

THE HOOKWORM CAMPAIGN

IN

L.

ALAMANCE COUNTY, NORTH CAROLINA

Benjamin Earle

BY

1885-

B. E. WASHBURN, M.A., M.D.

DIRECTOR OF CAMPAIGN

RALEIGH

E. M. UZZELL & CO., STATE PRINTERS AND BINDERS

1914

ISSUED BY THE
NORTH CAROLINA STATE BOARD OF HEALTH
RALEIGH, N. C.

INTRODUCTION.

The nineteenth century was in many respects the most remarkable in the history of the world. The achievements of learning and especially of science far surpassed that of any similar period of time. In no field of endeavor have these accomplishments been more marked or of such human value and interest as in the field of medicine. During the century, many of the most fearful diseases have been conquered and have been freed from the terror that was once attached to them. Among these may be mentioned smallpox, diphtheria, the plague, hydrophobia, and, to a measured degree, typhoid fever and tuberculosis. Following this period of wonderful accomplishments in the field of preventive medicine, the twentieth century is destined to put these discoveries into application and to so advance the cause of public health that the time will come when the physician will, in a true sense, become "the guardian of the public health" and the work of the doctor will be, not to cure people of disease, but to prevent people from having disease.

Accompanying the discoveries in preventive medicine, there has grown up the science of sanitation, or an application of the laws of nature, whereby it is possible for a man, family, or community to be rid of a great part of the sickness by which they have heretofore been afflicted. So important have the teachings of this new science become that every progressive government is making an effort to have the results of sanitation, and the methods of obtaining those results, known to all its citizens. For a State to increase the public health is economical, because health means the ability to work and earn good wages; and a healthy community means more business, more money, and more comforts.

The great trouble in getting sanitary measures adopted is that the majority of the people do not understand anything at all about the nature of diseases. Very few of the people know that malaria is spread by mosquitoes, or that a person who is only slightly ill may be carrying the germs of typhoid. A still greater number do not know the way in which infectious diseases are spread; do not know that tuberculosis, typhoid, diarrhea, many bowel complaints of children, and hookworm disease, are all spread by filth and unsanitary surroundings at home and at the schools. It is these people who do not realize the value of sanitation, of destroying the filthy breeding places of flies, or of ridding a community of mosquitoes. The great problem of public health and sanitation is that of making them realize the importance of keeping clean and of having sanitary surroundings. Every one, therefore, who spreads a knowledge of diseases and their causes is helping the sanitary condition of the community, for where there is knowledge of diseases, the fear of them and the effort to escape from them will soon follow.

In educating the people of North Carolina in public health, the State Board is assisted by the Rockefeller Sanitary Commission in giving definite demonstrations in the counties—trying to interest the counties and have them in turn interest and educate the people. It is for this purpose that the Hookworm Campaign is being carried on in the State. This question at once

arises: "If the object is to interest the people in sanitation, why carry on a campaign against hookworms and intestinal parasites?" No one can doubt the value of the campaign to those infected with intestinal parasites, but "the best part of a hookworm campaign is the collateral good it does. . . . The suppression of hookworm disease will diminish the amount of tuberculosis, typhoid fever, dysentery, and other infections. . . . One of the most encouraging phases of sanitary work directed against tuberculosis, typhoid fever, and hookworm disease is the assurance that a successful campaign will result in fundamental and permanent control or eradication of other communicable diseases. The prevention of tuberculosis deals especially with personal hygiene, and the prevention of typhoid fever and hookworm with the sanitation of the environment. The combination of the two, therefore, embraces almost the entire range of preventive medicine."¹

Then, too, the campaign is of great value because of the demonstration work in the counties where the dispensaries are being conducted, in the same way that demonstration work has been carried on in other fields of endeavor, especially in education, agriculture, and the building of good roads. For these reasons a class of diseases (intestinal parasites) has been chosen. Hookworm disease, the most important, is very prevalent, and is found in every county of the State during every month of the year. It is preventable and easily curable, and such marked results follow treatment that it appeals to every one. In conducting the Hookworm Campaign, the State Board of Health is showing what can be done in progressive health work, so that the counties may form an estimate of the value of such work when applied in a systematic manner to all preventable diseases.

In the accomplishments of positive results in any movement for the education and upbuilding of humanity, the leaders of the people must be interested to such an extent as to cause a positive expression in terms of work. When this is accomplished in public health, results are sure to follow, and the success of a hookworm campaign in any county is measured by the coöperation of the citizens.

The finances for a County Hookworm Campaign are provided by the State Board of Health and the county. The county makes an appropriation not to exceed \$250 to pay for four items: expense of a microscopist, advertising, medicine, and containers for bringing in specimens. In asking the counties to make this small appropriation (which is about one-fourth of the actual expenses of a campaign), the enlistment of local interest is solicited from the beginning. And this is of great importance, for if the people see that their own county is paying part of the expenditure, they are more easily interested and their coöperation is more easily enlisted.

¹Preventive Medicine and Hygiene, by M. J. Rosenau, 1913, p. 121.

THE HOOKWORM CAMPAIGN IN ALAMANCE COUNTY.

GETTING THE APPROPRIATION.

In June, 1913, while conducting the Hookworm Campaign in Caswell County, I was asked by the Raleigh Department to visit Alamance County on July 7 and go before the board of commissioners and secure an appropriation preliminary to conducting a campaign in that county. The task was undertaken with many misgivings, for I had often heard that to get an appropriation from Alamance was a hopeless undertaking, and had been shunned by other directors. I determined, however, to make an effort and to leave no stone unturned in making my visit successful.

I began immediately by writing letters to the county commissioners, telling them of my coming. I then wrote each of the thirty-five physicians of the county, asking his aid. Articles were sent to the five newspapers of the county. To follow up this preliminary work, I decided to spend one or two days in Alamance before the first Monday, and reached Graham on Friday, July 4.

My first interview was with the county attorney, and from him I learned the characteristics of the members of the board of county commissioners. There were five commissioners: two were progressive, one decidedly unprogressive, and two neutral. On Saturday morning I visited Dr. Long, the county physician. He was very kind, and assured me of his assistance. Together we went to Saxapahaw, a distance of 12 miles, to interview the chairman of the commissioners. Mr. Williamson was very much impressed with the results of our work in other counties, and especially among the cotton mills, he himself being in the mill business. In the afternoon I drove out to see one of the "neutral" commissioners, and found him negative. He agreed to all I had to say as to the value of the campaign, but said the county was already in debt, and needed to buy some mules.

Between Saturday and Monday I visited as many physicians as possible, and was greatly surprised to find that they spoke indifferently about public health work and were not very much impressed with the importance of a hookworm campaign. One of the leading physicians of Graham said he had never treated any cases of hookworm disease—that he had always been too busy with his practice to bother with unimportant theories.

On the first Monday I found the commissioners very busy with questions such as deciding the changing of roads, school districts, the building of bridges, and other local matters. I was promised one-half hour at 4 p. m. At noon I was able to interview two other commissioners. Mr. Cates assured me that he was heartily in favor of our work and would vote for it, while Mr. Fogleman wouldn't commit himself either way.

Just after dinner I visited the board of education, then in session, and explained to them the details of our campaign. They were very much interested, and passed a resolution asking the commissioners to vote the appropriation, and also ordered Mr. Robertson, the superintendent of schools, to go before the commissioners with me. The chairman, Mr. Scott, also assured

me that if it was necessary the board of education would take the matter up with the county commissioners and agree to pay half of the appropriation. Mr. Scott is the manager of a coffin factory, and when he was asked if his position in advocating public health was not inconsistent with his business interests, replied that he was interested in seeing people die, but that he had rather have them live longer and make more money so that when they did die their people could buy a casket.

As a result of the preliminary work, three of the five papers had printed our articles and two had also written editorials in our favor. Another editor was interviewed, but stated that he did not have space to print the article. His paper was filled with more important matter—an editorial petitioning the Secretary of the Navy to name the new battleship Alamance. From twenty-five to forty people were present to meet with us, and of the thirty-five physicians, two—Dr. Long and Dr. Barefoot—were present.

I explained the details of a county campaign and the effects of hookworm disease. Dr. Long and Dr. Barefoot made short talks, Dr. Barefoot telling of a case of hookworm disease he had treated with wonderful results. The patient, who was known to one of the commissioners, had been an invalid for a number of years and had been unable to work for some time. After treatment, his health improved and he is now the fireman on a freight engine.

Mr. Cates made a motion that the appropriation be made, and, to my surprise, one of the "neutral" men seconded it, and the vote was a tie. With the chairman's vote the motion carried, the dispensary points were decided upon, and I left on the evening train for Caswell—successful and happy.

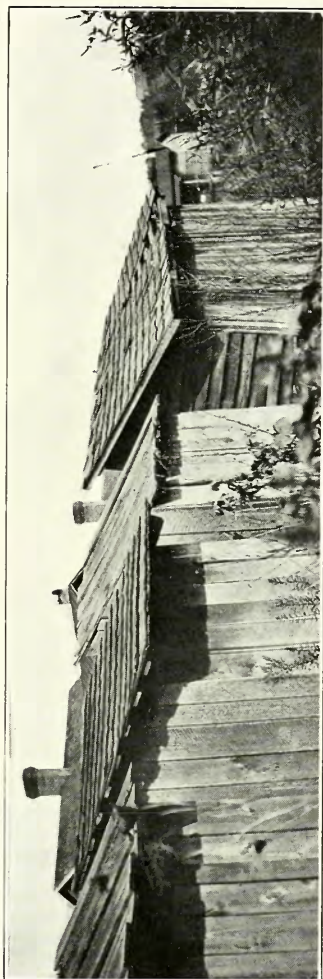
DESCRIPTION AND SANITARY CONDITIONS OF ALAMANCE.

Alamance County is situated in the Piedmont section of North Carolina, and has a population of more than 30,000 people. The soil is very productive, the chief products being cotton and tobacco. The watercourses are numerous and, because of the excellent water-power along the Haw and its tributaries, cotton manufacturing is an important industry, there being about thirty mills in the county. Because of these resources, the county is one of the foremost in the State in wealth and production. In the matter of public health, however, the county is very backward. Before the Hookworm Campaign no effort had ever been made to interest the people in sanitation.

The Hookworm Campaign was conducted in Alamance County from August 8 until September 20, 1913. Alamance being a North Carolina county of the progressive type, the campaign work there is typical of the campaign methods carried on in other counties. Of course, the county had individual differences which had to be overcome in doing successful work—all counties have. In this story of our campaign I shall give only the more important events and shall tell of the things that were most important in making our work a success, although these occurrences are not given in any chronological order.

As would be natural in a place where there are no public health regulations, the position, from a sanitary point of view, of the homes and villages, as well as of the larger towns of the county, is most backward. Taking the county as a whole, the greatest evil against the public health is the type of dirty, loathsome, unsanitary, open-back privies found in so many homes. A fair estimate of the sanitary conditions about a home can be made from the

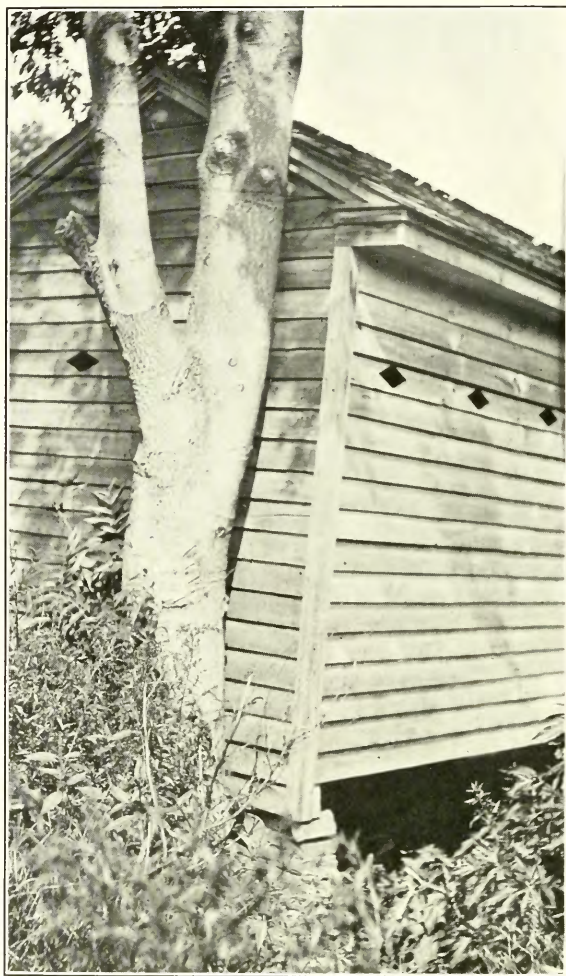
condition of the privy, and judged by this standard the sanitary index of Alamance County is very low. (See illustrations Nos. 1 and 2.) This type of privy is not limited to the country homes or to the mill villages, but is found in large numbers in the towns, especially Graham and Mebane. A con-



No. 1.—Privies at Haw River, N. C.

servative estimate would be that more than 90 per cent of the homes in the county having privies have them of this grade. A great many homes have no privy of any type, and the sanitary condition of such a place usually beggars description. Sanitation is very much neglected in the larger towns,

especially Burlington and Graham. At Graham even the courthouse was dirty, and it was so infested with fleas that at each dispensary date these had to be driven out before we could begin our work. At Burlington there is both a city health officer and a sanitary policeman, but these either have

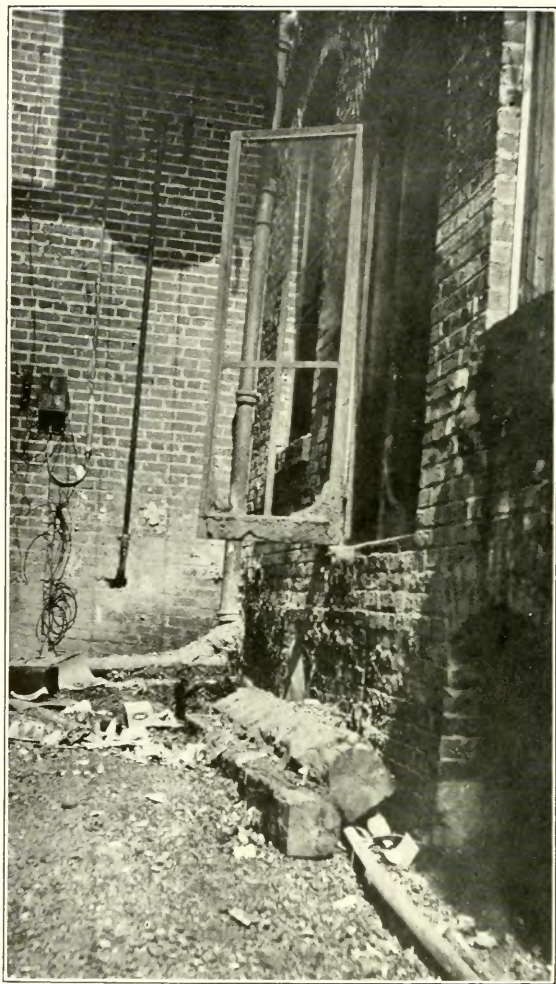


No. 2.—Privy at Saxapahaw, N. C.

no authority or fail to exert it, as may be strikingly seen by examining illustrations 3, 4, 5, 6, and 7. At no place in the county is there an effort being made to destroy the breeding places of mosquitoes or to limit the spread of malaria.

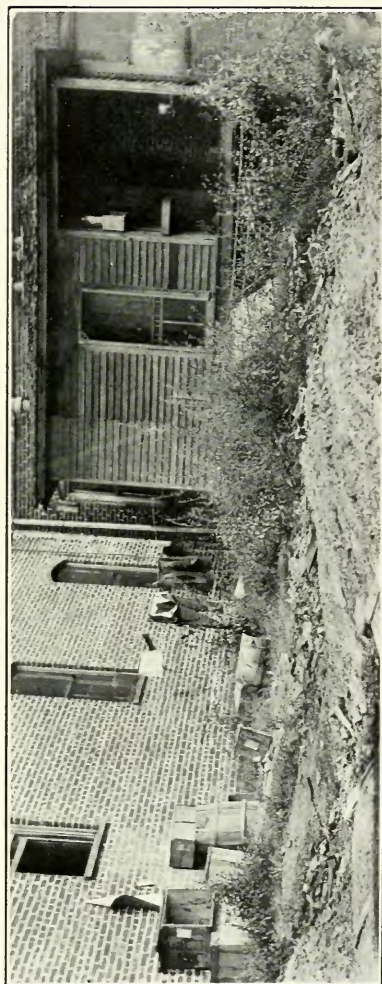


No. 3.—Tank of Burlington Bottling Works. Overflows daily.

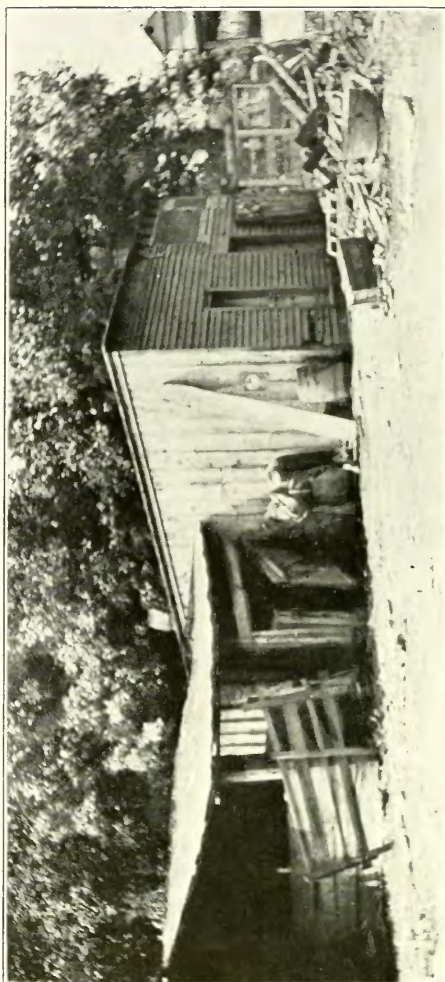


No. 4.—Back door and alley of The Burlington Bottling Works, Main Street. This wet and unsanitary condition is caused by the overflow of the tank above the door. There were a number of cases of typhoid in the city at the time the pictures were made, and although the condition had been reported time and again to the city authorities, no step was taken during our stay in the county to have this or other unsanitary places in the city cleaned up.

A large part of the soda water and bottled goods used in the county is put up at this place.

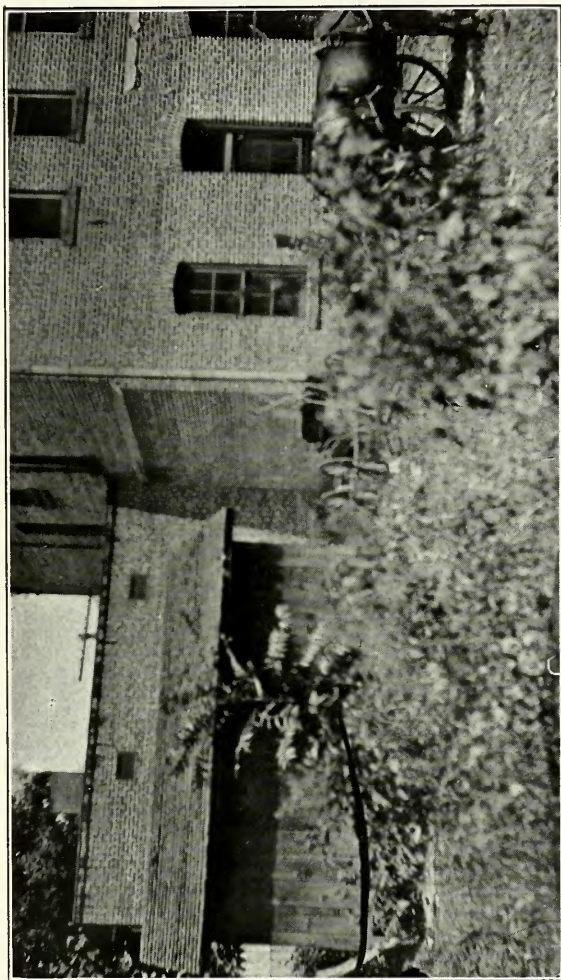


No. 5.—Open surface drain from the back door of the Burlington Bottling Works. This condition makes it impossible for the owners of other near-by business houses to keep their back yards clean.



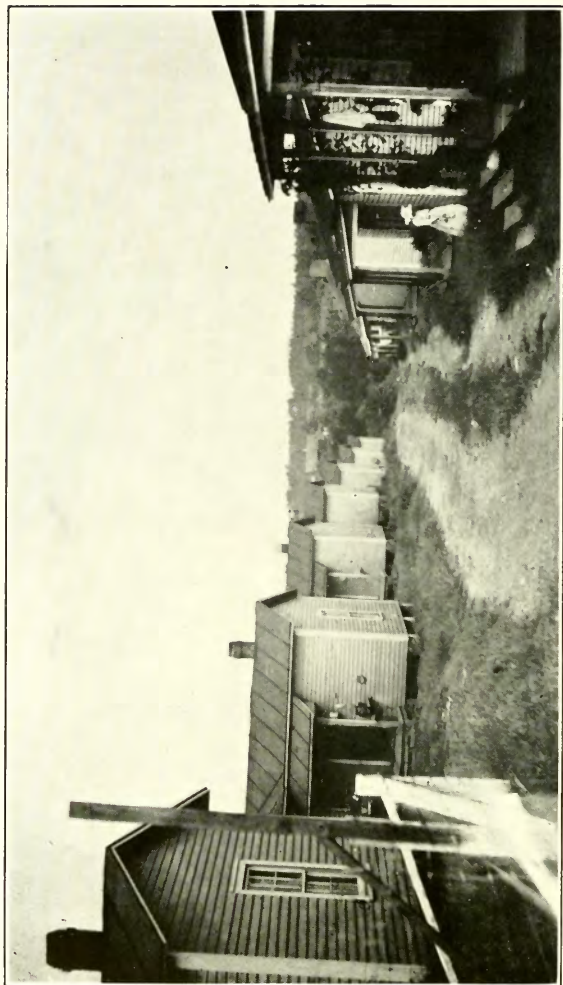
No. 6.—Back yard and alley near Courthouse, Graham, N. C.

The condition of public health and sanitation at many of the cotton mills is abhorrent, due to the fact that "what is everybody's business is nobody's business." At some of the mills the houses are owned by the tenants, while at other places the company owning the mill also owns the tenant houses.

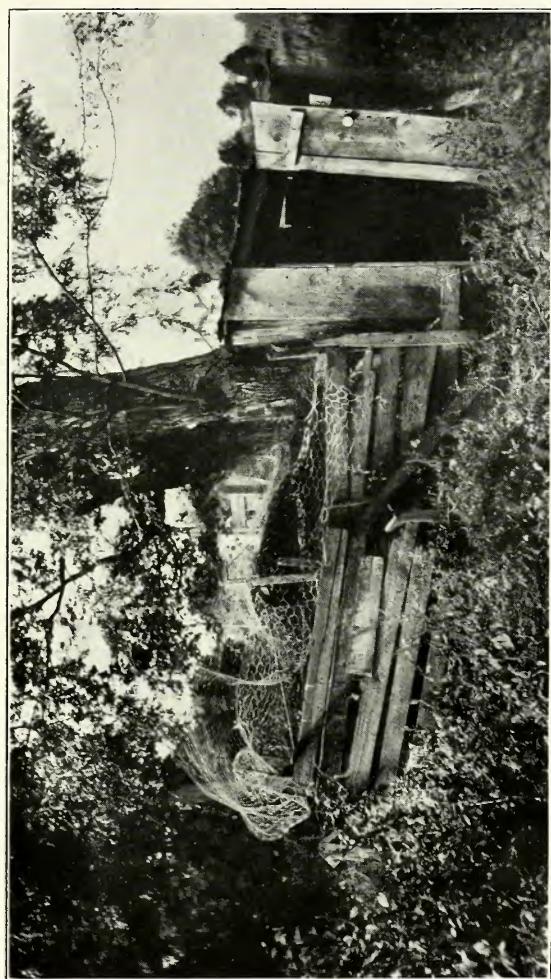


No. 7.—Privy and lot back of stores, Main Street, Graham, N. C.

I believe close observation will show the conditions to be worse in the latter places. As a class, in speaking of sanitary conditions, it is not necessary to mention any of the mill villages in detail. Some, of course, are worse than others, but all are bad enough. (See illustrations Nos. 8 and 9.)



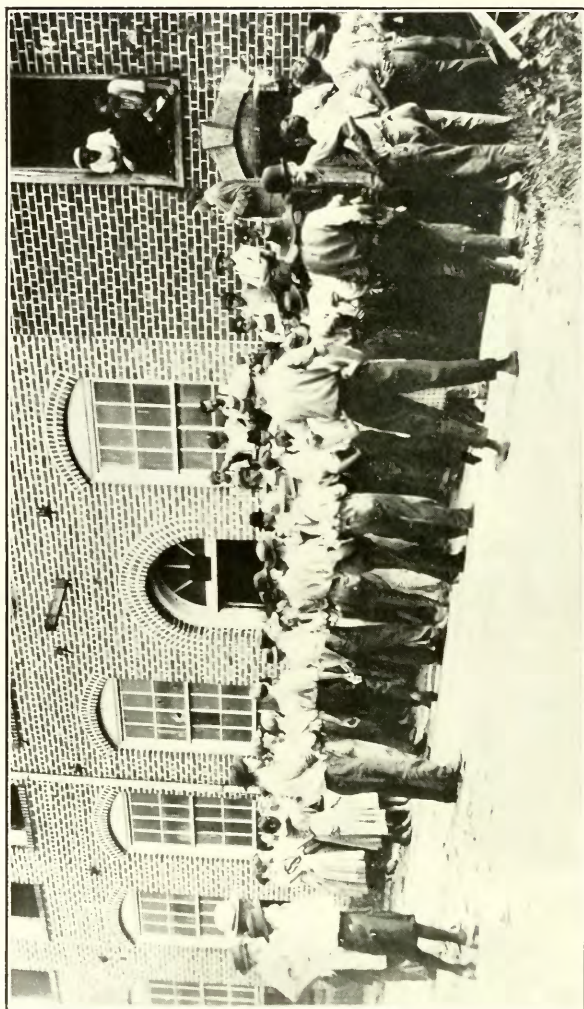
No. 8. Tenant houses at Haw River, N. C. Owned by the company owning the mill.



No. 9.—Hogpen and privy, only a few feet from street car track, Haw River, N. C.

ADVERTISING AND GETTING PEOPLE INTERESTED.

In advertising the campaign in Alamance the usual methods were pursued. The leading roads of the county were posted with large placards and small handbills giving details of the examinations and the dispensary points. (See handbill on page 17.) More than a thousand circular-letters were



No. 10.

mailed to leading citizens in all parts of the county. In addition to this, a number of public lectures were given at the different cotton mills (see illustration No. 10), and a public health demonstration was given at the Masonic picnic at Piedmont Park, on August 16.

Important!

Hookworm Disease

TREATED FREE

Alamance County Commissioners, co-operating with the State Board of Health, will conduct temporary Dispensaries for the examination and treatment of Hookworm disease. These Dispensaries will be free to all from 9:30 A. M. to 3:30 P. M. at the following places:

FIRST SERIES

MIDWAY SCHOOL-HOUSE—Thursdays, August 7, 14 and 21.

"HUB"—Fridays, August 8, 15 and 22.

BURLINGTON—Saturdays, August 9, 16 and 23.

ELON COLLEGE—Tuesdays, August 12, 19 and 26.

DAILEY'S STORE—Wednesdays, August 13, 20 and 27.

SECOND SERIES

SAXAPAHAW—Tuesdays, September 2, 9 and 16.

FOGLEMAN'S STORE—Wednesdays, September 3, 10 and 17.

MEBANE—Thursdays, August 28; September 4 and 11.

HAW RIVER—Fridays, August 29; September 5 and 12.

GRAHAM—Saturdays, August 30; September 6 and 13.

DR. B. E. WASHBURN, of the State Board of Health, and District Director for Hookworm Disease, will be in charge of these Dispensaries. Assisted by MR. E. B. DAVIS, Microscopist. Lectures on Hookworm Disease and Sanitation will be delivered daily. You can see at the Dispensary all kinds of worms and pictures of people before and after treatment.

REMEMBER

About one-third of the people of North Carolina are suffering with Hookworm disease and consider their trouble due to some other disease. Hookworm disease frequently causes headache, dizziness, shortness of breath, paleness, easily tired out in feet and legs, poor appetite for breakfast, indigestion, heartburn, stunted growth, and poor progress in school work on account of poor memory. If you have had ground itch or dew poison you should be examined, as this is the first sign of the disease. It takes about one drop of blood daily to feed each worm.

You can have from less than one hundred to six thousand hookworms, which live in your small bowel for from two to twelve years, suck your blood, inject a poison into your system and produce an inflammation of the bowel from their bites. These worms cast deposit from two to six thousand eggs daily, which pass with the bowel excretions of the infected person; and, if sanitary closets are not used, these eggs hatch out, and in nine days the little worms are ready to enter your body through the mouth and skin.

Parents who do not use this opportunity to rid their children of this dreaded disease, are standing squarely across their offsprings' future, condemning them to an early death or a life of misery, which may result in making them a public charge.

If you are sick or well, come to the Dispensary and bear the doctor talk about "How to Get Well" and "How to Keep Well." There is a lot of Hookworm disease in your neighborhood. The State and County pay the bills for your examination and treatment for this short time only.

TO BE EXAMINED

Bring on your first visit a small quantity of your bowel action in a tin box, with your name and age written thereon, as only in this way will the examination be made.

BUT FEW PEOPLE ARE CURED BY TAKING LESS THAN THREE TREATMENTS. We give but one treatment at a time, and the treatments are taken one week apart.

IF IN DOUBT, CONSULT YOUR DOCTOR

PLEASE POST.

THE WORMS REQUIRE WORKING 8 8

The campaign was conducted by visiting points selected by the county commissioners and holding dispensaries at these places. The conditions of life in Alamance being different from those in a majority of the counties of the State, the problem of interesting the people in public health was different. The chief industry of the county being manufacturing, the larger part of the population live in small villages. These people spend the day at their work, and cannot be reached as easily as in counties where the chief pursuits are agricultural. In order to work these mill towns, more dispensary points than usual had to be selected, thus making it necessary to limit the stay at each point to two or three days. Eleven points were visited, and at these we were able to reach seventeen cotton mills and several furniture factories.

As a rule, the mill people were very illiterate and were hard to interest in sanitation, and by the time they learned the nature of our work, the dispensary had to be moved to some other point. During the latter part of our stay in the county, this difficulty was overcome by the assistance of several progressive mill owners. We had a circular-letter printed which gave information as to how the examination was made. (See circular-letter below.) Each company furnished us with a man acquainted with the mill people and their homes. This man made a circuit of the village, leaving at each house a letter, a pamphlet on Hookworm Disease, and the number of containers needed. On the following day he made a second round and gathered up the specimens. This method was especially successful at the Saxapahaw, the Aurora, the Lakeside, the Oneida, and the Tavora cotton mills.

Dear Sir or Madam:

The Commissioners of your County by cooperating with the North Carolina State Board of Health are giving you and your family an opportunity to be examined, and if needed treated, for intestinal parasites and Hookworm Disease Absolutely Free of cost. A great many people have been examined in the county and State and about one out of every three was found to have worms and given treatment.

A great many of the ailments of children, as well as of adults, are caused by worms and it is for this reason that the State and County are giving you this free examination and treatment. Every one, but especially children, should be examined. The accompanying leaflet will tell you the symptoms and results of Hookworm Disease.

The examination is made by bringing a small amount of the bowel action in a tin box and having it examined with the microscope. Put your name and address and age on the box. The bearer will give you all the boxes you need to have your entire family examined and will call at about this time tomorrow and take up the boxes. If you or any of your family are found to have worms the medicine will be sent to you by mail.

Every one should take advantage of this opportunity and get examined and treated while the State and County pay the bill. Have the boxes ready by the time they are called for tomorrow, and remember that there is absolutely no cost for either examination or medicine.

Yours very truly,

B. E. Washburn.

Director of Hookworm Campaign.

The success of the work in Alamance was due to the interest shown by the influential men of the county, especially the mill men. There is an old saying that it takes all kinds of people to make the world, and the truth of this was never more strikingly demonstrated than in Alamance. There we found all kinds and classes of people from the most illiterate to the highly educated, from the backward to the most progressive. On the one hand was the

old man who asked what we were doing putting up notices, and when told that we were advertising dispensaries, said, "Wall, I'm mighty glad ter hear it. Thar's been prohibition too long already." Or the country storekeeper who did not understand the meaning of "campaign" in the advertisements, and thought it referred to a patent medicine for hookworms, and who said he would agree to take a trial order. On the other hand there were a number of progressive mill owners, like Mr. Baker at Swepsonville, who invited us to his town, used every effort to get his employees examined, and offered to defray our expenses if it were needed.

On our first dispensary day at Hub, we were awaited by Mr. Joseph Gant, of the Altamahaw Mills. He secured containers for his people, distributed them and on the next dispensary day collected and brought in the specimens. He also began to make arrangements to improve the sanitary conditions of the



No. 11.—Group of Hookworm Patients from The Altamahaw Cotton Mills examined at the Dispensary at Hub, on our second visit.

tenant houses under his charge by building sanitary privies. More than 200 people were examined from the Altamahaw Mills, while at the Ossipee Mills, just across the river, where the managers were not interested, only 90 were examined.

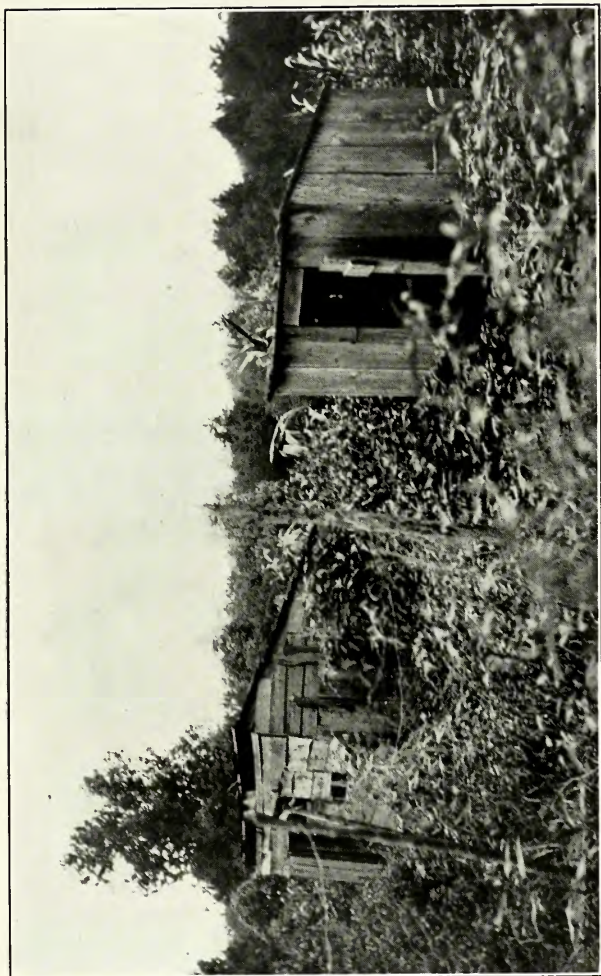
During our first week in the county we were invited to the Glenco Mills by Mr. Williamson, the manager. There we held an exhibit and gave a lecture, and, as a result, a good number of the people were examined, their specimens being sent to the dispensary at Midway. Mr. Williamson expressed his intention of immediately beginning the installation of sanitary privies at all of the mill houses.



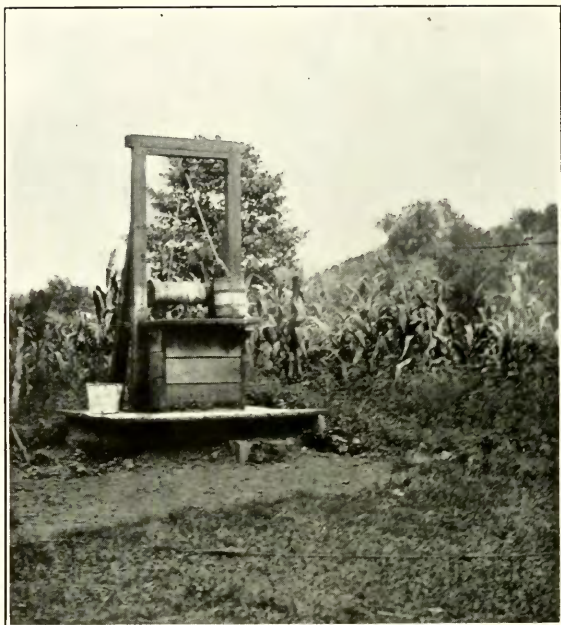
No. 12.—Dispensary Group at Altamahaw, N. C.



No. 13.—Privy at the Hopedale Mills, used by several families.



No. 14.—Privies at The Carolina Cotton Mills, near Burlington, N. C.



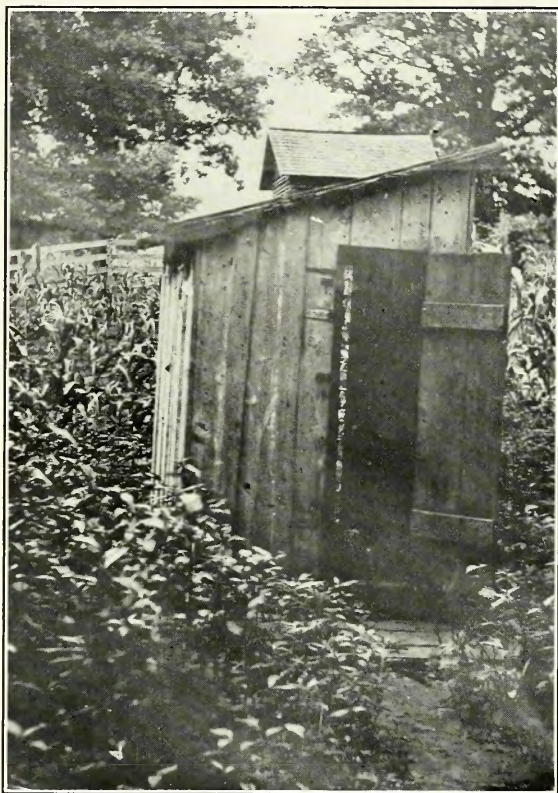
No. 15.—Well at Carolina Mills, said to furnish water to more than fifteen families.



No. 16.—Privy at The Hopedale Mills, said to be used by nine families.

The Midway dispensary was held at a schoolhouse between the Carolina and the Hopedale Cotton Mills. We spent three days at this point, and examined a large number from the Carolina Mills, but very few from the Hopedale Mills. The sanitary conditions at these villages is bad (see illustrations Nos. 13 and 14). At Carolina we saw only four open wells (No. 15), and were told that nearly eighty families obtained their drinking-water from these.

The type of privies, or rather the lack of privies, is abhorrent. These closets are kept in very bad condition and are said to be used by from four



No. 17.—Privy at The Carolina Cotton Mills, used by four families.

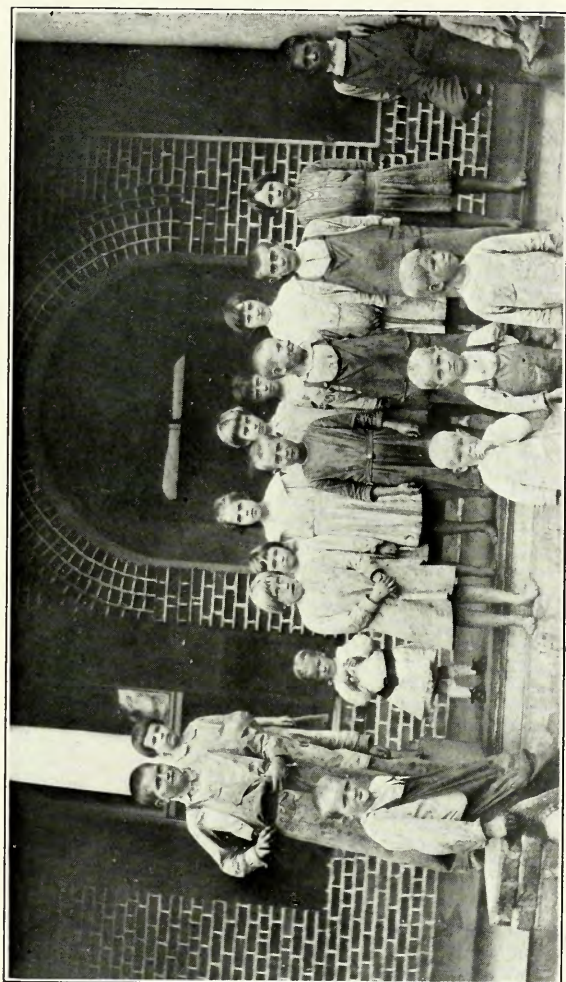
to nine families (illustration No. 16). We examined one family who used a privy in connection with four other families, and found every member infected with intestinal parasites, several being with hookworms (see illustrations Nos. 17 and 18). The people were very backward, however, and the houses being owned by the company owning the mill, we were unable to accomplish anything definite in sanitation.



No. 18.—Family using privy shown in No. 17. All infected with parasites.

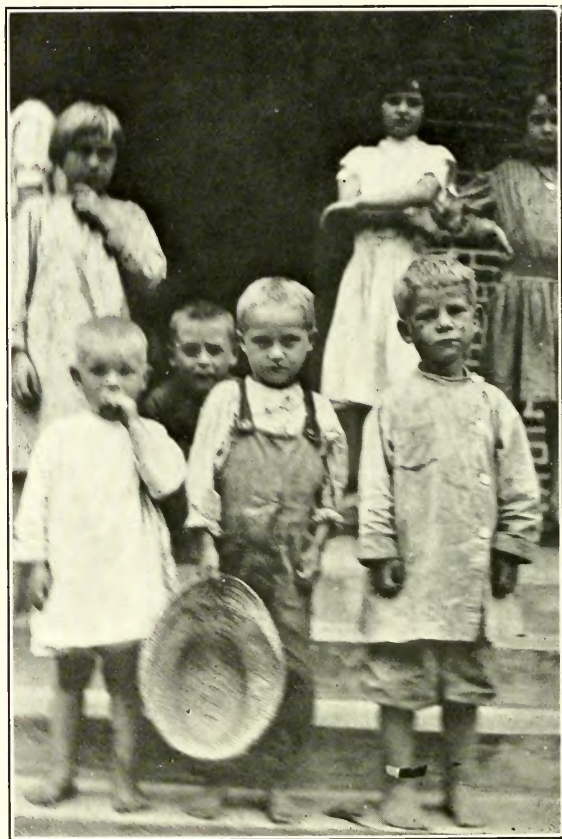


No. 19.—Boys at the Midway Dispensary. The boy in the center, Arthur Murray, is 11 years old and is infected with hookworms. The other boys are aged 11 and 9 years, respectively, and are not infected.



No. 20.—Children at the Christian Orphanage, Elon College, N. C.

We met with very little success at Elon College, examining only 59 people during our stay there. Elon is the site of the Christian College of North Carolina, and is above the average village in regard to sanitation. The Christian Orphanage is also there. We visited this institution and found that a number of the children had symptoms of hookworm infection (see illustrations Nos. 20 and 21). We left containers with the superintendent,

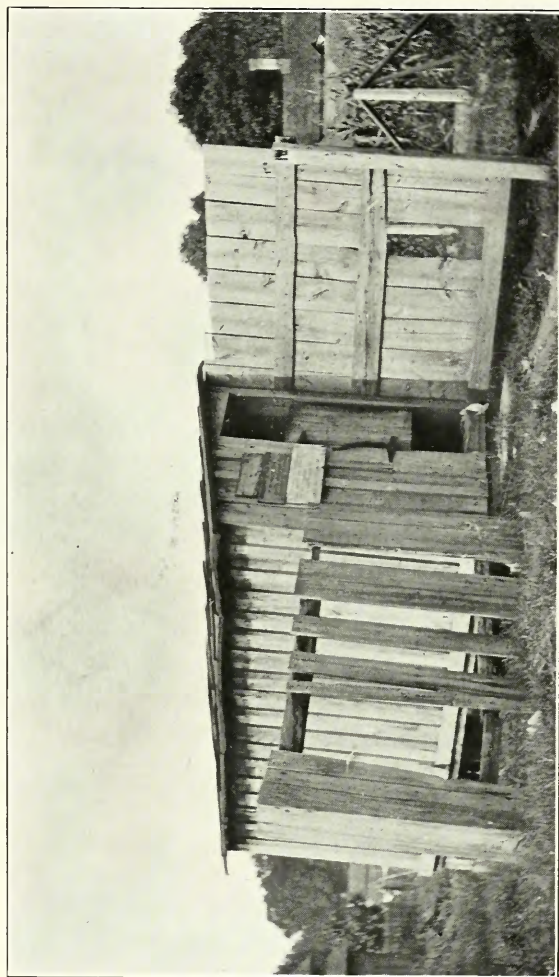


No. 21.—Children at the Christian Orphanage,
Elon College, N. C.

but he did not have the children submit specimens, although we urged him to do so. He said he was "too busy" to look after the health of the institution.

At Burlington we were greatly assisted by Mr. Eugene Holt, the manager of the Aurora Cotton Mills. Mr. Holt had the majority of the eighty-eight families under his charge examined. He is also considering the erection of L. R. S. sanitary closets at each of these houses.

At the Masonic picnic at Piedmont Park we had a public health exhibit, using in addition to our regular Hookworm exhibit a series of cartoons and placards furnished to us by the American Medical Association. These cards and illustrations gave interesting facts regarding typhoid fever, tuberculosis, and other preventable diseases, as well as exposures of the most widely ad-



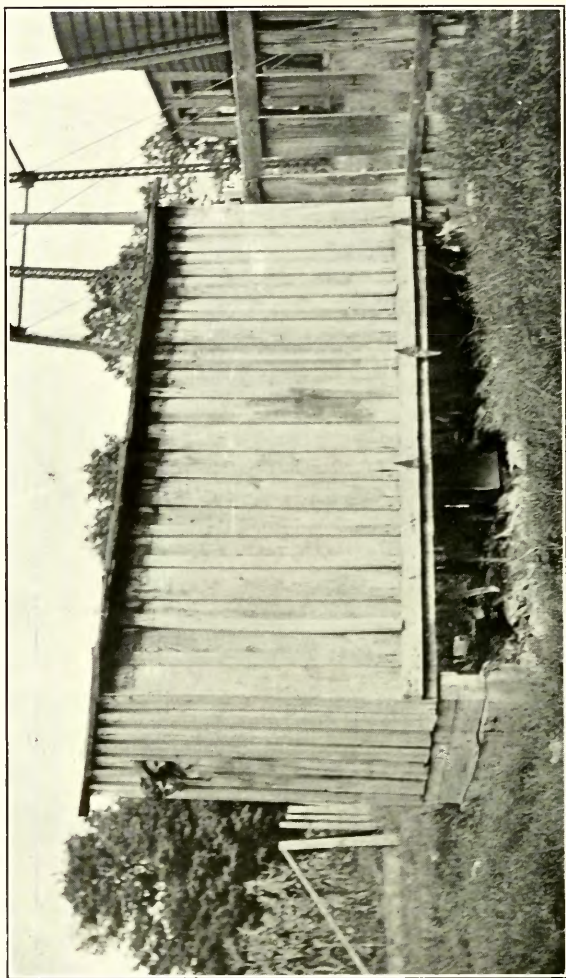
No. 22.—Privy at the Elmira Cotton Mills, near Burlington, N. C.

vertised patent medicines. The people showed much interest in the exhibit, and it proved an excellent means of advertising our work.

On the Monday following the picnic we were asked by Mr. McNeeley, superintendent of the Elmira Mills, near Burlington, to visit his plant. He had eight or ten men cleaning up the mill grounds, and had made arrangements to put in sanitary closets (see illustrations No. 22 and No. 23). On the follow-

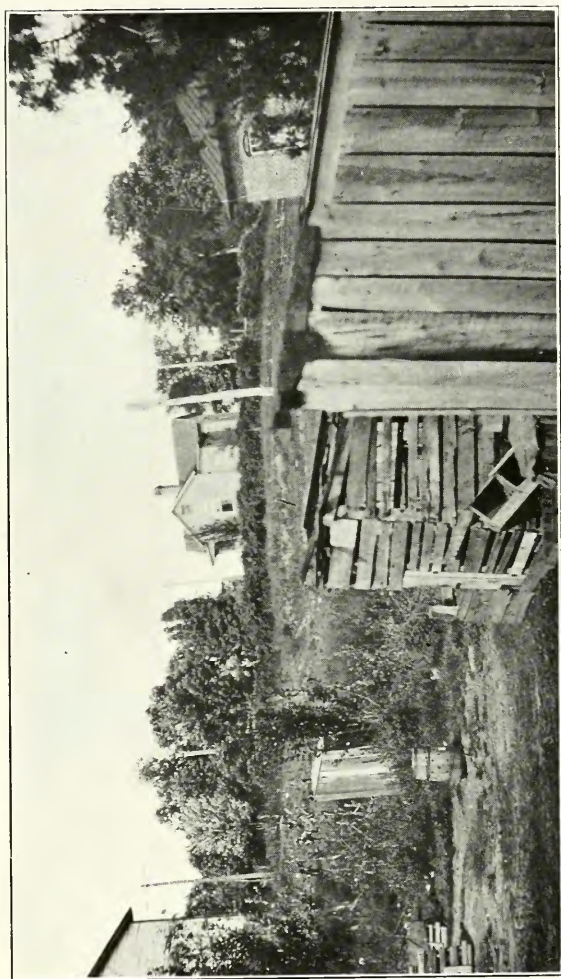
ing Thursday evening we made an address at the chapel near the mill, which resulted in quite a number of the people visiting the next dispensary held in Burlington.

Haw River is probably the largest mill town in Alamance County, four large mills being there. It is also one of the most unsanitary. Open surface privies abound (illustration No. 24), and the wells are badly kept and have



No. 23.—Privy at the Elmira Cotton Mills, near Burlington, N. C.

privies near them. The wells have no buckets, and when a person comes for water he fastens his own vessel, no matter where it has been, to the chain and lowers it into the well (illustrations Nos. 25 and 26). The company owns practically all of the homes, and there was little ground for individual improvement of sanitary conditions. The mill owners could not be seen, so we were told.



No. 24.—Back yard and privies at Haw River, N. C.

Very few people were interested in our work at Haw River, although we did more than the usual amount of advertising there. Drs. Wilkins and Sterrett assisted us in every way possible. It was at this point that the old story—springing from no one knows where and retold in every county—kept the people away. The story, as first told, was to the effect that a man, no

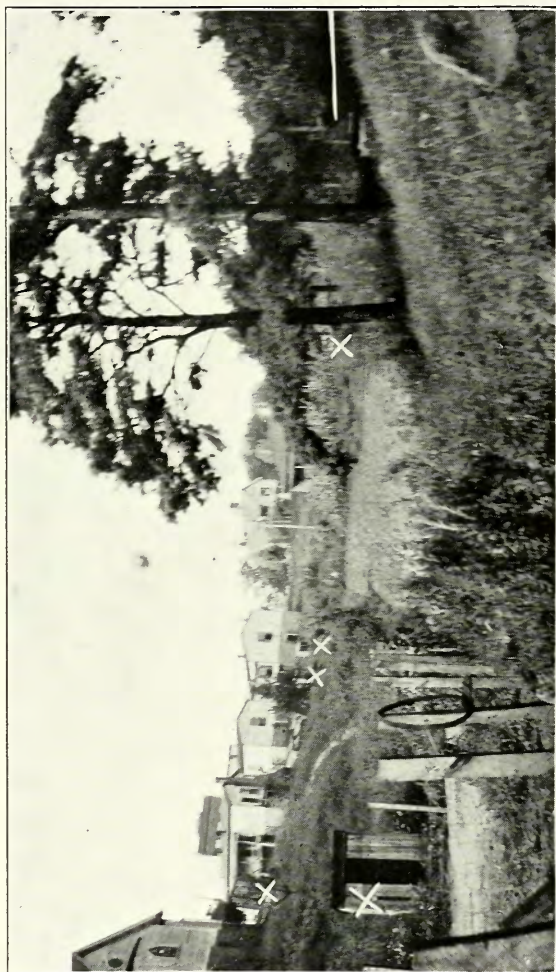


No. 25.—Well supplying water to one of the mills, Haw River, N. C. Notice the privy just above the well, x

one knew his name, living a few miles away had taken a hookworm treatment and died immediately. During our second week at Haw River it was told that the man, a Mr. Hale, by name, was not dead, but had been unable to be out of bed for about fifteen days as a result of the treatment he had taken, and it was doubtful if he would live. I made inquiries and found that Mr. H. had been infected with ascaris, having been examined and treated at

the Midway Dispensary. He stated that the calomel and santolin had made him very sick for one day, but that since that time his health had been greatly improved.

On the evening of August 25 we visited Swepsonville, a town 6 miles from Burlington, and spoke at the schoolhouse. On the following day we held a



No. 26.—This illustration shows the well of illustration No. 25 on the right, and five privies above it and probably draining into it.

dispensary and examined nearly 200 people. The town is owned by the Virginia Cotton Mills Company, of which Mr. Baker is manager. Mr. Baker was very kind to us, and was very much interested in modern sanitation and public health. He consulted us in regard to building sanitary privies at each of the houses, and also decided to recommend to his company the advisability of securing a trained nurse to give her whole time to the village, instructing

the women how to care for the sick and teaching them the essentials of good cooking and household sanitation. Mr. Baker asked us to give another dispensary day at Swebsonville and to give a talk to the women. We arranged to come on September 18, but met with little success, as the weather was very stormy and few could come out.

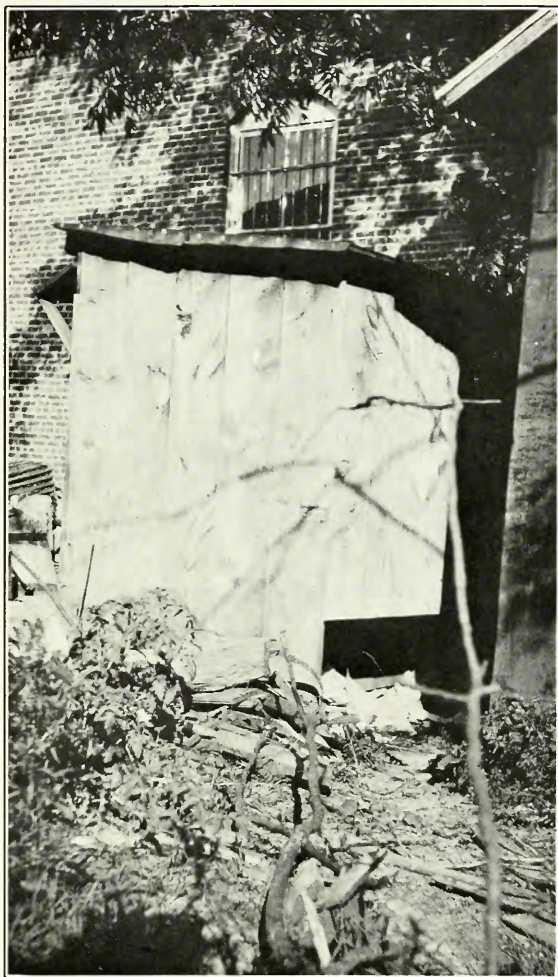


No. 27.—Dairy delivery wagon at Haw River. Notice the milk can.

The chief industry at Mebane is the manufacture of furniture. Here we were greatly aided by the owners of the White Furniture Company. Mebane is a very dirty town (illustration No. 28). Our success here was due to the interest shown in our work by many of the leading citizens. A large number of people expressed their intention of building L. R. S. closets at their homes.

At the country dispensary points, Dailey's Store and Fogleman's Store, we

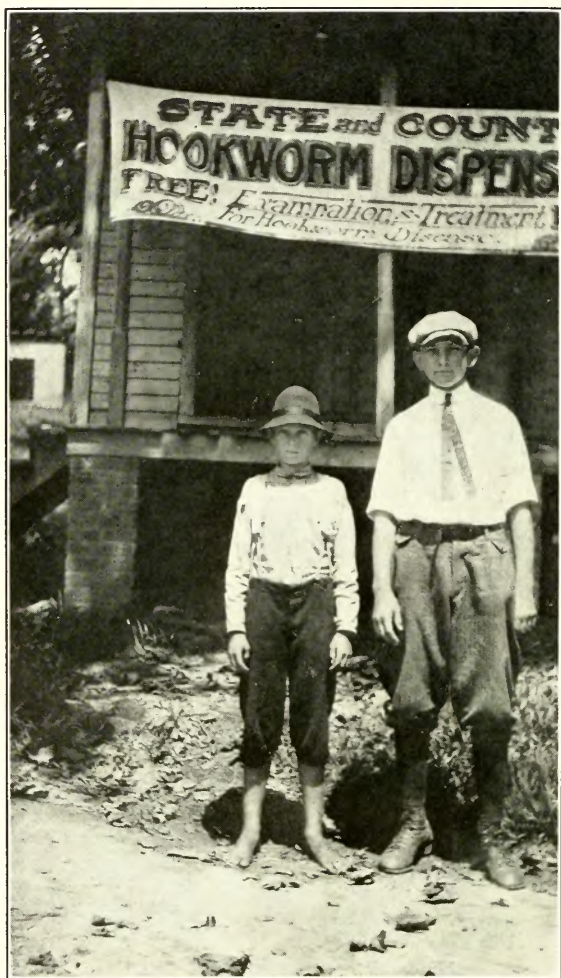
met with little success. The country people were very busy curing their tobacco and were hard to interest in anything else. Then, too, it rained on every day we were scheduled to visit these points. The infection with hookworms was very light at Dailey's Store, while it was heavier at Fogleman's Store than at any other point in the county.



No. 28.—Privy behind stores on Main Street, Mebane, N. C.

In respect to the number of people reached, our work was more successful at Saxapahaw than at any other point. Here the attendance was good on all three of the days, there being 302 examined on the second day. A large per cent of these were country people, some of them coming a distance of 14 miles. This attendance on the part of the rural population was due to the

interest and efforts of Dr. R. G. McPherson. This physician spent his entire time with us at the dispensary, helping with the examining and giving treatments. Between the dispensary dates he distributed containers and urged every one to be examined. Mr. Williamson had the mill stopped so that the



No. 29.—Sylvanus Johnson (heavily infected with hookworms) and O. D. McBane (not infected), Saxapahaw, N. C. Both boys are 14 years of age.

operatives might have an opportunity to hear the talk on Hookworm Disease, and used every effort to induce the people to be examined (illustration No. 10). There were several cases of severe infection with hookworms found at Saxapahaw among the country people, and one or two families of the village also had the disease (illustrations Nos. 29, 30, and 31).

The success at Saxapahaw is an excellent example of the influence wielded in the matter of public health by a physician, and also of the opportunity open to the medical profession for the betterment of sanitary conditions.

The schools of the county were not in session during the time our work was being conducted in Alamance County, and so we were unable to reach them



No. 30.—Coy Hunter and Sylvanus Johnson, Saxapahaw, N. C. Both boys are 14 years of age and are heavily infected with hookworms.

directly. The sanitary conditions around the majority of the schoolhouses inspected are very poor. At the majority of schools there is no privy, and the drinking-water of the school often comes from a spring or from the well

of a near-by family. The county superintendent of schools was very kind to us, but was not interested enough to lend his aid toward having the children examined.

The experiences at the different dispensary points are only examples of the value of coöperation from the citizens of a county, and also show what individuals, by their personal efforts, may do for the cause of public health and the upbuilding of their communities. We interested a few of the leaders, and they in turn interested the masses; but the help we received from the majority of the leading citizens of Alamance was meager. Many of the



No. 31.—Haithecock Family, Saxapahaw, N. C. The family, excepting the baby, is infected with intestinal parasites, mainly hookworms.

intellectual people of the county were indifferent and, in some instances, prejudiced against our work. The lack of interest on the part of the medical profession and on the part of the school authorities was surprising! During our entire stay in the county only nine physicians visited the dispensaries, and only three of these took an active part in our work. If I remember rightly, the dispensaries at Burlington were not visited by a single physician. When these men were interviewed, they said they were interested and hoped that we would meet with success, but went no further. The truth of the Apostle, that "Faith without works is dead," is shown here with much force. It was a great opportunity for those in charge of the education and the

health of the people to promote sanitation and public health among the masses, and our work was greatly handicapped by their lack of coöperation.

During the entire campaign we were greatly aided by the newspapers, especially the Burlington papers. Weekly items regarding the success of our work were published, and the people were urged by the press to visit the dispensaries and take advantage of the opportunity offered by the State and county.

THE PROPOSITION OF A WHOLE-TIME HEALTH OFFICER.

It is impossible for the State to reach every citizen and instruct him. That is the duty and privilege of the county. The greatest factor in public health work is the instruction given to the school children and to the public at large—the common people who are not reached by the newspapers and health bulletins. The only way to accomplish this is to employ a capable and experienced physician for his whole time to look after the health matters of the county. It is not necessary to mention the numerous duties he would have to perform. He would be interested in not only looking after the health of the county, but the greater part of his work would be constructive—teaching the laws of health to the masses and showing them the importance of observing them. The proposition of the whole-time health officer was revolutionized by the act of the last Legislature requiring a registration of the vital statistics. Then, too, this officer's work is made more effective since the State Board of Health has established a Bureau of County Health. A physician is in charge of this work, and it is his sole duty to coöperate with the whole-time health officers, keeping them in touch with similar work being done in other counties, and advising them regarding local conditions.

The need of a whole-time health officer for Alamance is so apparent that Dr. P. W. Covington, chief of the Bureau of County Health, was invited to visit the county and coöperate with us in laying the proposition before the officials. On September 8 there was a joint meeting of the boards of education, health, and county commissioners. Dr. Covington explained the duties of the whole-time health officer in a very interesting manner. Talks in favor of the movement were made by several of the leading citizens of the county. The board of education and the board of health were unanimous in recommending that the county commissioners make provision for employing a physician for his entire time to look after the health matters of the county.

There is only space to give in detail one fact shown by Dr. Covington. Statistics prove that, aside from the educational and constructive features of his work, a whole-time county health officer, getting the minimum results, would in his first year of work reduce the death rate 1 in every 1,000 of population. This would mean that in Alamance County the health officer would save 30 lives during the first year of his work. The United States Government places a value of \$885 on every immigrant that lands on our shores. This means that every poor, illiterate foreigner, who in many instances cannot speak our language, is worth to the United States \$885 in the increased taxes which his work will turn to the Government treasury. The salary for a whole-time county health officer is \$2,500 per year, an increase of taxes of

a very few cents on the hundred dollars of property. If 30 lives can be saved in the county by this investment, the cost to the county would be less than \$85 each. The county commissioners, however, agreed that Alamance is too poor to pay this price to save the lives of its citizens, and rejected the proposition—only one member being in favor of it.

RESULTS OF THE HOOKWORM CAMPAIGN IN ALAMANCE.

The chief result of the Hookworm Campaign in Alamance County was the beginning of a movement for sanitation and public health. During the campaign it is estimated that more than 9,000 people visited the dispensaries, saw the exhibits, heard the talks, and received literature on public health topics. Of this number 3,085 were examined for intestinal parasites, and of these 703 were found to be infected and were treated; of the 703 found to be infected, 404 had hookworm disease. One thousand one hundred and fifteen children of school age were examined and 384 were found infected with intestinal parasites. Five of the cotton mills visited expressed their intention of constructing sanitary privies at their tenant houses. The Aurora Cotton Mills are considering the building of closets of the L. R. S. type at each of the 88 houses under their charge. A large number of the leading citizens of the county became interested in sanitation and are making improvements about their homes. The need of a whole-time county health officer was forcibly shown to the county officials, and a strong sentiment was created for making provision for such an officer. We were assured by one of the county officials that the matter would not be dropped, and his opinion was that as a result of the Hookworm Campaign, Alamance County would in a short time join the other progressive counties of the State and provide for a whole-time health officer.

The cost of the Hookworm Campaign to Alamance County was \$230.34.