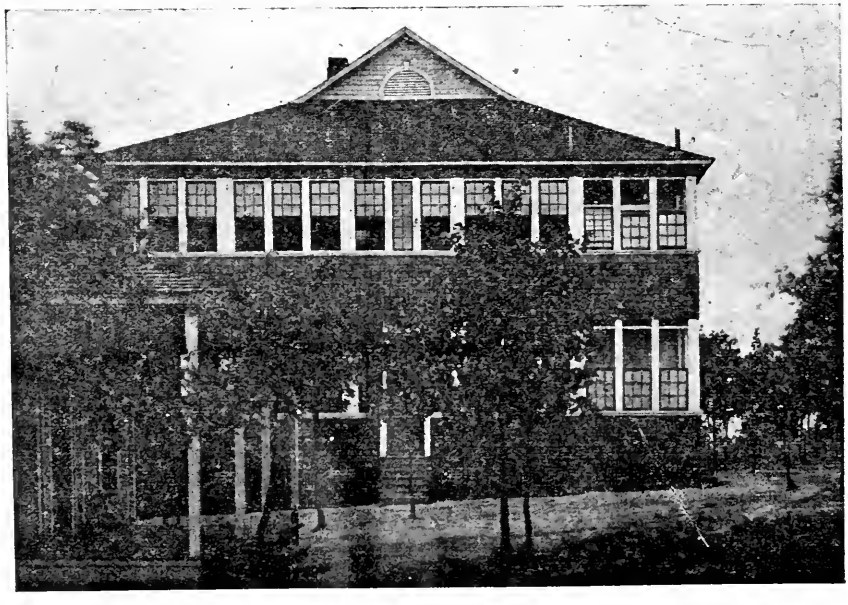
This is found to be a workable plan and one that will cover the ground entirely. It is working now and we are hoping that it will become more perfect as the days come and go.

One wonders why this standardized work by the whole-time health officer should be limited to those who work in co-operation with the State Board of Health. We would certainly be glad to have all whole-time health officers come in on the plan, and county physicians or health officers who are allowed to devote only a part of their time to health work can get in on the plan outlined by Miss Ehrenfield by having his county employ a public health nurse. So that this plan is so arranged that it is workable in any and every county in the state, and it is our desire that it shall be. Let us join you.—L. B. McB.

HOW TO PREVENT THE SPREAD OF TUBERCULOSIS

Tuberculosis is spread from one person to another only through ignorance or carelessness. The germ which causes tuberculosis, the tubercle bacillus, is contained in the discharge from the patient's mouth and nose—in the sputum, the saliva, and the spray from coughing and sneezing. If the patient and those helping to take care of him will follow carefully the directions given below for disposing of the discharges and of the things which come in contact with those discharges, there will be no danger whatever of his giving tuberculosis to any one else.

1. Never spit except in a sputum cup which can be burned when used. There is danger in using a tin cup, a bottle, or a spittoon. Both the pocket sputum cups for those who are up and the cups for those in bed can be gotten at the State Sanatorium, Sanatorium, N. C. for 50 cents a hundred, postage prepaid, which is actual wholesale cost when purchased in



SHACK FOR CONVALESCENT WOMEN AT SANATORIUM

quarter million lots. The tin holders for the bedside cups can be had at the same address for 15 cents each. One sputum cup will usually last a day, so that the cost is negligible. After being used, the cups should be filled with sawdust, wrapped in paper, and burned in a closed stove. The kitchen stove is usually most convenient and perfectly safe for this purpose.

2. If any of the sputum should accidentally be spilled, or willfully placed on the floor, bed linen, or clothing pour over it a five-per-cent compound cresol solution and allow to stand for one hour. Then wipe up with a rag or cloth wrung out of the same solution, and burn the cloth. After this pour over the place where the sputum was more of the solution and allow it to stand for one hour. Then finish wiping the place with a cloth wrung out of the solution. After burning the cloth, wash your hands thoroughly with soap and water. If the sputum is on the bed linen, the linen can be soaked for two hours in one of these solutions and afterwards boiled.

3. Always cover your mouth and nose with a rag or piece of gauze when you cough or sneeze. Coughing or sneezing emits a fine spray from your respiratory passages. This spray contains the germs, and unless you catch this spray on a rag, the germs will contaminate the air and others will become infected. A clean rag, a piece of gauze or cheese cloth, or a paper napkin is suitable for this purpose and is inexpensive. Whatever is used should be wrapped in a paper and burned in the kitchen stove. A patient should never use his hand to shield the mouth and nose when coughing, because of the danger of getting germs on the hand and transferring them to whatever is touched. The hands should be washed often, and always before meals. Should a patient ever have to shield his mouth with his hand when coughing, before he can get his rag, he should wash his hands immediately. A patient should never use a handkerchief for this purpose unless he burns it or boils it for five minutes before putting it in the laun-

SHACK FOR CONVALESCENT MEN AT SANATORIUM

dry. Each patient should have a separate towel for his own use.

4. A patient who has any cough or expectoration should not allow any one to kiss him, and should never kiss any one on the lips, even though he does not cough or expectorate.

5. A patient should use separate dishes and drinking vessels. It is better to have dishes of a different color or shape for the patient, so that they won't get mixed with the others. After being used, the dishes should be boiled for five minutes and then washed in a separate dishpan and with separate dishcloths.

6. Put everything which the patient has had in his mouth, such as apple cores, grape hulls, toothpicks, or other articles, in a paper to be burned. Scraps of food which the patient leaves may be fed to hogs, dogs, and chickens, if boiled first. Otherwise they should be burned.

7. The water which the patient uses for washing his teeth should either be boiled after he has used it, or allowed to stand for a few hours after mixing with it an equal quantity of five per cent compound cresol solution.

8. The patient's clothes, bed linen, and towels should either be boiled for five minutes or soaked in three per cent compound cresol solution for two hours before being washed or sent to the laundry.

9. The patient should never sleep with any one.

10. The person who waits on the patient should wash her hands thoroughly with soap and water every time after handling the patient, the bed linen, the sputum cups, or anything else about the patient.

11. Do not use a duster in the patient's room. Use instead a cloth moistened with a one per cent compound cresol solution. Do not sweep the patient's room without first sprinkling the floor or without using a moistened broom. The best way is to scatter sawdust soaked in a one per cent compound cresol solution over the floor before sweeping it.

12. Do not allow children to play on the floor of the patient's room or to lounge on his bed, since they are much more easily infected with tuberculosis than adults.

13. Screen the patient's room so as to keep flies out. If allowed to swarm over the patient they will carry the germs to the kitchen and dining-room and will likely infect the other members of the family.

14. If the patient has tuberculosis of the bowels or kidneys, the stools and urine need to be disinfected. This can be done by adding twice as much five per cent compound cresol solution

CLASS IN BASKETRY DURING RECLINING HOUR

Making Pine Needle Baskets in Front of Shack for Women, With Miss McLawhorn, the Class Instructor, in Charge

or twice as much of a solution made by adding half a pound of the chloride of lime to one gallon of water and by allowing it to stand for three hours. If the bowels and kidneys are not diseased, no such precautions are necessary.—L. B. McB.

REST, THE MAIN ESSENTIAL

Do you have tuberculosis? Would you like to know wherein lies the secret of being cured? The belief is almost universal that it lies in swallowing raw eggs by the dozen, in sleeping out in the fresh air and in going to some special climate. Our cemeteries are full of those who depended upon these things alone. Nourishing food, fresh air and a suitable climate are all important factors in getting well, but the secret, the one factor which is more important than all others combined, is REST. Whether or not you get well depends not on your going West or North or South, not on how fine a sleeping porch you have and not on how much milk and how many raw eggs you take, but on how soon after the beginning of the disease you begin to **rest**, how completely you **rest** and how long you continue to **rest.**

The tuberculosis in your chest is very much like a house on fire; and rest is the water which will quench it if you discover the disease early and continue to rest not only until the symptoms, or the flames, have disappeared, but also until the lesions in your lungs, or the smouldering coals, have been smothered out. If your house were in flames, you would drop all your other business, your pleasure and everything else until the fire was quenched. Just in proportion as your life is more valuable than your house is it necessary for you to drop everything else and make it your one business to get well.

OFFICE FORCE, 1919

If you are a man with a family to support or a mother with a household to attend to, you may think you cannot drop everything and rest; but if your family cannot get along in some way during the months you are resting in order to get well, how are they going to get along after one or two years when you are dead or helpless, as you will almost surely be if you don't give up everything and rest.

Why is it that in a well run sanatorium so much better results in treating tuberculosis are obtained than in the home? Why is it that 46.3 per cent of all the moderately advanced cases

AMBULATORY PATIENTS AT SANATORIUM
In the Rear is Shown Infirmary Sleeping Porches, With Patients

and 81 per cent of all the early cases treated in the North Carolina Sanatorium are living and at work, and most of them back at their old jobs? It is not on account of any special medicine used. It is largely because in a well run sanatorium a patient is required to rest. It is one thing to tell one how to rest and quite another to see that one does it.

What, then, is the "rest cure," and how is it carried out in a sanatorium?

The patient is put to bed as soon as he is admitted and is kept at complete rest in bed as long as he has any fever at any time during the day. After his temperature has been 99 or below for several days, he is allowed to sit in a reclining chair for an hour a day. If this exertion doesn't cause a "rise of temp." his "time up" is increased after a few days to two hours, then to three hours, etc., until he is up most of the day. It may be only a few days, it may be weeks or it may be months before one's temperature becomes normal, the length of time depending very largely on how soon after the onset of one's trouble one begins to rest. Regardless of how long it requires, every patient in a sanatorium is kept in bed until his temperature subsides.

If the patient has had no fever or other active symptoms for some days after getting out of bed, the physician prescribes for him a small amount of exercise, usually a few minutes slow walking, being as careful in the prescription as if it were a dose of medicine. The remainder of the day the patient spends resting. As his condition improves his exercise is gradually increased.

But all patients, regardless of how well they look or feel, are required to take a rest period of one and one-half hours on a reclining chair in the morning and a rest period in bed of at least two hours in the afternoon. During this latter period they must relax and keep perfectly quiet, no talking, no visitors, no games and no reading being allowed.

Of course the patient is kept in the fresh air both day and night and he is given plenty of nourishing food, both of which are factors that aid materially in restoring him to health. But it is in the enforcing of the "rest cure" which makes the sanatorium indispensable.

Do you ask, "Why can't one take the rest cure at home?" Do you say you can get just as good food at home and that you can build an up-to-date sleeping porch, so what is to hinder you from getting well at home as surely as in a sanatorium? No matter how well your home may be equipped, you will not take the prolonged rest which is necessary for a cure, unless you are different from the other ninety-nine in every hundred.

Early tuberculosis doesn't make one feel very sick and it causes no pain unless there is pleurisy. After a few weeks of real rest the symptoms all disappear—the fever subsides, the appetite returns, the weight is regained —and one looks and feels as well as he ever did in his life. On the contrary the tuberculous lesion inside of his chest heals very slowly and it requires months and months of rest after all symptoms have disappeared for the disease to be arrested.

It is comparatively easy for one to take the rest cure when one feels sick; but to act like a sick man when he feels and looks perfectly well and when there are hundreds of things which he needs or would like very much to be doing is beyond the power of the average individual. Even when a patient is disposed to continue the rest cure himself his homefolks and friends often make it impossible for him to do so by insisting on his enjoying himself or possibly on his helping with the work around home. A relaxation from the rest cure as soon as a patient feels well means that he will soon have another breakdown and

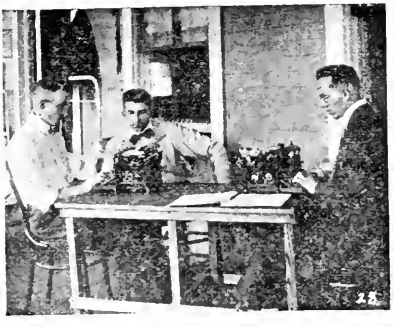
will likely be in worse condition than he was at the beginning.

In a sanatorium every one else is taking the cure and it is comparatively easy for you to fall in line. While getting well you are forming good habits, learning tuberculosis and learning how to live when you go back home so that you will never have another breakdown. Let me urge you, then, to go to a sanatorium as soon as possible, for this is the surest and quickest way to get well. In case it is absolutely impossible for you to raise the necessary funds, you will need to summon to your aid every ounce of will power you have and determine that "in spite of the world, the flesh and the devil" you are going to rest and keep on resting at home until your disease is arrested.

Above all don't think you have no further need of your physician as soon as your symptoms disappear and you begin to feel well. Don't fool yourself either into thinking he has made a mistake in his diagnosis. Have him examine your chest as often as he thinks wise, keep him advised as to your symptoms and never increase your exercise except upon his advice.—P. P. McC.

THE SPUTUM AND THE GERM

A great number of North Carolinians are today suffering with tuberculosis which has become incurable because they have been horribly misled by the fact that no tubercle bacilli (germs causing tuberculosis or consumption) were found upon one or more microscopical examinations of their sputum (spittle). This prevailing belief that the failure to find these germs of tuberculosis in your sputum means that you do not have tuberculosis is far more damaging than to be told that you really have tuberculosis when you do not have it. This one error in deductive reasoning is costing hundreds of lives in North Carolina each year.



VOCATIONAL THERAPY

In Center, Mr. C. W. Hyde, Instructor, With Students at State Sanatorium

IN THE WORKSHOP

Student-Patient Soldier Completing Center Table at State Sanatorium

Can a man have real tuberculosis (or consumption) and never show any of these germs in his sputum—after microscopical examinations? Most assuredly he can. This fact is proved by the case and autopsy records of the University of Pennsylvania Hospital in Philadelphia.

In face of this proof, what does the failure to find tuberculosis germs in the sputum mean? It means nothing at all—for you can and may have

tuberculosis just the same. The germs of tuberculosis (or consumption) are in you, if you have the disease and, if found by microscopical examination it is positive proof that you have the disease—and no further examination is necessary by any one to make the diagnosis positive; however a failure to find the germs means absolutely nothing.

Doctor C. A. Shore, State Laboratory of Hygiene, Raleigh, N. C., will examine your sputum for you free of charge at any time, though he will caution you not to believe that you do not have tuberculosis even if he does not find the germ of tuberculosis in your sputum.—R. A. McB.

OCCUPATIONAL THERAPY—VOCATIONAL EDUCATION AT STATE SANATORIUM

In the treatment of tuberculosis, which of necessity extends over a long period of time, it has been found that what we term Occupational Therapy is of much importance.

The mind in the treatment of tuberculosis is of so much importance that one writer has said that half the treatment should be directed to that part of the body above the neck. The mind to do or the will to do is the large part in most any undertaking, whether it be the securing of an education, the amassing of a fortune, the winning of a girl, or getting well of tuberculosis. "An idle brain is the devil's workshop," was a true adage when it was written, is true today and will remain true for all time. It is true in the treatment of tuberculosis and ofttimes, more often than any other one thing, spells failure in taking the cure. So that anything that will bring cheer and contentment to a patient taking treatment for tuberculosis is a very valuable adjunct and I might say a very valuable therapeutic agent. You know we have long since found out that drugs are a small part on the therapeutic agents at our command.

Homesickness in the tuberculous patient at a sanatorium is a very important thing, and hence should be given earnest consideration. It is believed that homesickness interfered more with the treatment and cure of tuberculous soldiers in the U. S. A. Sanatoria than all other things combined. They were receiving the best

CLASS IN PINE NEEDLE BASKETRY WORKING

treatment and care that science and money could provide; the government, we are unofficially informed, spending quite $5.00 per day per patient. They had their clothes furnished them in addition to their care and treatment; they had the Red Cross, the Y. M. C. A., the Knights of Columbus aides, dietitians, nurses, doctors, all in abundance, and besides they were still receiving a soldier's pay, which for a private was $30.00 per month. But they were homesick. They wanted to go home and it mattered not that the home was far in the country, where a doctor could only be secured at long intervals, and a nurse not at all; where the food to be cooked and the methods of cooking it were of the very crudest kind; where the simplest methods of caring for the sick had never been heard of, in fact it mattered not if there were no home to go to—the sick soldier wanted to go home—was homesick.

The most pitiable patient that we have ever had at the State Sanatorium was a woman sent by a local Anti-tuberculosis Association and whose expenses were paid out of funds secured by the annual sale of Red Cross Seals. She had neither home nor loved ones, but she did have friends in the tuberculosis association above referred to who provided the funds, and the great heart of the great State of North Carolina who provided a place and part of the expense which made it possible for her to have proper care. The only relative she had was a nephew of 12 years. The Association had hired a negro woman to do the housework and such nursing as she could do, pending admission to the State Sanatorium. They had also provided food and medicine and house rent, the doctor giving his services as doctors always do under such circumstances.

When this woman came to the State Sanatorium, the rented house was given up and so the patient had no home in this world—but she wanted to go home—that was the burden of her plea, and it mattered not that she

SOLDIERS DISCHARGED WITH ARRESTED CASES

These Men Are Leaving for Colleges and Other Places to Specialize in Vocational Training Begun at State Sanatorium

had no home on this earth. She was homesick.

Contrast another woman, age 60, who hadn't been more than two miles away from her home in the extreme eastern part of the State, in the last twenty years. She too was homesick for the first week after she entered the Sanatorium, but another lady patient, who might very well be denominated an angel of mercy, called on her, talked with her, read to her, and as the days went by taught her how to read and write, and a happier patient we have never had at the Sanatorium, and while she cried every day for the first week of her stay on account of homesickness, she cried every day for the last week of her stay because she had to leave such pleasant environs and return to her home. And since her return home as an arrested case, each year she writes the Sanatorium as sweet a letter as ever a school girl wrote her alma mater. That is an example of occupational therapy.

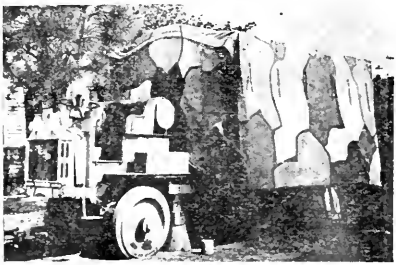
But that is only an example. Miss McLawhorn, a former patient, is teaching the women patients all kinds of handwork; pine needle baskets, trays, lamp shades, etc., raffia work of many kinds, bead work, fancy work, etc., etc.

Mr. Chas. W. Hyde was loaned to us by the Federal Board for Vocational Education to do occupational therapy with the forty soldiers we are treating here for the War Risk Insurance Bureau and now for the United States Public Health Service. The forty refers to the average carried all the time. We have handled about a hundred and twenty-five discharged tuberculous soldiers, all of them North Carolina boys.

OUTDOOR HANDWORK

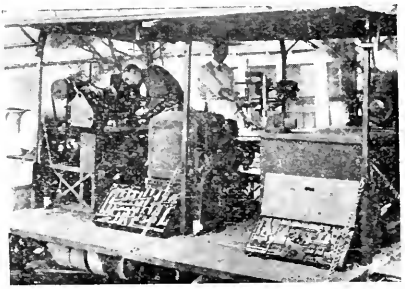
Student-Patient Soldiers During Reclining Hour at State Sanatorium

The Federal Board calls it Vocational Education and between occupational therapy and vocational education as applied to a sick person, the dividing line is imaginary, but in addition to teaching the boys grammar school work and higher, Mr. Hyde teaches them mechanical drawing, raffia work of many and varied kinds, woodwork, woodwork finishing, shop work from the simplest drill work to



ARTILLERY REPAIR TRUCK

Loaned by Ordnance Corps, United States Army, for Use of Student-Patient Soldiers at State Sanatorium

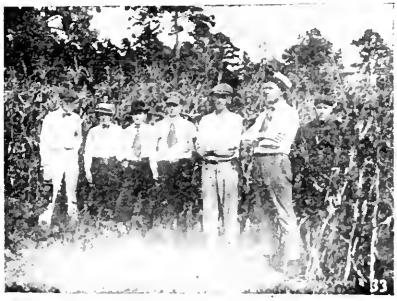


AT WORK ON TRUCK

Interior of Truck Fully Equipped as Complete Machine Shop for Students

oxy-acetylene and electric welding, gardening, typewriting, etc., etc., and makes a study of the mentality of each soldier boy, collaborating with the medical staff, including his educational and hereditary advantages, and when he has an arrested case the vocational education is transferred to a college or other place and his tuition is paid by the Federal Board and in addition he is paid $80.00 per month and up while he is continuing this vocational education. While at the Sanatorium he receives his treatment and $30.00 per month (for private) at the hands of the government.

A case in point was a soldier boy who was "down in the mouth," had the "mulligrubs," didn't want anything done for him, didn't want to get well—was homesick. A vocational teacher found after many attempts to approach him from as many different angles, that he had always worked in a dairy until he was drafted into the service, and that he did this to support a widowed mother from the time he was twelve years old and that his father had been a mechanic. The teacher then began to talk mechanics and found out that he had been reading, "Popular Mechanics." A copy was procured for him, he devoured it and later a pencil and other drawing material were brought, and he was a different man. Hope beamed from his countenance and six months later when he left the Sanatorium he was given a position as draftsman in a large office at $75.00 per month. That is Occupational Therapy—that is Vocational Education.



IN THE CORN FIELD

Agricultural Work by Student-Patient Soldiers at State Sanatorium

When I told this story to a shrewd business man, he replied, "It is strange that a man should have to go to war, become a casualty from tuberculosis, and be sent to a Sanatorium for treatment, before there is any one to fit him into an occupation in which he could succeed easily and well, and but for which war and tuberculosis and sanatorium he would never have found. How often we try to put square pegs into round holes when selecting an occupation or profession for our children. Wouldn't it be splendid if the State would do this thing for all her children, even while they are well and strong." We must do it.—L. B. McB.

THE SANATORIUM CLINICS

In the furtherance of our purpose to make the Sanatorium of the most possible service to the people and to the profession of the State, we have established diagnostic clinics to which patients may come from any part of the state for free examination and where physicians may come for special instruction in tuberculosis.

That our regular work at the Sanatorium may not be interfered with it has been necessary for us to apportion the number of cases coming each day and to have a regular time for these examinations, the time being eight to eleven a.m. So if you wish to be examined free, write for an appointment. Otherwise, there will be a charge of $5.00.

Each patient is examined carefully and advised according to the peculiarities of his own case. He is also given printed instructions on how to get well and how to keep from infecting others.

We are now making about 1,000 such examinations a year at the Sanatorium. The demand is so great that

we will soon be unable to handle the problem alone. So we are planning to establish such a clinic in each of the ten medical districts of the state and in addition to encourage their establishment in all the larger cities. The greatest problem is to find physicians who are both capable and willing to take charge of the work.

To help equip men for such positions has been one of the motives which prompted us to offer to the physicians of the state a special course covering all phases of tuberculosis. The course consists both in didactic and practical work. Lectures are given and assignments for reading and study are made on the anatomy, histology, and physiology of the lungs; on bacteriology, prevention, pathology, diagnosis and treatment of tuberculosis; on the relation of tuberculosis to public health; on the management of tuberculosis nurses and on the best methods of conducting county and municipal clinics.

The practical work of the course receives the most emphasis and consumes by far the larger part of the time. With all the outside patients coming for examination and with our 135 resident patients in all stages of the disease we have a great wealth of clinical material.

In teaching diagnosis much emphasis is laid on the symptoms of the disease. One is not only taught the significance of the various symptoms, but is also taught how to obtain and how to make an accurate record of the symptoms in each case coming for diagnosis. He writes histories and submits them for criticism until he acquires the art of obtaining them quickly and accurately.

Several hours each day are spent in examining chests. First the normal and then the various abnormal signs are demonstrated and interpreted in terms of pathology. After making several examinations with a member of the staff, one is given patients to examine alone and is required to write the history, chart his findings and make his diagnosis.

In a short time, no one of course, can become an expert in diagnosing tuberculosis, but if he is drilled in and impressed with the importance of a thorough and systematic procedure in making a physical examination, he has made a long stride in becoming an expert.

Sufficient time is spent in the laboratory to teach one how to find tubercle bacilli in the sputum and how to examine urine, stools and other tuberculous discharges for tuberculosis.

We have a complete X-ray equipment and we endeavor to demonstrate its value and its limitations, but we do not attempt in so short a time to teach one to become a radiologist.

It usually requires at least two weeks working full time during the day and studying at night for one to finish the course. We feel that we are not justified in accepting a candidate for a shorter period than this.

—P. P. McC.

THE PROPER ORGANIZATION FOR THE FIGHT AGAINST TUBERCULOSIS FOR A TOWN AND COUNTY

Winston-Salem and Forsyth County have about completed a real and complete organization for a fight against tuberculosis, the necessity for which was apparent to all those familiar with conditions there. For example, the city of Winston-Salem has a larger number of deaths from tuberculosis than any city in the state.

Again, there were 3,391 deaths from tuberculosis in our state in 1918—there were more than 100 deaths from tuberculosis in Winston-Salem in 1918. Then one out of every 30 deaths from tuberculosis in North Carolina in 1918 occurred in Winston-Salem, or one death from tuberculosis occurred in Winston-Salem to 29 in the remainder of the state. This in itself should be

enough to awaken the public to a sense of responsibility to these more than a 100 citizens who are dying in their midst every year and the hundreds of other cases who are living to infect their families, friends and neighbors. But it takes more than a mere recital of facts to arouse the people of Winston-Salem to their duty, and unfortunately the same is true for every other town in North Carolina, for while Winston-Salem has the highest batting average when it comes to killing people with tuberculosis, yet the death toll from tuberculosis in every other town in the state would be appalling, were it not for the fact that the public has become so accustomed to it that they give it no heed.

Winston-Salem differs materially from most of the other towns in the state in that she has "seen her duty and is doing it," while practically every other town in the state is "asleep at the switch," while their citizens are dying from tuberculosis.

It would not be possible to speak of the fight against tuberculosis in Winston-Salem or in North Carolina without mentioning the name of Colonel J. L. Ludlow, a prominent citizen of Winston-Salem and member of the North Carolina State Board of Health and member of the Board of Directors of the State Red Cross Seal Commission since its organization. Several years ago, about ten we would guess, Colonel Ludlow organized what he called "A Committee of One Hundred" in Winston-Salem, and began a campaign of education in his city on the prevention of tuberculosis. As the writer remembers, he, too, began through this committee the first nursing service. This was perhaps the first local organization in the state unless it might be the organization at Wilmington, headed by Mrs. Cuthbert Martin, who has also been a member of the Board of Directors of the State Red Cross Seal Commission since its organization.

We are quite sure that no one rejoices more over the splendid organization that has just been completed than Colonel Ludlow. This organization at Winston-Salem and in Forsyth County is so nearly ideal that we feel that we owe it to the other towns and counties in North Carolina to present the organization to them as an example which each of them should endeavor to emulate.

1. A City Health Officer with complete Health Department.

2. A County Health Department in co-operation with the State Board of Health with a whole-time health officer at its head.

3. A sufficient number of Public Health Nurses for city and county in charge of competent, properly trained supervising Public Health Nurse.

4. A permanent tuberculosis clinic in the city open at regular hours, with physician and nurse in attendance.

5. Tuberculosis clinics held by the County Health Officer in every township in the county.

6. Co-operation of the diagnostic clinic of the State Sanatorium with the city and county tuberculosis clinics in the diagnosis of doubtful cases.

7. The reporting of known cases of tuberculosis by physicians and others to the City and County Health departments.

8. The County Sanatorium.

9. Sufficient money to "carry on."

The above mentioned organization, all of which is now in operation in the city of Winston-Salem and Forsyth County, is of sufficient importance to need consideration in greater detail.

1. The City Health Officer and the properly organized City Health Department is now so well known that a detailed description is not deemed necessary. Suffice it to say that the City Health Department of Winston-Salem has been continuously progressive since the day the present efficient health officer, Dr. R. L. Carlton, was placed at its head, and the permanent

tuberculosis clinic and the well organized staff of Public Health nurses is a justification of the statement if there were not many other things in this Health Department to justify it also.

2. A County Health Department in co-operation with the State Board of Health with a whole-time Health Officer at its head:

This co-operative County Health Department is desirable from every standpoint, but as this article has only to do with the tuberculosis part of it, we will limit our discussion to that. First, the Health Officer, who is to hold the tuberculosis clinics at stated intervals in every township in his county, must have some expert knowledge of the physical examination of the chest. In the case of Dr. A. C. Bulla, who is the efficient whole-time Health Officer for Forsyth County, he has obtained this by adding to the ordinary teaching on this subject given by medical colleges in their regular course, which is admittedly inadequate, a course on the physical diagnosis of the chest, and tuberculosis in general given by the staff of the State Sanatorium. This done, the holding of the clinics with the help of his county Public Health Nurse only needs time and energy to make it a complete success.

3. The Public Health Nurse has recently been discovered to be the most important cog in the wheel of the Health Department, next only to the Health Officer. The matter of extra training of the graduate nurse in public health work, social service ideas and ideals, record keeping, etc., etc., before she is capable of taking up the duties of a Public Health Nurse is admitted we believe by all who have given serious thought to the subject. There are many schools where courses are given for this purpose. Teachers' College, New York; Simmons College, Boston, Richmond, Cincinnati, Chicago and other places. There are also many scholarships provided at this time by the Red Cross, National Organization for Public Health Nursing, State Red Cross Seal Commission of North Carolina, and many other agencies. In a city a sufficient number of Public Health nurses are needed to cover the town, and each one should be assigned to a given district and should cover all the nursing of whatsoever kind needed in that district—this to prevent overlapping, loss of time in travel and increase in efficiency. To have a properly co-ordinated nursing service in a city it is necessary to have a competent Public Health Nurse as supervisor. All and every of which above outlined plan of Public Health Nursing is in force in Winston-Salem.

4. A permanent tuberculosis clinic in the city open at certain specified hours, with physician and nurses in attendance:

The diagnosis of tuberculosis while it is yet in the early or incipient stage is perhaps the greatest need at this time in the fight against tuberculosis. To say that the general practitioner should be the one to find all these early cases is to express a woeful lack of knowledge of his routine work. He hasn't the time to do it, if the people would apply to him, and many people are not willing to pay for a proper physical examination of the chest and many others haven't the funds with which to pay. Hence the necessity of a clinic. Then the physician who is in charge of the clinic will take more interest in the cases as there will be less danger of them quitting, than would be the case with a private practitioner. Then, as there is no financial reward to the doctor, it is not embarrassing to have the nurse follow up the cases, see that they carry out instructions, and secure their return at proper times to the clinic. There is, however, plenty of work to do and there will always be all the private tuberculosis work that the general practitioner will care to do. At the

clinic, too, the doctor and nurses will have sufficient time to give the patients proper instructions in the hygiene of tuberculosis; the shielding of the mouth and nose when coughing or sneezing, the use of sputum cups, and the proper disposal of the sputum (by burning). And the nurse in following up the cases will be able further to impress these things by having the patients do them in her presence. It goes without saying that all such supplies mentioned above will be kept in every well regulated clinic and distributed free to the patients.

The permanent city clinic should co-operate with the temporary or movable clinic of the County Health Department, by allowing doubtful cases found in the county to report to them for further study, and any remaining doubtful cases should be sent to the clinic at the State Sanatorium for final study over a period of days. From the above you will see that many early cases of tuberculosis cannot be diagnosed by one examination, but must be studied over a period of days sometimes. But the importance of the early diagnosis to the patient and to the community warrants any amount of study necessary.

5. The tuberculosis clinic held by the County Health Officer in every township and in some instances in subdivisions of a township at stated periods:

Everything said about the permanent city tuberculosis clinic is true of the movable county tuberculosis clinic except as the name implies, to wit: the county tuberculosis clinic holds one day in one township and the next day in another until every township in the county has had its clinic. When this round is finished it will probably be necessary for the Health Officer to devote his time to other work over a period of one or two months, when he will make the rounds of his drives again, his nurse in the meantime looking after the cases just as the nurse in town does. Should the county town be too small to have a Health Department, and be included in the work of the County Health Officer, he should hold a tuberculosis clinic at his office at least once a week. As in the case at Winston-Salem, these cases could be cared for at the city clinic if satisfactory arrangements could be made. In any tuberculosis clinic the work should not be considered satisfactory until every person who has been closely exposed to tuberculosis over a period of time, such as living in the same house with a case, is examined.

6. Sufficient has been said as to the co-operation of the clinic at the State Sanatorium with the county and city clinic in four and five to make the proposition entirely understandable.

7. The doctors of the town and county owe it to themselves, their patients and the community to report promptly every case of tuberculosis that comes within their knowledge. To a large extent they serve the same purpose as pictures taken from an airplane during the war—locate the enemy.

8. The County Sanatorium:

No county is serving its people as it ought unless it builds and maintains a tuberculosis sanatorium where all races can be cared for. There is no place equal to a sanatorium for the treatment or for the training of patients with tuberculosis; 90 per cent or more of the incipient cases can be cured, if properly treated. We owe it to every one to give them a chance to get well. Then there are in every community cases of tuberculosis that have nowhere to stay even for shelter. Common instincts of humanity demand that we provide a place for these, where they can have humane care and treatment. No person has a right to kill his fellow by torpedoing him with the deadly bacillus of tuberculosis, and careless consumptives should not be allowed to live outside a sanatorium. Some day we will have

a law covering this—but we must also have a place to send them and the County Sanatorium is the place. You may wonder that we say so little about the State Sanatorium. It has its place, a large place too, but every county in the state should have its own County Sanatorium. Those who are able might also have a building at the State Sanatorium, as is now provided for by law. The Forsyth County Sanatorium is a model for the capacity intended and is presided over ably by Miss Ingram as head nurse, who graduated from the training school for nurses of the State Sanatorium and was acting head nurse there during the war, in the absence of the head nurse overseas.

9. Sufficient Money:

Winston-Salem and Forsyth County are fortunate again; fortunate because their officials are acting with intelligence. The Sanatorium was built and is maintained by the county commissioners and credit must be given Mr. E. T. Mickey, who was Chairman of the Board of County Commissioners, for his leadership in this movement. The city has made appropriations for its clinic and for several nurses. The county clinic and county Public Health Nurse is provided for in the budget for the County Health Department, while the local Red Cross Chapter provides funds for the salary of the supervising nurse and perhaps more, while funds for many other expenses are provided by the sale of Red Cross Seals and it is intended to largely increase this fund at the annual drive December 1-10. So by this co-operative spirit between many different agencies, sufficient funds are provided to operate a completely correlated organized drive against the deadliest foe of our people in the city of Winston-Salem and the county of Forsyth.

The command now is, Carry On!

—L. B. McB.

UNIT OF TUBERCULOSIS OF STATE BOARD OF HEALTH

By MISS ROSE M. EHRENFELD, RN.,
State Director of Public Health Nursing

The Tuberculosis Unit is a plan of work for a county public health nurse who is not specializing and who may be working under a full time county health department, or in an independent field. It calls for:

1. "Securing the names of all persons in the county who are afflicted with tuberculosis." These are gotten from cases reported by physicians to the Bureau of Tuberculosis and from lists of draft board rejects and discharged tuberculous soldiers.

2. "Recording cases of tuberculosis in the county and deaths there on a tack map as prescribed by the North Carolina State Board of Health." Cases and deaths, irrespective of race, are indicated by white and black tacks.

3. "Visiting homes of persons afflicted with tuberculosis as often as may be necessary to give patient such nursing attention and household such instructions as to enable them to utilize the best means of treatment and those sanitary measures of safety necessary for prevention of spread of the disease." To the new cases found the nurse to go sufficiently often to give bedside care for its teaching value until reasonably certain of intelligent care of the patient and adequate protection of the caretaker and other members of the family.

4. "Investigating the general health of members of families where tuberculosis exists or has within three years preceding. The nurse to offer to members of the family below par or other contacts, an opportunity for examination" (discussed later in this paper).

5. "Visiting every soldier, sailor or nurse discharged from the army or navy on account of tuberculosis and carrying out, in dealing with the aforesaid persons, the instructions of

the North Carolina State Board of Health, especially using influence to effect proper disposition of such cases in accordance with provision by the Federal Government and State.

6. "Making such other investigations regarding presence of tuberculosis in the county as may be necessary, not inconsistent with the symmetrical development of county plan of work." The geography, roads, population, etc., regulate the extent of one nurse's ability to emphasize the different units of work.

7. "A campaign of education through public schools by means of lantern slides, lectures, moving pictures and distribution of suitable literature; publication of newspaper articles (submitted or approved by the Bureau of Tuberculosis) and offering suitable prizes to school children for essays on subject of tuberculosis." This provision explains itself.

8. "Arrangements for clinics for examination of persons with suspicious evidence of tuberculous infection (the medical examiner furnished by the Bureau of Tuberculosis of the State Board of Health). This effected by the nurse conferring with persons suspected of tuberculous infection and submitting information regarding their condition to the State Sanatorium and later arranging for groups of such as suggested by the Sanatorium, to receive a thorough examination by a specialist therefrom." (The initial clinic according to this plan discussed later in this paper.)

MISS ROSE M. EHRENFELD
State Director of Public Health Nursing

9. "Secure treatment for all persons found to be tuberculous, by family physician, in State Sanatorium or private sanatoria, at clinics or by County Health Officer or county physician." The following indicate the need of county clinics:

(1) Large number of previously unknown cases discovered by exemption boards, military camps or naval schools.

(2) Belief that the strain of war creates conditions favorable to the development of the disease among civilian population.

(3) As a practical way of economically carrying education to a community and acquainting the people with the extent of the disease.

(4) To serve the counties too small to have a local dispensary and offer

NURSES' HOME

clinic physician who knows tuberculosis in all stages, to communities where the need is great and facilities for examination of the lungs limited. The ultimate aim is to create an organization for constructive work and secure the supervision of all consumptives.

"Report of first clinic showed 120 examinations with definite appointment for 30 others at later date. Of the 120, 72 were negative, 25 positive and 23 probable. Of these 6 were teachers advised to stop teaching for a period of rest; 7 were advised to lighten work and rest or to stop work entirely; 8 were ordered to Sanatorium for treatment and to bed pending admission thereto; 16 were advised to have X-ray and 9 others placed under observation and to record daily temperature and have further examination; 2 advised to wean babies and 5 referred to family physicians for other than chest findings. (Medical supervision by family physician recommended for all.)"

The clinic demonstrated:

(1) As practical the unit of tuberculosis work.

(2) Unlimited educational value of same.

(3) That the standardization of the plan through supervisory control was possible.

(4) With an active supervising tuberculosis agency, a modest amount of money, a clinic physician who knows tuberculosis in all stages, and a nursing staff trained in public health aspect of tuberculosis, all the essentials for conducting a clinic were available.

(5) That this type of clinic is practical, inexpensive and satisfactory and has come to stay.

The response to the clinic showed:

1. That rural North Carolina is inclined to accept as authority representatives of the Bureau of Tuberculosis of the State Board of Health. Our word was never questioned that we know of; but one occasion it was not accepted by a member of the medical profession as being worth as much as that of a veterinarian who spoke on the same occasion.

2. The need of the Modern Health Crusade, not alone in schools but to extend its influence back to the homes. One family coming for examination (a man, wife, two boys and a girl) gave evidence of neglected health chores and, on being questioned by the examining physician as to their bathing facilities at home, he was informed that the boys went swimming. "What about the girl?" The reply was, "She ain't bathed since she was a baby." And what a contrast to this is the case of a recently reported adult crusade enthusiast who claimed, "I just can't take any more baths than I do but I rub harder and enjoy them more."

3. To what extent the county public health nurse has the confidence and support of the people. I believe this was secured:

(1) By making known her work in advance of her coming and stimulating intelligent interest therein.

(2) By having back of the nurse a board of representative people, typical of the county's interests.

(3) By her own ability to teach and organize groups of class work throughout the county.

(4) Through her ability to co-operate with existing agencies, thus creating a demand for her service.

(5) By making herself known to mixed audiences and "making good" in every opportunity afforded her.

(6) As a very gratifying reduction in tuberculosis mortality is due to ordinary public health activities, such as control of milk supply, child welfare work, the prevention of communicable diseases, etc. (which have perhaps been quite as instrumental as the warfare against specific tuberculosis infection) we believe that county public health nurses are the most im-

portant single factor in placing a new slant on the tuberculosis problem.

(Read before the meeting of the Southern Conference on Tuberculosis, Asheville, N. C., October the 24th, 1919.)

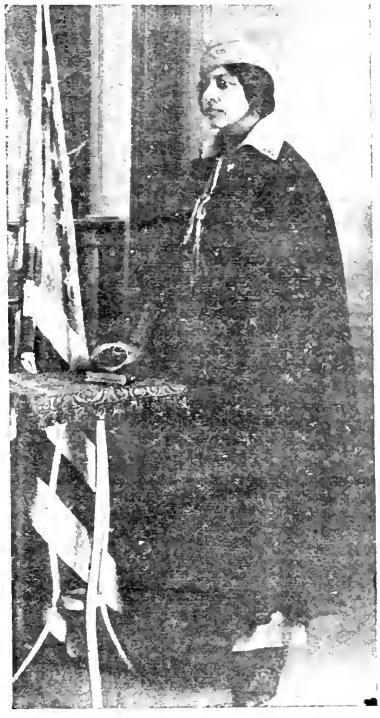
HEALTH WORK IN NORTH CAROLINA FOR NEGROES

By FLORENCE CHAPMAN WILLIAMS

State Director of Health Education and Organization Among Negroes

Because of his large interest in the health of the people of this State, particularly as it pertains to tuberculosis, and with a vision to realize that the health of one race cannot be properly conserved unless the health of the other is in like manner conserved, on account of the close relationship of the races, health work among negroes was actively and systematically begun in the year 1917, by Dr. L. B. McBrayer, Chief of the Bureau of Tuberculosis, at Sanatorium, N. C.

Conferring with Mr. N. C. Newbold, State Agent for the Jeanes Fund, which, co-operating with the counties, supports what is known as Industrial Supervisor in each of forty-four counties in this State, it was decided that the plan could best be carried out through these supervisors, making the county the unit of operation thereby assuring a more intensive and effective program.



MRS. FLORENCE C. WILLIAMS

State Director of Health Education and Organization Among Negroes

These supervisors, together with the Superintendents, have full charge of the rural schools, and going into every section of the counties offer a fine medium for the furtherance of the health

MEMBERS MILLER'S CHAPEL COMMUNITY LEAGUE

program. They find it a pleasing part of their usual duties because of a natural interest, and receive an added stimulus through an addition to their salaries by Dr. McBrayer's bureau.

This work in each of forty-four counties is directly under a Jeanes supervisor and is handled by organizing in every community, where there is a school, a Negro Community League consisting of a President, Secretary, Treasurer and Executive Committee for officers, and it is the desire to enlist every person in the community as a member.

In every Community League there is organized three committees: One on education, one on health and one on agriculture. The scheme is to get as many people into the league as possible and there work as many as possible. Miller's Chapel, Rowan County, is a small community, but nearly everybody in the community is a member of the League. This is a thriving little community and everything for community uplift is done through this League. The County Supervisor works through it; the Farm Demonstration Agent works through it and the minister works through it.

The Committee on Education does everything possible to improve the school along all lines. Picture No. 1 was the school at Miller's Chapel known as Thompson's school, before it was rebuilt. Picture No. 9 is the present new building after rebuilding. The material was purchased, the house built and finished without aid from anybody but the patrons themselves. It is a model rural school, furnished in Hyla blackboards and patent desks.

LEADERS AT LANDIS

Officers of Community League at Thriving Rowan County Town

The Agriculture Committee handles all phases of club work among the girls and boys, such as pig, corn, and poultry clubs and gardening and canning among both the girls and women. In some counties these canning clubs have saved from thirty to fifty thousand quarts of fruits and vegetables every year, and from the corn and pigs and poultry the girls and boys in many instances send themselves to boarding school.

The Health Committee looks after all phases of health in the community: sanitation around home, school and church; visits the sick in the community and raises money by various means to improve better living conditions where families are not able to make better conditions for their sick.

Special attention is given to all

BEFORE

AFTER

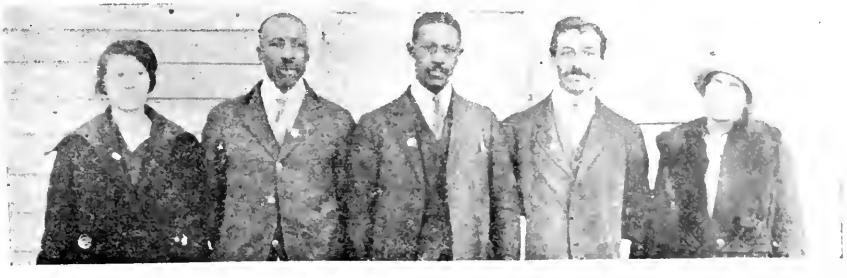
cases of tuberculosis. Literature on this dreaded disease is carried to the homes and read and discussed. Pictures are shown at the Community League meetings on tuberculosis and also much literature is used. In some Community Leagues the Health Committee buys fruit, eggs and milk and ice for tuberculosis patients. They have also screened the bedrooms and made sleeping porches for these patients.

The county people as a whole are doing much in the way of screening their homes and back porches. There is a very decided improvement in the life of the average rural family.

Landis people have one of the cleanest communities seen anywhere, with quite a number of the homes well screened. The work in Rowan County is under the direction of Mrs. Rosa Hargrave, County Supervisor. There are also in Rowan County two men who lend wonderful co-operation to the work of their community. These men are Prof. J. E. Aggrey, of Livingstone College, Salisbury, N. C., and Mr. Thomas B. Patterson, the efficient Farm Demonstrator of same county. Nothing is ever too much trouble or too big a task for these men to put over if it is for the betterment of Rowan County. They have given unlimited aid to the State Health Director and their County Supervisor in all phases of Rowan County Community work.

There are a number of counties doing very good work along the lines of health as well as education and agriculture. Of these Vance County is doing her part. In Vance the work is under the supervision of Mrs. Lelia B. Yancey, County Supervior. In every community in Vance County there is a good school with good toilets. Picture No. 8 shows the Community League at Middleburg, Vance County, one of the largest and most progressive leagues in the state. Every member in this League wears the double Red Cross button and is a crusader in the fight against tuberculosis. The supervisor of this county did quite a bit last year to promote the Crusaders Health campaign in her schools as did the Supervisor of Beaufort County, Miss Elizabeth J. Jones and a few others.

There is at Henderson, N. C. the Henderson Normal School, of which Dr. J. A. Cotton is President. There is no school man in North Carolina who has done more than Dr. Cotton towards rural community co-operation. When the work first started in Vance County, he helped pay part of the supervisor's salary. He gives of his time, the use of his car and horse and buggy. Whatever interests Dr. Cotton in this rural work also interests Mrs. Cotton. She has contributed just as freely to the development of this work as he has. In fact there seems to be throughout the Henderson Normal School that spirit of good will and co-operation. Everybody connected with the school



MIDDLEBURG COMMUNITY LEAGUE OFFICERS

seems eager and ready to help in any phase of rural work for Vance county wherever there is an opportunity. President Edwards of Kittrell College is also identifying himself largely with county work and stands ready with the use of his school and in many ways to push forward the work of Vance County. There is shown throughout the state a wonderful spirit of co-operation from the various heads of all departments, the Education, Health and Agriculture departments co-operating.

This work was started in 1917, with the Department of Education under Mr. N. C. Newbold and the Bureau of Tuberculosis under Dr. L. B. McBrayer, working jointly. To date there are nearly five hundred community leagues organized with nearly fifteen thousand members. The Educational Rural Community work is under Mrs. Annie W. Holland, Jeanes Fund State Supervisor, who is doing a great work along educational lines and gives unlimited support to all community work. The Health work is under Mrs. Florence Chapman Williams, State Director, Bureau of Tuberculosis. This Bureau is anxious to handle all kinds of health work, and as all phases of health work bear on tuberculosis, stresses at all times and under all conditions the fight against this dreaded disease.

There is to be a big drive on in each of the forty-four counties for the sale of Red Cross Seals, taking place December 1st to 10th. An allotment has been made to every county and the supervisor is responsible for this amount.

There is no question but that every county will put this drive over the top, when by so doing it will be made possible to put into these counties a Health Educational Car, carrying a moving picture outfit. This car will give one week of afternoon and evening programs, as desired, in each of the forty-four counties. In this drive every Community League is placed

DR. J. A. COTTON
President Normal School for Negroes
Henderson, N. C.

on its mettle, being the first time they have been asked to raise money to help in any way further the health work. For that reason alone, each league seems anxious and delighted to do a great big job.

This is a year for plenty of real hard work for schools and communities. Just after the Red Cross Seal drive comes the Crusaders Health Campaign in all the schools. The work was crippled to some extent last year by war drives and influenza. But with a big Peace Program ahead of all the world and with the restlessness of educational, industrial and social conditions facing us as they must for the next five years, we all must become interested and co-operate, not as colored people or as white people for the narrow benefit of any group alone, but together, as citizens for the common good of our common community, our common country.

One year ago last summer this health work was a part of every institute and summer school in North Carolina, and at Hampton, Va. The Presidents of each of our State Schools

and the conductors of every institute were anxious, kind, courteous and enthusiastic in their co-operation of this work, in that the State Health Director was given daily periods for lecture work and community organization and nights for lantern slides with the teachers. In nearly every institute and summer school all student teachers responded as one. The spirit of co-operation was really wonderful.

The work thus far planned and carried out has clearly indicated the wisdom of Dr. McBrayer in conceiving this idea and justified the expense incident thereto. We need help, we need sympathy, we need co-operation, we need money to extend this work which means so much to the people of our state, and I am persuaded to believe that money spent in this health work is destined to yield large dividends, for has the state any better asset than a healthy, intelligent citizenship? Good health must be promoted for how can a sound mind exist other than in a sound body?

The co-operation from all educational departments at Raleigh, especially education and agriculture, have gone way beyond our expectation. At a meeting in the Hall of Representatives at the Capitol in Raleigh, September the 26th, with State Superintendent of Public Instruction, Dr. Brooks, and State Agent for Negro Schools, Mr. N. C. Newbold, and about fifty of the State's leading educational negro men and women, a declaration of principles was unanimously adopted by these people.

The State Superintendent declared that in attempting to inaugurate a broad educational policy for both races he was confronted with serious difficulties. Therefore, it seemed desirable that the negroes of this state should adopt a platform of principles upon which they will stand, one convincing to all that doubts may be vanished; that strife may cease and that good will may prevail between the races. Moreover, all school officials of both races should at all times seek to make right and justice prevail among all classes of people.

If this is done, we shall have an unprecedented era of good feeling. Educational progress will be promoted, great economic prosperity will result, and there will be no strife in North Carolina. This meeting not only tends to prove the wonderful co-operation between all educational forces in North Carolina, but also the co-operation and relationship between the races of the state.

As State Director of this work among my people, I have been in nearly all the forty-four counties referred to above and in some two and three times, working day and night,

SPENCER CANNING AND PIG CLUB

often under hard conditions, talking to my people about health, showing them pictures, and they have responded with readiness, sympathy and co-operation that have commanded my profound admiration and respect.

That the work has been effective can be clearly seen as one travels through the rural communities of the state. Great progress is indicated in better, cleaner, screened homes, greater use of paint, sanitary closets, pumps, drainage, and greater care in handling the sick and promoting good health. In Northampton County under Mrs. Sarah Randolph a wonderfully successful drive was made for sanitary closets with Dr. F. M. Register, at that time the county's whole-time health officer, co-operating.

I cannot close this article without a word of thanks for all who have interested themselves in this work, for their sympathy, help and co-operation, without which we could not have carried out our plans. Moreover, I here make acknowledgment of the help, advice, sympathy and personal direction of Dr. McBrayer and Mr. Newbold, without which the work could not have reached its present state of efficiency, and I congratulate them on the conception of the idea of this work, which, under God, must stir the people from one end of this state to the other.

THE RED CROSS CHRISTMAS SEAL

The Red Cross Christmas Seal, as millions of Americans know today, is an agent of happiness and health.

It was originated in 1907 by Miss Emily Bissel of Wilmington, Delaware, who had learned through Jacob Riis of somewhat similar seals that were sold in Norway for the purpose of raising funds with which to fight disease.

Miss Bissel persuaded the American Red Cross to take up the idea with the result that the seals were sold in a limited number of communities in 1908. The sale yielded a revenue of approximately $3,000.

The Red Cross then decided to issue the Seal each year and to turn the proceeds over to the National Tuberculosis Association and its affiliated societies for the purpose of financing the campaign against tuberculosis.

The number of Seals sold in America has risen by leaps and bounds until in 1917 the total reached 180,000,000. In 1918 as a war measure the Seals were not sold, but through an agreement between the American Red Cross and the National Tuberculosis Association were awarded in limited quantities to each member of the Red Cross.

This year the Seals are again "on sale," beginning December first. More than half a billion Seals have been printed for distribution to state and local agents. In addition to the Seals this year there will be "Health Bonds" in denominations ranging from $5 to $100 to be sold in lieu of Seals to large contributors who do not send out a sufficient quantity of mail in December to make use of all the Seals they would like to purchase.

The national campaign against tuberculosis, in which North Carolina has come to play an important part, is directed by the National Tuberculosis Association. Under the guidance of this organization the forces engaged in the fight against tuberculosis have grown rapidly year by year since 1895. In that year there was only one organized tuberculosis society, and one tuberculosis sanatorium. Today there are more than one thousand state and local societies in every section of the country. More important still, there are today over six hundred sanatoria for the treatment of tuberculosis, thousands of visiting nurses, hundreds of open-air schools, and thousands of free clinics and dispensaries. Measured in human lives, the result of this work might be

summed in the statement that in 1895 the death rate from tuberculosis was 200 per 100,000 of population. Today the ratio is 140 per 100,000. A SAVING OF 60,000 LIVES ANNUALLY.

The work of the National Association, and of the affiliated state associations, is financed through a small percentage of the proceeds from the sale of Red Cross Christmas Seals by local agencies throughout the Nation.

In North Carolina the fight against tuberculosis is led by the North Carolina State Board of Health, acting through its Bureau of Tuberculosis with Dr. L. B. McBrayer as director. Supplementing most effectively this department of the state work is the State Red Cross Seal Commission of North Carolina, acting in co-operation with the American Red Cross and the National Tuberculosis Association. The Commission handles the sale of the Seals each year, and directs the private and quasi-public activities in the state against tuberculosis. The directors of the Commission are: Mrs. C. C. Hook of Charlotte, Mr. Hamilton C. Jones of Charlotte, Dr. Otho B. Ross of Charlotte, Mrs. Gordon M. Finger of Charlotte, Mrs. Cuthbert Martin of Wilmington, Mrs. W. N. Hutt of Candor, Mrs. Thomas D. Jones of Durham, Dr. William L. Dunn of Asheville, Col. J. L. Ludlow of Winston-Salem, Mrs. Mark Quinerly of Greenville, Mrs. S. H. Brown of Oxford, Mrs. J. L. Wetmore of Arden, Mrs. Charles R. Whitaker of Hendersonville, Mrs. R. C. Warren of Gastonia, Mrs. C. C. Hook of Charlotte is chairman, and Dr. L. B. McBrayer of Sanatorium is executive secretary and treasurer.

The sale of the Seals was begun under the auspices of the Commission in 1913, when 525,307 Seals were sold. Since then the increase has been marked: In 1914, 674,522, in 1915, 803,386, in 1916, 1,207,874, in 1917, 1,754,102. There was no sale in 1918. In the last sale Greensboro led the State with a total of 160,956 Seals sold, more than doubling the next largest sale. Grouped closely together for honors for second place were four cities, their total sales being as follows: Asheville, 78,160, Raleigh, 75,-112, Charlotte, 70,724, Wilmington, 69,028.

It has been the custom since the sale of Seals was begun by the Commission to leave seventy-five per cent of the total receipts from sales in the hands of local committees for local expenditure for the eradication of tuberculosis. The remaining twenty-five per cent is divided between the American Red Cross, the National Association and the State Commission for the purpose of financing their work.

Indicative of the work for the present year are the following appropriations made by the Commission at the annual meeting of the directors in April: (1) for public health nursing, $1,000; (2) for furnishing dairyman's cottage at State Sanatorium, $508.35; (3) for the care of tuberculous soldiers, $3,500; (4) scholarships for public health nurses, $1,000; (5) furnishing bottling plant at dairy of State Sanatorium $2,500; (6) for Red Cross Seal campaign, $1,000; (7) for public health nursing in local communities, $1,000; (8) for establishing tuberculosis clinics, $2,000; (9) for tuberculosis work among the negroes, $2,000.

Accomplishments in the past year are shown from a few excerpts from the report of the executive secretary for the year ending March 31, 1919.

With regard to the treatment of discharged tuberculous soldiers at the State Sanatorium: "After a visit to Washington and consultation with Col. Banks, medical advisor of the War Risk Insurance Bureau, he agreed to pay us $2 per day, which was just about the actual cost for the treatment of soldiers who had been discharged on account of tuberculosis. On account of the crowded condition of the office force of the War Risk Insurance

Bureau, it takes several months to get them to rule on a tuberculous soldier; so we decided to use this appropriation as a revolving fund, and we have been admitting soldiers discharged on account of tuberculosis without delay so far as we could, and have been carrying about forty all the while for the past several months. The Sanatorium could not continue to run and pay its expenses without the $1 per day charge for patients, so this fund was advanced to the Sanatorium for the payment of this $1 per day for the discharged soldiers whom the Government had not yet passed on. It is intended as soon as the Government pays the Sanatorium the $2 per day for these soldiers, the Sanatorium will return the amount paid by the State Red Cross Seal Commission and the money can be used over again. This is working very well, and the Home Service Committee in every county has been notified of this arrangement. Likewise we have received from the War Department the names of the men who have been discharged from the army on account of tuberculosis, in North Carolina to the number of about 500. We have written them personal letters advising them that free treatment could be had from the Government. In addition to that the Federal Board for Vocational Education has promised to send us at their expense a teacher to teach these soldiers vocationally and avocationally, and vocational therapy, so with all it seems to be a very splendid arrangement made possible by this appropriation by the State Red Cross Seal Commission."

An appropriation of $3,420 was made for the purchase of an X-ray equipment for the State Sanatorium. Speaking of this the executive secretary says: "The Sanatorium has expressed itself as being very grateful for this contribution from the State Red Cross Seal Commission, and it has, perhaps, the most complete X-ray equipment in the state, and it is of wonderful help in the work that is being done. Due credit is given in the annual report for this splendid donation, and in addition the matter was mentioned before the Appropriations Committee of the last General Assembly, and the Legislature's attention was called to the fact that it had not properly provided for the Sanatorium, and but for the kindness of the State Red Cross Seal Commission, we still would not have this equipment. This, no doubt, had something to do with the more generous attitude of the General Assembly."

Additional outstanding features of the state work is that of Miss Rose M. Ehrenfeld, State Director of Public Health Nursing, whose salary is paid jointly by the Red Cross Seal Commission and the Metropolitan Life Insurance Co. She has and is doing a remarkably effective piece of work in the state that has met with great approval and success. Florence C. Williams, colored, has been employed as State Director of work among the negroes, her work being done in cooperation with the office of the State Superintendent of Public Instruction. Through her efforts Community Leagues have been organized in forty-four counties of the State, with membership of approximately twenty thousand. It has been characterized as the most efficiently serviceable health work attempted on a large scale among the negroes in the Southern States.

The bulk of the work accomplished from funds received through the sale of Red Cross Christmas Seals, however, has of course been in the local communities where the sales were made. By the use of such funds public health nurses have been employed, special school work among the children done, patients sent to and maintained at sanatoria for tuberculosis, sanatoria assisted financially through the furnishing of rooms and the purchase

of necessary equipment, and the partial maintenance of one local sanatorium.

This year the National Tuberculosis Association is offering to the people of the United States 650,000,000 Red Cross Christmas Seals, of a total value of $6,500,000. Of this amount North Carolina is asked to take $90,000 worth, virtually all of which is for the promotion of local work against tuberculosis. It is a small amount when the enormous loss from tuberculosis in the state each year is considered. While there has been a gratifying decrease of about twelve per cent in the number of deaths from this disease during the past four years, yet last year in North Carolina 3,391 people died, and about 27,000 people were suffering because of tuberculosis. The economic loss to the state is in excess of $15,000,000 each year from this one source alone. To reduce this loss, and to save the suffering and sorrow caused by tuberculosis, the people of the State are asked to purchase during the ten days between December first and tenth these little messengers of hope and cheer to provide the funds for a bigger, more intensive and more efficient fight against the common enemy.

Red Cross Christmas Seals will be on sale through local committees in practically every community in North Carolina this year. Where there is no local committee handling the sale the seals may be obtained in any quantity desired by writing direct to the executive secretary of the State Commission, Dr. L. B. McBrayer, Sanatorium, N. C. The price of the seals is one cent each.—R. B. W.

MODERN HEALTH CRUSADE

Good health is dependent upon the observance of certain simple rules or right living. To make these rules easy and attractive to children is the purpose of the Modern Health Crusade.

The Modern Health Crusade is an organized movement that has enlisted more than three million American children. It is adding strength to coming workers and protecting them from the increased disease and neglect which the war has brought to the children of Europe. It is a system of health education that grips the child's interest until health practices become habitual. Through the children it is educatin parents and promoting community health.

The Modern Health Crusade supplies the child with a motive for patient work in acquiring health habits when the abstract advantages of health and and the usual teaching of physiology do not call the child to action. Material is educational just in so far as it creates an interest. With adults the direct motive for the faithful observance of the laws of health is usually insufficient until sickness creates a desire for health through its absence. With children it is all the more essential to supply an indirect motive. The Crusade accomplished this by introducing the play element into the study and practice of hygiene. It transfers some of the romance of the medieval crusades to a vital quest of present-day children. It holds up to them the chivalry of health, the high ideals of strength, right living and the protection of the weak. It makes an instant appeal to the child through its titles and badges as well as by giving him something to do and honors to earn; but throughout it adheres to the laws of habit-formation. It applies the approved pedagogical principle of learning health habits by doing them.

TUBERCULOSIS!

eprosy — Smallpox — Yellow Fever — Typho

These in turn have scourged the world, but they have been surely conquered by science.

Now Tuberculosis goes to the block. There must be no reprieve, no pardon.

Tuberculosis can be PREVENTED and can be CURED. But you must do your part in this national fight against the WHITE PLAGUE.

Don't pass a Red Cross Christmas Seal Booth without buying—encourage those who are selling.

JSE RED CROSS CHRISTMAS SEAL

Each Seal Is a Penny's Worth of Cure and Prevention

EXTRA

THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen in the State upon request

Vol. XXXIV DECEMBER, 1919 No. 12

PROCLAMATION BY GOVERNOR BICKETT

The annual sale of the Red Cross Christmas Seals is now on. No more beautiful expression of the Christmas spirit can be made than for every letter, card and package to bear the seal of the Red Cross. The seal adorns the package, is a recognition of the blessings of the Red Cross, and the money will be used to stamp out the Great White Plague. We are enjoying an era of unrivaled prosperity. Let every one have the grace to show forth gratitude by buying Red Cross Seals.

T. W. Bickett

Governor.

This 2d day of December, 1919.

DEATHS FROM TUBERCULOSIS
IN
NORTH CAROLINA

1915	3710	
1917	3482	
	Decrease	228
1917	3482	
1918	3391	
	Decrease	91
1915	3710	
1918	3391	
	Decrease	319

AN APPEAL FOR HELP

Dear Reader:

We believe that a great number of the readers of The Health Bulletin are interested enough to want to aid in the work of stamping out tuberculosis in North Carolina, which means better security for the loved ones of each, as well as aid for those who are suffering.

This every one can do by buying Red Cross Christmas Seals, which are sold for one penny each. Use the seals for decorations for your Christmas letters and packages, and let your dollars bring Christmas cheer to many.

In many communities of the State the Red Cross Christmas Seals have been on sale since December 1. If they are not available in your community order as many as you can afford AT ONCE, using the form below.

For those who are suffering or may hereafter be stricken with tuberculosis, we thank you; and wish you a merry Christmas, health, and a happy, prosperous New Year.

Sincerely yours,

STATE RED CROSS SEAL COMMISSION,

By L. B. McBrayer, M.D.,

Executive Secretary.

December_____1919.

Dr. L. B. McBrayer,

Executive Secretary,

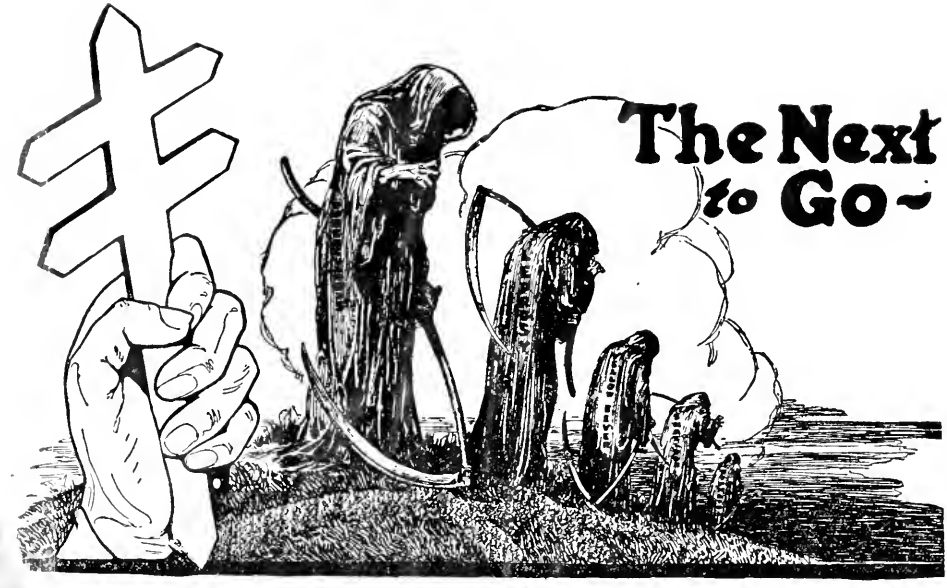
Sanatorium, N. C.

Enclosed find $_____for which please send to me_____

Red Cross Christmas Seals.

_____(name)

_____(address)



TUBERCULOSIS!

Leprosy-Smallpox-Yellow Fever-Typhoid

These in turn have scourged the world, but they have been surely conquered by science.

Now Tuberculosis goes to the block. There must be no reprieve, no pardon.

Tuberculosis can be PREVENTED and can be CURED. But you must do your part in this national fight against the WHITE PLAGUE.

Tuberculosis last year cost North Carolina in excess of $15,000,000 in money, over 27,000 persons needlessly ill, and more than 3,300 persons who uselessly laid down their lives, a wasted sacrifice upon the altar of this greatest scourge of mankind.

In the determined efforts being made to reduce this appalling yearly loss to the State each citizen may take an active part by buying now Red Cross Christmas Seals. All the funds so secured are used for the prevention and cure of tuberculosis.