Information on the Mississippi Tuberculosis Sanatorium, located in Sanatorium, MS from 1918 – 1976.

Mississippi State Sanatorium

A Book of Information

Sanatorium, Mississippi

September [illegible]

Mississippi State Sanatorium

A Book of Information About Tuberculosis and Its Treatment in Mississippi

Dedicated To

Patients, Ex-Patients, Employes and Others Whose Contributions Made Its Publication Possible

Published by Mississippi State Sanatorium
and
Mississippi Tuberculosis Association
Sanatorium, Mississippi
September, 1939

FOREWORD

What is tuberculosis, its cause, prevention and treatment?
How many Mississippians die of tuberculosis each year?
Is the death rate increasing or decreasing?
Why a State Sanatorium? What does it do and how?
When was it built, and what growth has it had?
What did the Sanatorium cost? What is the operating cost?
Where can I get information for an essay or address about tuberculosis and the Sanatorium?
How does the Mississippi Sanatorium compare with similar sanatoria in other places?

These and many other questions come in the mail of both the State Sanatorium and the Mississippi Tuberculosis Association. There has long been a need for a publication designed to answer such questions. This book is intended to fill that need.

TABLE OF CONTENTS

WALTER HAWTHORNE ROWAN, M.D.

Sanatorium Superintendent 1916-1917

Born 1875—Died 1917

Following courses at University of Nashville, Rush Medical College, Chicago and College of Physicians and Surgeons, New York, engaged in private practice for several years. Served Mississippi Tuberculosis Association as field worker. Field service Rockefeller Foundation 1910-1912. Mississippi State Sanitary Inspector 1912-1914. Director in Guatemala for International Sanitary Commission 1914-16. Appointed Sanatorium Superintendent in 1916 but died in August, 1917, before first buildings finished. Member American, Southern and Mississippi State Medical Associations, American Public Health Association, International Hygienic Congress and Phi Kappa Psi medical fraternity. Committeeman for Mississippi for Malaria Section of National Drainage Association.

HENRY BOSWELL, M.D., F. A. C. P., *Superintendent, 22 years.*

University of Nashville, M.D., 1908, Alpha Kappa Kappa. Interne, Nashville City Hospital 1908. House Physician, Providence Infirmary, Mobile, 1909. Field Director Mississippi State Health Department under auspices Rockefeller Foundation 1909-1916. Appointed Sanatorium Superintendent 1917. Member: Central Medical Society, Mississippi State Medical Ass'n., American Medical Ass'n., and Executive Committee Mississippi Tuberculosis Ass'n. Fellow: American College of Physicians. Past president, director and executive committeeman National Tuberculosis Ass'n. Past president American Sanatorium Ass'n., Southern Sanatorium Ass'n., Southern Tuberculosis Conference, Southern Conference for the Study of Bovine Tuberculosis, Mississippi Tuberculosis Ass'n., and Mississippi State Medical Ass'n.

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MANAGEMENT OF THE SANATORIUM

As provided by law the Sanatorium is under the management of the State Board of Health which consists of ten members, nine physicians and one dentist. One physician from each of the eight congressional districts and one dentist from the state at large are appointed by the Governor. The tenth member, a physician who serves as executive officer and secretary, is elected by the Board.

Vacancies due to expiration of terms of the appointed members are filled in the following manner: Three qualified physicians from each district affected are nominated by the Mississippi State Medical Association and the Governor appoints one of the three. For the dental member the Mississippi Dental Association nominates three qualified dentists from the state at large and the Governor appoints one of them. Such appointments are subject to confirmation by the senate.

When vacancies occur before expiration of terms the Governor fills the unexpired terms from nominees selected by the medical or dental association at its next regular meeting.

Full term appointments are for six years with terms so arranged that three expire every two years. Each succeeding Governor appoints three members after he has been in office two years and three more at the end of his term. Because of this system, the personnel of the Health Department and the Sanatorium remain undisturbed by changes in governmental administration. This fact is considered of paramount importance since it is universally recognized that those functions of government having to do with the protection of human life depend for their efficiency upon adequate training of personnel before employment and long terms of service afterward.

The Sanatorium superintendent is appointed by the State Board of Health and the business manager is selected by the superintendent. Present membership of the Board and the organization affecting management of the Sanatorium are as follows:

District		*Terms Expire*
1	Dr. J. W. Lipscomb, President, Columbus	Jan. 1, 1944
2	Dr. S. E. Eason, New Albany	Jan. 1, 1940
3	Dr. L. B. Austin, Rosedale	Jan. 1, 1944
4	Dr. B. J. Shaw, Slate Spring	Jan. 1, 1940
5	Dr. W. H. Banks, Philadelphia	Jan. 1, 1940
6	Dr. H. L. McKinnon, Hattiesburg	Jan. 1, 1942
7	Dr. L. W. Brock, McComb	Jan. 1, 1942
8	Dr. John B. Howell, Canton	Jan. 1, 1942

State At Large:

Dr. Felix J. Underwood, Executive Officer and Secretary, Jackson ..... Jan. 1, 1944

Dr. Wm. R. Wright, Dentist, Jackson ..... Jan. 1, 1944

Sanatorium Executive Committee:
Dr. J. W. Lipscomb, Chairman
Dr. Felix J. Underwood, Secretary
Dr. S. E. Eason

Sanatorium Superintendent and Director Division of Tuberculosis Control:
Dr. Henry Boswell, Sanatorium

Business Manager of Sanatorium:
John H. Rowan, Sanatorium

LOCATION OF THE SANATORIUM

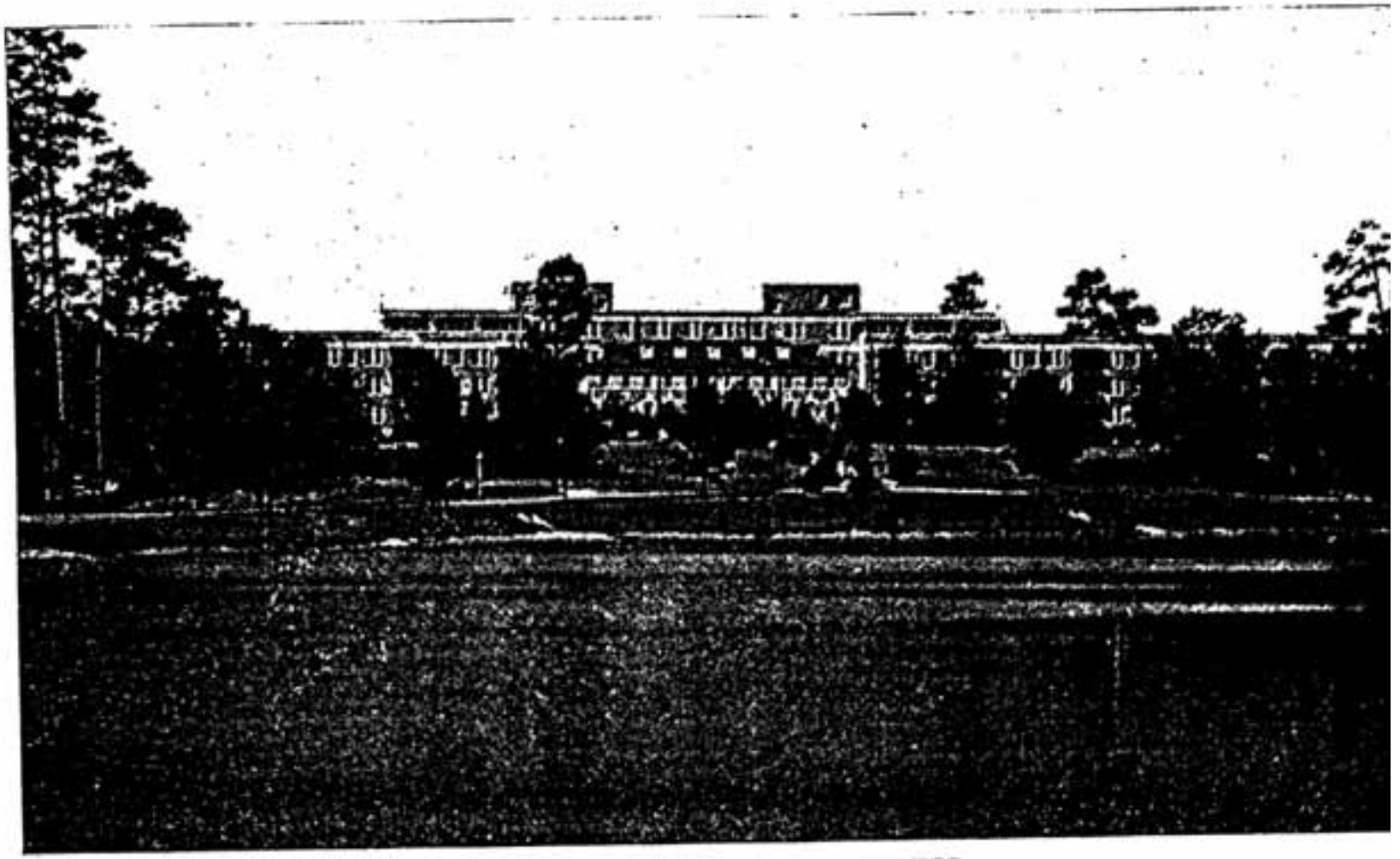
The Sanatorium is located in Simpson County on Highway 49 and the Illinois Central Railroad 40 miles southeast of Jackson and 50 miles northwest of Hattiesburg. It is served by two passenger trains and eight Tri-State buses daily and has its own post office, freight, express, passenger, telegraph and bus stations, all Sanatorium, Mississippi.

VISITORS WELCOME

Visitors are always welcome at the Sanatorium. Patients may be visited during the following hours:

9:00 A. M. to 10:30 A. M.
11:30 A. M. to 1:00 P. M.
2:00 P. M. to 4:00 P. M.
5:00 P. M. to 6:00 P. M.
7:00 P. M. to 8:30 P. M.

Other hours are rest hours, and while visitors are welcome at the institution, they may not visit patients during rest periods.



SANATORIUM—MAIN BUILDING

PURPOSE OF THE SANATORIUM

The purpose of the Sanatorium, as stated in the law under which it was established, is "The prevention and treatment of tuberculosis."

A few decades ago the tuberculous were diagnosed to die. Today, thanks to modern methods of diagnosis and treatment, they are diagnosed to LIVE, but only IF they can procure the essential treatment.

Through three-quarters of a century the value of sanatorium treatment has been proven more and more conclusively and provision of sanatorium facilities has long been accepted as an indispensable function of government by all states and all nations.

The Sanatorium takes the tuberculous young mother and father, often both at once, not only to save their lives but at the same time to stop the spread of deadly infection to their children. It takes susceptible children to build up their resistance to disease and thus keep them from providing more figures for the fearful statistics of sickness and death. The Sanatorium is a hospital.

The Sanatorium takes the school and college student, the teacher, doctor, farmer, laborer,—stricken with tuberculosis through no fault of their own, and restores them to healthful citizenship. It teaches them how to get well and remain well and how to carry their life-saving knowledge to home and community. The Sanatorium is a school.

The Sanatorium is open to Mississippi physicians for observation and study without cost to them. It teaches the diagnosis and treatment of tuberculosis to medical students of the State University. It operates a post-graduate school for nurses. It sends back to every part of the state doctors and nurses trained in the newest case-finding and treatment methods. It takes diagnostic and consultation services to physicians and patients all over the state. The Sanatorium is a "University of Health."

Thousands of cases of tuberculosis exist in Mississippi today to menace every person. The Sanatorium offers the only hope to most of the tuberculous and is the protector of those not yet stricken. Its value has been proven from every point of view: humanitarian, economic, educational.

THE PURPOSE OF THE SANATORIUM IS THE PREVENTION OF NEEDLESS DEATHS.

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THE SPIRIT OF THE SANATORIUM

What is the Sanatorium? Lexicographers define a sanatorium as an establishment for treatment of the sick. Perhaps that is a correct definition, but the Mississippi State Sanatorium is more than that.

It is a collection of some eighty various structures on beautifully landscaped grounds and cultivated acres. The buildings are furnished with beds and chairs, typewriters and operating tables, roentgenographic apparatus and test tubes, autoclaves, microscopes and what not. But those things do not make a complete sanatorium.

Doctors and nurses, executives and accountants, dietitians and technicians, farmers and electricians work at the Sanatorium. They measure temperatures, raise vegetables, conduct staff meetings and perform many intricate operations. They manipulate tiny arms to induce the first breath of life in the newborn, and they give what comfort they can to some who must die. But a list of workers and their tasks does not give an adequate conception of the institution.

More than in edifices and flowers, case histories and rest hours, prognoses and statistics, the satisfying conception of the Sanatorium presupposes an understanding of the spirit of the place.

Just what is that spirit? Here the mind stumbles and words become feeble things hardly able to define. The spirit of the Sanatorium must be felt, not described; discerned rather than perceived. But it is very real to those who comprehend it; seeming easy of explanation,—until one tries to explain it. It permeates every phase of Sanatorium life and influences all who serve or who are served by the institution.

That spirit is an efficient aide to the technical skill of the doctor, the mysterious magic of Roentgen's ray, and the transmuting alchemy of rest. It is the force that impels both scientific and lay workers to give their best, conscious that every task well done contributes to the saving of human life. Because of it they come to prefer their jobs to any other in the world, rather than because of salaries earned.

There is a story of three workmen cutting the same block

of granite. One was toiling for three dollars a day and the second was interested in shaping a graceful cornice, but the third said he was building a sublime temple to the glory of Almighty God.

The Spirit of the Sanatorium is what influences the workers who strive to stem the ravages of tuberculosis to partake of the nature of that third stonecutter rather than of the nature of the first. Whatever of good the Sanatorium accomplishes is due largely to the acquisition during a score of years of a staff whose members, while possessing all the imperfections of their kind, lean toward the ideal. There is no career in the crusade against tuberculosis, nor in any public health activity, for workmen who do not derive satisfaction from service of that kind.

To the tuberculous patient with health broken, earning power destroyed and loved ones destitute, the spirit of the Sanatorium is the thing that infuses hope where hopefulness seems incongruous.

The basis of all tuberculosis treatment is complete rest, a regime contrary to the nature of civilized man. Mankind craves action, be it work or play. But if the tuberculous would get well they must do almost nothing at all for a long, long time.

Such a regimen requires a fight, and a grim fight it is, against fever and pain; sometimes against the gushing of life's blood. . . . ! Fight is the right word, too. No man knows how right unless he has been through it.

Give a man weapons and he will defy savages in order to hew a home out of the jungle for his loved ones. Tell him he must combat a more deadly foe by doing mostly nothing, and he will begin to comprehend the fight that faces the tuberculous. Yet thousands have learned to wage it and have gloriously won. The thing that more than anything else encouraged them to dare that fight was the spirit of the Sanatorium.

Most often stricken in the years of fullest promise, the tuberculous have the right, if anybody has, to be downhearted. Yet one will find less discouragement among three hundred Sanatorium patients than among the first three hundred men and women encountered on the most prosperous street in the state.

When profits have failed to exceed costs, business men have bewailed depression and recession until worry has reawakened

latent tuberculosis which laid them low to worry still more. Admitted to the Sanatorium, they have been imbued with that indescribable spirit of the place; inspired to release inherent fighting powers, not only to overcome disease but also to master the adversities that took their health away.

Available illustrations are plentiful. They apply to people of wealth and of poverty, the intellectual and the uneducated. To them that indefinable spirit has given that one thing which, added to scientific ministrations, has enabled them to conquer "The Captain of the Men of Death."

Reshaping character and reweighing values, that spirit has taught thousands the way of a more abundant life even in the face of handicaps. It is the thing that engenders in Sanatorium patients a deep affection for the place and all who are connected with it; that calls them back for frequent visits long after the specter of invalidism and death has been banished.

The spirit of the Sanatorium is inexactly defined here, but an effort has been made to define it as well as may be, in the hope that those not privileged to share it may glimpse the fact of its existence, even though not fully discerning its nature.

WHAT IS TUBERCULOSIS?

Tuberculosis, originally called phthisis, which means wasting or consuming, is a disease caused by a colorless, rod-shaped organism, scientifically named the tubercle bacillus.

While the disease may attack any part of the body such as brain, kidneys, bones; all forms usually begin in the lungs, or respiratory system. Of 1164 tuberculosis deaths recorded in Mississippi in 1938, lung tuberculosis caused 1087, or 93.4 per cent of them. Though serious enough, other forms of the disease are not now so common as to be a major public health problem.

A Raging Fire from a Spark

The tuberculosis germ is so small that it must be magnified a thousand times before it can be seen. Stick a pin through this page and 25 of the germs must be joined end to end to extend through the hole. A thousand could stand on end on the period at the end of this sentence.

Yet these tiny seeds have produced a greater harvest of suffering and death than any other plague and the disease they cause is probably as old as man. Mummies show its existence 3500 years ago and it has been found in human bones dating back to the dim ages of the Neolithic Period. The further science delves into the past, the older is consumption's record of destruction.

Tuberculosis has made more orphans and claimed more lives than any other cause of death; more even than all the wars of all times. Every four years it kills more Americans than the country has lost in all its wars since the Declaration of Independence. Truly a spark may cause a raging fire.

No wonder John Bunyan named tuberculosis "Captain of the Men of Death."

HOW TUBERCULOSIS SPREADS

Tuberculosis is communicable. The germs grow in the lungs. Thousands of them may be carried in the invisible spray coughed or sneezed into the air. Whoever comes close to a person who has tuberculosis may pick up some of the germs. Things that touch his lips may have the germs on them. A tuberculous mother kissing her baby may plant the germs on the child's lips. Brisk talking or laughing may shower germ laden droplets onto another person's lips.

Sleeping with a tuberculous person is dangerous because of long hours of close contact. Sick people sometimes spit on the ground. A child may later pick up germs on fingers or toys and carry them to his mouth. Drinking glasses or towels may pass germs from one person to another. Dairy workers and other food handlers who have tuberculosis may contaminate food supplies. Milk and other products from tuberculous cows may transmit the disease to human beings.

In many ways may the germs be spread, and the danger is better understood when it is known that many people are infecting others without themselves knowing they have tuberculosis. The most prolific sources of infection are often the persons least suspected: teachers, domestic servants and members of one's own family.

Once in the mouth the germs may find their way into the lungs, and that is the way the seeds of sickness and death are planted. When they reach the lungs the germs often spread over a large part of them. First stages of the disease may heal in a few months, leaving only a scar. Later the germs may again enter the lungs and this second attack usually spreads rapidly unless treated at once. But no two cases are exactly alike and no one explanation can tell how the disease acts in all cases.

Tuberculosis menaces YOU as an individual, YOU as a family and YOU as a community. No home can be called safe from it until every home has been made safe.

FINDING TUBERCULOSIS

Even after repeated infections with tuberculosis germs, months may pass before symptoms appear. The disease may progress to an advanced stage before the patient knows he is ill. Multiplied thousands of people are spreading tuberculosis while ignorant of their own disease.

Danger Signals

Some of the first warning signs of tuberculosis may be:

Unexplained loss of weight	A cough that hangs on
Loss of appetite with indigestion	Too easily tired
A stitch in the side	Husky throat
Blood spitting	Night sweats

One of the most common signs is fatigue,—not the fatigue that comes from work or play and is relieved by sleep, but that comes after slight exertion and that cannot be explained. Blood spitting is a danger signal that should never be passed by. These and other warnings do not always mean tuberculosis but any one of them should call for a visit to a good doctor.

Early Discovery, Early Recovery

The hope of recovery from tuberculosis lies in beginning treatment early,—at the very first sign of trouble. It is still better to discover the disease before there are any signs. This can be done by a trained physician, but only by use of modern diagnostic aids, especially the X-ray. No one can tell by looking at you whether or not you have tuberculosis.

When seeking to detect or to rule out tuberculosis the doctor makes a thorough examination of the chest, by looking at it (inspection), by feeling it (palpation), by tapping it with his fingers and noting the resulting sounds (percussion), and by listening all over it with his stethoscope (auscultation). He may make a tuberculin skin test which tells whether or not germs have entered the body, and an X-ray to learn whether or not actual disease has started as well as its location and extent. He may make a sedimentation blood test for toxemia and he may send several samples of sputum to a laboratory for examination. He will take a history of home conditions, family illness and the patient's exposure and symptoms. His diagnosis will be based on the aggregate of all his findings.

If it were possible for every person to have a thorough examination with X-ray of the chest every year, the unknown spreaders of tuberculosis could be located. Then if it were possible to treat all those found tuberculous, eradication of this scourge would be accomplished within a short time.

From Whom, To Whom?

Every diagnosis of tuberculosis should be followed by two questions and the answers diligently sought:

1. From whom did he get it?
2. To whom has he given it?

Everyone in close enough contact to spread the germs or to receive them should be examined. The greatest aid in such examinations is the X-ray. As expressed by Doctors Lawrason H. Brown and Fred S. Heise:

> "It can truthfully be said that no examination of the lungs is complete without an X-ray properly taken, properly developed and properly read by an experienced physician."

SHADY WALKS

TREATMENT OF TUBERCULOSIS

Early in the Christian era phthisis (consumption, tuberculosis) was treated with the liver of a wolf in wine, a beverage made from the hoof of an ox, thousand legged worms or green lizards. Another prescription compounded the ashes of a snake killed between two wagon tracks at the rise of the dogstar.

These and many other nostrums equally incredible were actually used, and many centuries passed before remedies much more efficacious were found. But once the medical men commenced to find ways to lessen the appalling death rate from tuberculosis, superstition gave way to science and rapid strides were made. (Even lately vapors to be inhaled and other "cures" have been exploited. Quackery is ever present to ensnare the ignorant with hopes that too often turn to hopelessness.)

No two cases of pulmonary tuberculosis are exactly alike and no two cases can be treated exactly alike. There is no medicine in bottles for it, such as quinine for malaria, insulin for diabetes, neoarsphenamin for syphilis, sulphanilimide for various infections. The fundamental treatment for tuberculosis is rest; the time-tested rule of three is REST, REST, AND REST. This does not mean simply refraining from work but rest flat in bed; food in bed, bath in bed; every bodily function performed in bed without variation until symptoms subside, and little variation for some time thereafter.

In the strict routine of bed rest scientific developments have brought about certain modifications, for all of which the well-equipped hospital is desirable, for most of them absolutely essential. The most modern treatment methods are in use today at the Mississippi State Sanatorium.

Tuberculous lungs are eroded and cavitated and the purpose of treatment is to induce such damaged places to heal. No injury can heal without rest. A broken bone cannot mend if allowed to move about; it must have rest. With the lungs it is the same but since they expand and contract with every breath the lungs are never still. How then may they be rested?

Vigorous exercise makes the lungs work hard. A man running breathes deeply about 50 times a minute, walking about 25 times less deeply, sitting still less deeply about 15 times, but when lying flat in bed he takes only about 10 shallow breaths a minute. Therefore, while not perfect rest, bed rest so reduces lung movement that healing is possible in some patients but not in all of them.

Rest in bed then is usually not enough. In fact it seldom effects permanent arrest of tuberculosis, but fortunately science has found a way around that difficulty. As a broken bone is splinted to induce perfect rest, so may a diseased lung, in effect, be splinted by surgical procedures, some of them simple, some more complicated. These procedures are known under the general classification of collapse therapy, and the first to be described is called pneumothorax, which means "air in the chest."

Each lung is contained in a sac called the pleura and the pleura has two layers. Within the pleura the lung lies free in the chest except where blood vessels and air passages enter. To give pneumothorax the doctor painlessly inserts a hollow needle through the chest wall until it penetrates the outer layer of the pleura and injects a measured volume of air between the two layers. The volume of air is increased every few days until the lung is compressed enough to close all cavities. By periodic "refills" compression is maintained until healing takes place. Then the lung is allowed to reexpand gradually and the patient gets well if the disease was not too far advanced for this treatment.

Pneumothorax is indicated in about 90 per cent of tuberculosis cases found reasonably early, as well as in some of the more advanced cases, and it may be given in both sides of the chest at the same time. It is employed thousands of times each year at this Sanatorium, materially shortening the period of bed rest. Many patients are able to return to active lives while continuing pneumothorax treatment and such patients are not spreaders of disease.

When, because of disease the layers of the pleura have stuck together in places, thus restricting the use or effectiveness of pneumothorax, pneumolysis is sometimes performed. The surgeon inserts through the chest wall an instrument known as a thoracoscope, through which the adhesions can be seen with the aid of a tiny electric light, and can be cut away with an electric cautery inserted through another small incision. A variation of this procedure is called open pneumolysis, which involves removal of a portion of one rib to gain access to the adhesions with clipping instruments. Following pneumolysis, pneumothorax can be employed as already described.

In some cases pneumothorax cannot be given because the lung is adherent to the chest wall. In such a case a pocket must

be created between the wall and the lung by means of an operation known as extra-pleural pneumothorax. This operation involves removal of a portion of one rib, dissociation of the lung and pleura from the chest wall and the introduction of air into the chest cavity outside the pleura instead of between its two layers.

In more advanced cases the operation known as thoracoplasty has been performed hundreds of times at the State Sanatorium. This involves removal of several ribs, permanently collapsing as much of the diseased lung as necessary to close all cavities. It is usually done in two or more stages, two or three ribs being removed each time. The ribs grow back, though shortened, thus reducing the size of the chest cage and maintaining the lung in a collapsed condition. Thoracoplasty is sometimes done to a limited extent on both sides of the chest; sometimes on one side, with pneumothorax on the other.

A relatively simple and common operation involves interruption of the phrenic nerve which controls the diaphragm, a large muscle that actuates the lung in breathing. This operation stops the diaphragm from working, allows the lung to retract, and often results in healing. The nerve regenerates usually in from six months to a year and the diaphragm then starts lung movement again.

Bronchoscopy involves use of a slender instrument called the bronchoscope, through which the surgeon can see into the respiratory tracts for diagnostic, as well as for operative procedures. This instrument is used for abscess drainage, removal of foreign material and in other non-tuberculous lung conditions.

Other operations are regularly performed for tuberculosis, as well as other chest conditions. The right lung is made in three and the left lung in two sections called lobes. Lobectomy involves removal of one or two lobes and pneumonectomy removal of an entire lung. Both have been successfully performed at this Sanatorium.

Because of the rarity of certain operations and the scarcity of doctors trained in advanced chest surgery, the State Sanatorium has been made available to Mississippi physicians and their patients for such operations not done elsewhere, as well as for consultation service.

Since tuberculous patients are subject to the same illnesses as are other people, a modern sanatorium must be equipped and

ready to perform any operation that becomes necessary. When patients are admitted with complications such as appendicitis, dental and other troubles, such conditions are usually corrected before intensive treatment for tuberculosis is started. The regular staff of the Sanatorium is augmented by the necessary specialists from other places.

In a tuberculosis sanatorium the most efficient X-ray and fluoroscopic apparatus is indispensable. Besides its use in diagnosis, the X-ray is used for permanently recording the status of lung conditions upon admittance of patients and for recording progress of treatment. Thousands of X-ray films are used annually. Chest X-raying requires precision in the taking, developing and drying of films. The fluoroscope also is employed thousands of times each year; always before administering pneumothorax refills and on numerous other occasions.

In diagnosis and treatment of tuberculosis extensive laboratory work is necessary. Upon admittance of each patient eight or ten different tests are made, many of which must be repeated periodically, making a total of many thousand of tests and examinations annually. Guinea pig inoculation is employed for diagnosis in certain cases.

Expert nursing service day and night is necessary in treatment of tuberculosis. Plenty of good food is essential, with special diets arranged for many patients. These departments of the Sanatorium's work are covered more fully in other pages.

Heliotherapy, or the use of sunlight in treatment, and the ultra-violet lamp as a substitute for sunlight, are employed in certain cases, but not for lung tuberculosis.

Exercise is not used in treatment of active tuberculosis, but is employed gradually during convalescence. Walking is the form of exercise used almost exclusively.

Not only his tuberculosis but the whole patient is treated. This involves the banishment of worry, homesickness and anything else that distracts from the all-important task of getting well. It also requires wholesome amusements, and these are discussed under another heading.

A modern tuberculosis sanatorium must have all the facilities of a complete general hospital and others besides. The Mississippi State Sanatorium rates well. It is so certified by the American College of Surgeons.

VIEW OF SERVICE BUILDING

PREVENTORIUM

THE PREVENTORIUM

The Preventorium for children is one of the most effective weapons against tuberculosis. As its name implies it is a place for prevention. It has a capacity of 50 children, half girls, half boys, and they usually stay from three to six months, a few of them longer.

Admittance is open to children from four to eleven years old who are undernourished or otherwise physically sub-normal, especially those from tuberculous homes. Children with actual tuberculosis or any other communicable disease are NOT admitted.

Situated several hundred yards from the nearest tuberculosis wards, the Preventorium has a separate staff, separate food service, and is kept separate in every way from other departments of the Sanatorium. Tuberculous patients are not allowed to visit the Preventorium.

The Preventorium building is of stone and brick, Colonial in design, the plan having the shape of a modified Lorraine cross, the emblem of the tuberculosis movement. While fitting, this design resulted accidentally from the need for a plan providing an abundance of fresh air and light in open air sleeping quarters and school rooms.

Furnishings and equipment; plumbing fixtures, beds, chairs, lockers, blackboards and adjustable desks; in fact everything about the place was built for children. Spacious playgrounds are provided with safe play equipment and ample material for creative work and play of the children's own choosing.

Treatment and training include long hours of sleep at night and proper daytime rest periods, good food in a balanced diet prepared for children and served at regular hours, school work to suit age and physical limitations, supervised play as chosen by the children, health and safety habits learned by doing, correction of defects, exposure of the body to air and sunshine; all under constant expert medical supervision.

A daily schedule, slightly varied with the seasons, follows:

Rise	6:30
Personal hygiene	6:30— 6:45
Morning exercises	6:45— 7:00
Breakfast	7:00— 7:45
Personal hygiene	7:45— 8:00
Rest in bed	8:00— 8:30
School	8:30—10:00
Mid-morning milk	10:00—10:15
School	10:15—11:15
Play out of doors	11:15—11:45
Personal hygiene	11:45—12:00
Dinner	12:00— 1:00
Rest in bed	1:00— 3:00
Mid-afternoon milk	3:00— 3:15
Play out of doors	3:15— 4:40
Personal hygiene	4:40— 5:00
Supper	5:00— 6:00
Play and story hour	6:00— 7:30
To bed, summer	8:00
To bed, winter	7:30

(All play is out of doors summer and winter, weather permitting.)

The Preventorium was opened in February, 1930. Its establishment followed proof of its value as demonstrated over a period of years by summer health camps conducted by the Mis-

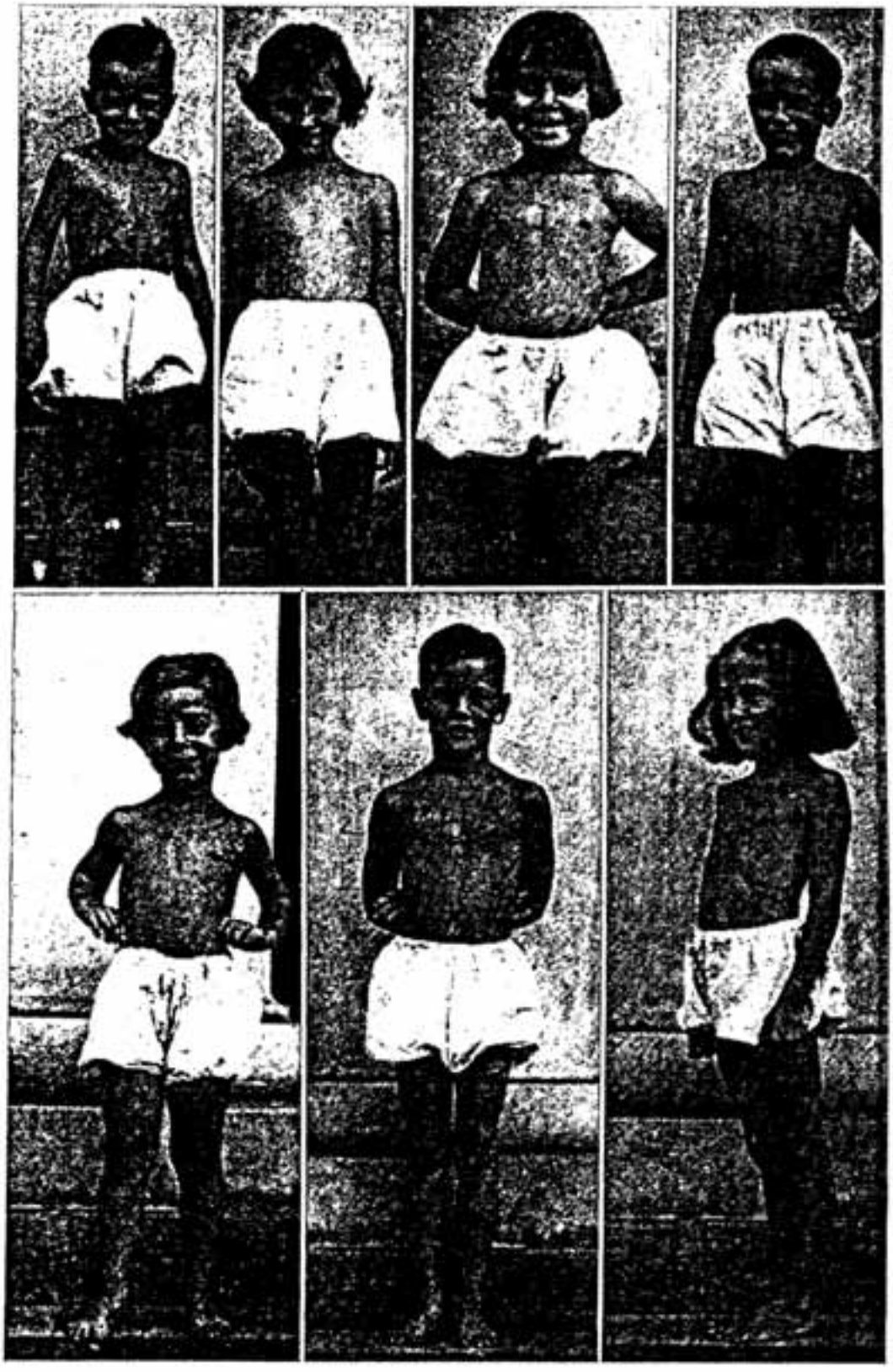
sissippi Tuberculosis Association. It is noteworthy that not a single case of tuberculosis has been recorded in a child who has had treatment and training at this Preventorium.

In the outspoken opinion of those who have observed its work the Preventorium is truly a wonderful institution. Little space is given here to a description of it because there seems to be no satisfactory way to convey in writing an adequate conception of what it is and what it does. Such an understanding can be gained only by a visit to it. Visitors are welcome any day between 9:00 and 12:00 and between 3:00 and 5:00 o'clock.

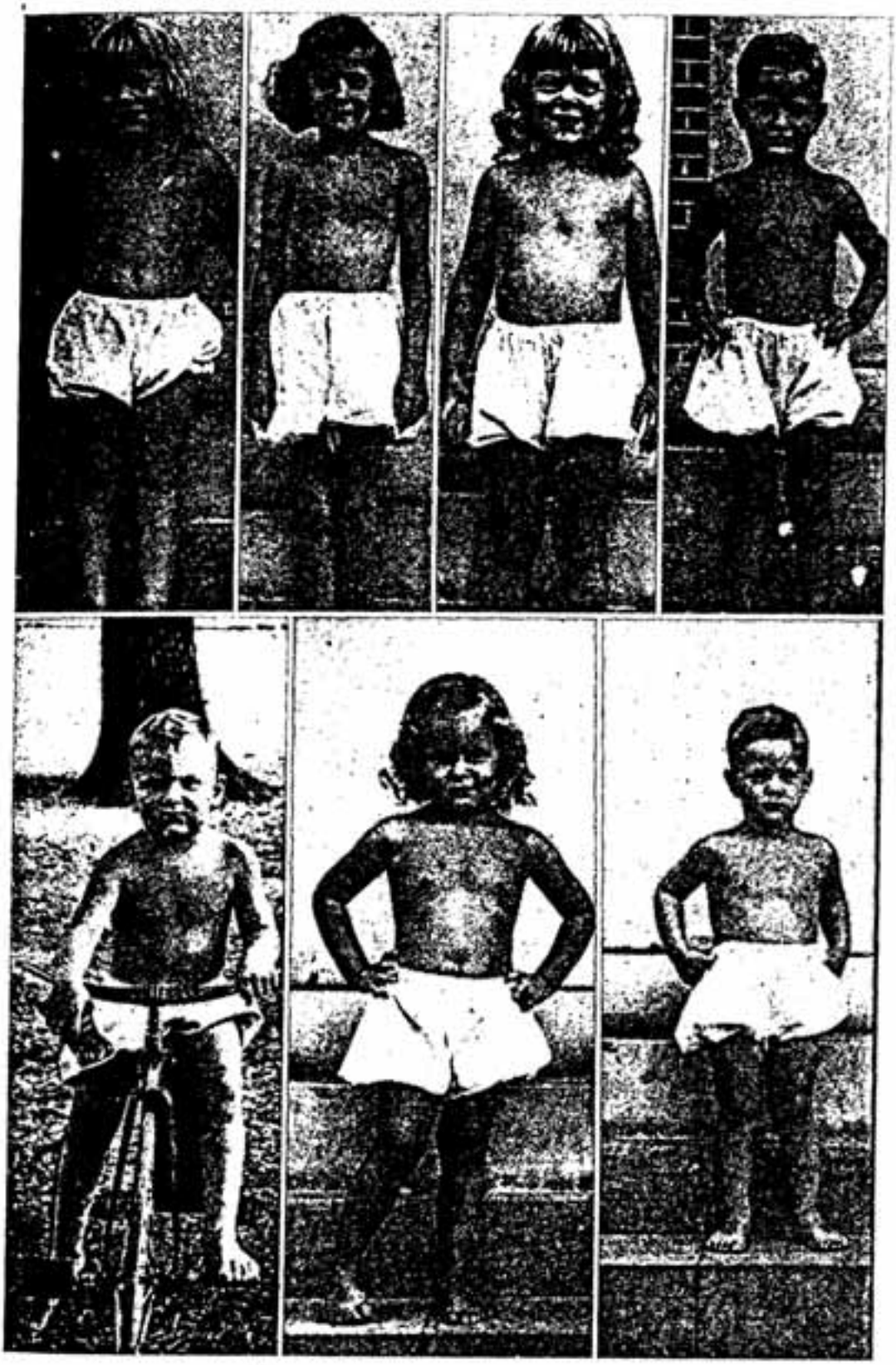
The Medical Auxiliary Fund

When the Preventorium was opened the Woman's Auxiliary to the Mississippi State Medical Association undertook to provide a fund to pay for the extra things needed at the institution, —things not provided by legislative appropriation. Such items include story books, song books, equipment and food for pets, decorative material and costumes for celebrations, replacement of toys and games, clothing and other needs for indigent children on leaving the institution, and miscellaneous small items necessary to their happiness while there.

The Auxiliary raised this fund through many organizations and by contributions from individual friends. One philanthropic business man has pledged twenty-five dollars per month for as long as the need exists. A part of the fund is reserved for emergency requirements.



PREVENTORIUM CHILDREN



PREVENTORIUM CHILDREN

PREVENTORIUM CHILDREN

THE SANATORIUM STAFF

The success of any large undertaking depends upon workers proficient in a variety of crafts. The Sanatorium has many departments, separate cogs that direct a unified force toward a single objective, the prevention of needless deaths.

The conquest of tuberculosis is peculiarly one requiring long periods of service. There is no place in it for transitory employment. Appropriate education and experience before employment and continuous training afterward are axiomatic requisites.

The success of the Sanatorium has been due to the assembling and retention of a corps of capable, interested workers. Most of those in the medical department and in other positions of responsibility have had tuberculosis themselves or have felt its tragic consequences in their families.

Some employes have served the Sanatorium since its beginning and many more have been employed from five to twenty years. The qualifications and service records of medical staff members and department executives are given in succeeding paragraphs.

HENRY BOSWELL, M.D., F.A.C.P.,

Superintendent, 22 years.

(For additional data, see page 9)

CHARLES EMMITT WALKER, M.D., *Assista Superintendent, Out-patient Clinician, years.*

University of Tennessee College of Medici M.D., 1916. Charity Hospital, Jackson, Mis 1916-1917. Medical Corps U. S. Army, A. F., July 1917 to February 1919. Joined San torium staff May 1920. Member: Central Me cal Society, Mississippi State Medical Assoc tion, American Medical Association.

JOHN H. ROWAN, *Business Manager, 15 yea*

Wesson High School 1906. Scientific cou Tulane University 1909-1910. Drug clerk Ju 1910 to June 1912. Druggist and accounts State Charity Hospital, Jackson, June 1912 Sept. 1914. Drug business Jan. 1915 to M 1916. Accountant State Penitentiary offi Jackson, June 1916 to Aug. 1920. Asst. S retary and Purchasing Agent State Impro ment Bond Commission, Jackson, Miss., Se 1920 to Dec. 1923. Joined Sanatorium St Jan. 1, 1924, 15 years continuous service Sanatorium, total service to the state 24 yea

E. D. KEMP, M.D., *Staff Physician, 15 years.*

Georgia Robinson Christian College, B. 1907. Memphis Hospital Medical College, M. 1911. Tulane University, Post-graduate, X-r laboratory and Int. Medicine, 1920. State Ch ity Hospital, Vicksburg, 1913. U. S. Ar 1918; Reserve Corps, Camp McClellan, 1 and 1924. Houston Hospital, Houston, Mi 1924. General practice 1911 to 1924. Joi Sanatorium staff August 1924. Member: C tral Medical Society and Mississippi State M ical Association.

W. J. C. WIEMERS, M.D., *Staff Physician, 11 years.*

John Tarleton College 1910. Southwestern University 1912. University of Texas, M.D., 1916. John Sealy Hospital, Galveston, 1916-17. U. S. Army overseas service 1917-1919. General practice 1919-1928. Joined Sanatorium Staff Nov. 1928. Member: Central Medical Society, Mississippi State Medical Association, and American College of Chest Physicians.

WILLIAM DANIEL HICKERSON, M.D., *Director Field Clinic Service, 5 years.*

University of Virginia Medical College, B.S., M.D., 1920-26. Cincinnati General Hospital 1926-27. Resident in Tuberculosis, Hamilton Co. Sanatorium, Cincinnati, 1927-28. Director Tuberculosis Control, Cincinnati, 1928-30. Clinician, Tuberculosis Study, Tennessee, 1930-33. Henry Phipps Institute, Philadelphia, 1932. Trudeau School of Tuberculosis, Saranac Lake, N. Y., 1933. U. S. Army, World War 3 years. Joined Sanatorium staff June 1, 1934. Member: Central Medical Society, Mississippi State Medical Ass'n., Southern Medical Ass'n., and American Medical Ass'n.

VIRGINIA B. HICKERSON, M.D., *Staff Physician, 5 years.*

University of Mississippi, B.S., 1922. University of Virginia, M.D., 1926. Cincinnati Gen. Hospital, Rotating Internship 1926-27. Cincinnati Gen. Hospital, Resident Physician 1927-28. Hamilton Co. Tuberculosis Sanatorium, Res. Physician 1928-30. General Practice and understudy to Dr. Kennon Dunham, Cincinnati, (Chest, X-rays, Autopsies, etc.) 1930-32. Research work Rockefeller Foundation, Tennessee, 1932-34. Study under Dr. Eugene Opie, Henry Phipps Inst., and Dr. Horton Casparis, Vanderbilt University 1932-34. Joined Sanatorium staff July 1, 1934. Member: Central Medical Society, Mississippi State Medical Ass'n., Southern Medical Ass'n., and American Medical Ass'n.

JOHN S. HARTER, M.D., *Staff Surgeon, 3 y*

University of Wisconsin 1922-25. Was ton University School of Medicine 192 M.D. Pathology, University of Minnesota Internal Medicine, Barnes Hospital, St. 1929-30. Surgery, Strong Memorial Hos Rochester, N. Y. 1930-31. Fellowship in gery, Harvard University, Boston, 193 House Officer Massachusetts Gen. Hos Boston, 1932-35. Lahey Clinic, Boston, 36. Joined Sanatorium staff Aug. 1936. ber: Central Medical Society, Mississippi Medical Ass'n., American Medical A Southern Medical Ass'n., American Aca of Tuberculosis Physicians, and American lege of Chest Physicians. Associate me American Association for Thoracic Surge

DEWEY L. ANDERSON, M.D., *Field Clini 3 years.*

Lynchburg College, B.S., 1924. Universit Virginia Medical School, M.D., 1931. Resi Interne, Elizabeth Buxton Hospital, New News, Va., 1931-32. Physician Virginia S (Catawba) Sanatorium, 1932-36. Joined S torium Staff, Oct. 1936. Member: Central M ical Society, Mississippi State Medical As Southern Medical Ass'n., and American M cal Ass'n.

ERIC P. ROBBINS, M.D., *Staff Physicia years.*

University of Mississippi, B.S., 1931, two years of medicine. Vanderbilt Univers M.D., 1933. Protestant Hospital, Nashv Tenn., 1932-33. Nashville General Hosp 1933-34. Sayers Clinic, Nashville, Tenn., 1 35. Long Island Hospital, Boston, Asst. R dent and Resident Physician 1935-37. Joi Sanatorium staff, Oct. 1937. Member: Cen Medical Society, Mississippi State Med Ass'n., American Medical Ass'n.

ALLEN A. LILIENTHAL, M.D., *Surgical Interne, 1 year.*

Depauw University 1929-31. University of Wisconsin, B.S., 1934. University of Tennessee Medical School, M.D., 1936. Baptist Memorial Hospital, Memphis, Tenn., 15 Mo. Marine Hospital, U. S. Public Health Service, Boston, medicine and tuberculosis, 1 year. Joined Sanatorium staff Oct. 1, 1938.

RAY HOYT BIGGS, M.D., C.P.H., *Staff Physician.*

University of Alabama, A.B., 1928. Emory University School of Medicine, M.D., 1933. Vanderbilt University, Post-graduate, 1936. Johns Hopkins University, C.P.H., 1938. Fitkin Memorial Hospital, Neptune, N. Y., 1934-35. U. S. Army Medical Corps Res., Active Duty CCC Surgeon 1935. Mississippi State Board of Health, Health Officer 1936-38. Joined Sanatorium staff June 1, 1939. Member: American Public Health Ass'n., Mississippi Public Health Ass'n.

T. J. BURNHAM, D.D.S., *Staff Dentist, 21 years.*

Diplomas Southern Dental College 1908; Atlanta Southern Dental College 1917. Joined Sanatorium Staff 1918. Member: Mississippi Dental Ass'n., American Dental Ass'n., and Omicron Kappa Upsilon, honorary dental fraternity. Past president Mississippi Board of Dental Examiners and Mississippi Dental Ass'n.

CHARLES W. YEATES, D.D.S., *Assistan*
tist.

Pre-medical course University of Miss
1930-31. Pre-medical Course Millsaps (
1933. University of Tennessee, D.D.S.,
Private practice 1937-38. Joined Sana
staff Jan. 1939. Member: Mississippi
Ass'n. and American Dental Ass'n.

MRS. BELLE ROBBINS, *Mail Clerk, 20*

Chickasaw College. Joined Sanatoriu
Dec. 1918.

E. C. McCARLEY, *Chief Engineer, 19 ye*

High School education. Telephone c
tion and maintenance 7 years. Plumb
electrical contracting 4 years. Joined
ium staff March 1920.

GERTRUDE BUTLER, *Secretary to Superintendent, 19 years.*

Business course at Nelson's Business College, Memphis. Secretarial work law office, 1907-1912. Confidential secretary to Governor 1912-16. Departmental work during World War, Washington 1917. Joined Sanatorium staff, August 1920.

MRS. MAY ROWLAND, *Hostess; Sunshine Club Committee; 16 years.*

Peabody College 1920. Public School Teacher four years. Joined Sanatorium staff May 1923.

S. E. GRIMES, *Superintendent of Buildings, 15 years.*

High School. Lumber mills 11 years, building construction and maintenance 5 years. Joined Sanatorium staff August 1924.

FRANCES MAY, R.N., *Instructress P ate Nurses' Classes, 15 years.*

Public Schools. Highland Park Sa Montgomery, Ala., R.N., 1903. Priv 1903-1922. Observation work Grassla pital, Valhalla, N. Y., 1934. Join torium staff May 1922. (Leave of 1927-29). Member National League o Education, American Red Cross Nurs ice, Miss. State Nurses' Ass'n., and Sa District Nurses' Ass'n.

W. J. JOHNSTON, Jr., *Superintendent 15 years.*

High School graduate and 1 year College. Joined Sanatorium staff Sept.

EVERETT E. LOWRY, *Bookkeeper-Ac 14 years.*

Collins High School 1912. Mississ lege 1912-13. Accounting in lumber 1913-17 and 1919-25. U. S. Army Service 1917-19. Joined Sanatorium s 1925.

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MRS. L. A. KILE, *Assistant Bookkeeper; Sunshine Club Committee; 14 years.*

High School, two years college, business college graduate. Bookkeeping lumber industry one year, department store four years. Joined Sanatorium staff Aug. 1925.

of Farm,

State
1924.

J. R. ROBERTS, *Steward and Receiving Clerk, 13 years.*

Graduate Brookhaven High School, and Lewis Hotel Training School 1912. Cafe employment 1912-16. American Express Co., 1916-17. U. S. Army, Overseas service, 1917-19. Cafe and hotel cook, chef, steward 1919-26. Joined Sanatorium staff Aug. 1926.

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RUTH McGEHEE, M.T., *Laboratory Technician, 12 years.*

Teacher in public schools eight years. Technical Training Stingily Laboratory. Registered by American Society of Clinical Pathologists. Joined Sanatorium staff July 1927. Member: American Society of Medical Technology.

A. E. HOLMES, *Superintendent of Grounds, 10 years.*

Iowa State College, Forestry 1916. Postgraduate work Iowa State College, Landscape Architecture 1917. Lumber industry, forestry and landscape work 1917-25. U. S. Army, World War Service, 1917-18. Landscaping superintendent Sesqui-centennial Exposition 1926. Landscape Contracting, Birmingham, 1926-29. Joined Sanatorium staff Jan. 1929.

EFFIE M. CLARK, *Preventorium Director, 8 years.*

Whitworth College, 1920-21. Miss. State College for Women, 1921-22. Three summers at State Teachers College. Public school teacher 1922-31. Joined Sanatorium staff, Oct. 1931.

WILLIAM H. WATSON, Jr., *X-ray Technician, 6 years.*

University of Mississippi, B.S., 1933. Technical training at Sanatorium. Joined Sanatorium staff Sept. 1933.

AGNES SULLIVAN, *Chief Dietitian, 3 years.*

Blue Mountain College, B.A., and Diploma in Home Economics. State Teachers College, two summer terms. Barnes Hospital, St. Louis, Post-graduate work in dietetics. One year as high school teacher. One-half year Home Economist, E. R. A., 8 Mo. Home Management Supervisor Resettlement Program. Joined Sanatorium staff July 1936.

FRANCES ALEXANDER, R.N., *Superintendent of Nursing, 3 years.*

All Saints College 1926. Academic work Vanderbilt University 1929-30. Jackson Infirmary School of Nursing, R.N., 1934. Private Practice 1934. Public Health Nursing 1934-35. Operating Room Supervisor, Jackson Infirmary 1935. Vanderbilt University Hospital 1936. Operating Room Technique and Hospital Management, U. of Pa. Graduate Hospital 1936. Tuberculosis Nursing Post-graduate course, Sanatorium 1936. Joined Sanatorium staff July 1936. General duty, supervisor, assistant superintendent, and superintendent of nursing. Member: Sanatorium District Nurses' Ass'n., Mississippi State Nurses' Ass'n., American Nurses' Ass'n., and National League of Nursing Education.

O. P. BARTEE, *Superintendent of Laundry.*

Tuscaloosa Steam Laundry 1907-10. Vicksburg Steam Laundry 1911-14. Jackson Steam Laundry 1915-38. Joined Sanatorium staff May 1939.

SANATORIUM CONSULTING STAFF

Allergy:
Dr. Geo. W. Owen

Dermatology:
Dr. R. W. Hall
Dr. James Grant Thompson

Gastro-Enterology:
Dr. L. B. Neal

Internal Medicine:
Dr. J. E. McDill
Dr. G. W. F. Rembert
Dr. T. E. Wilson

Ophthalmology:
Dr. A. G. Wilde

Otolaryngology:
Dr. George E. Adkins

Otolaryngology and Ophthalmology:
Dr. Van Dyke Hagaman
Dr. Robin Harris
Dr. W. Lauch Hughes

Orthopedics:
Dr. Thos. H. Blake

Orthopedic Surgery:
Dr. Frank Hagaman

Pediatrics:
Dr. Harvey F. Garrison, Sr.
Dr. Harvey F. Garrison, Jr.
Dr. Noel C. Womack

Radiology:
Dr. W. R. Bethea

Surgery:
Dr. J. F. Armstrong
Dr. D. T. Brock
Dr. W. W. Diamond
Dr. A. E. Gordin
Dr. Lawrence W. Long
Dr. G. C. Russell
Dr. H. R. Shands
Dr. J. P. Wall
Dr. F. E. Werkheiser

Surgery and Gynecology:
Dr. J. W. Barksdale

Urology:
Dr. Temple Ainsworth
Dr. F. L. Van Alstine

Urology and Proctology:
Dr. I. C. Huggins
Dr. Lonnie B. Moseley

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GROUP OF NURSES

GROUP OF NURSES

NURSING SERVICE

An efficient and flexible nursing service is essential in the treatment of tuberculosis. Fifty nurses with special training in tuberculosis nursing are normally employed. They include a superintendent and an office assistant, an instructress and ten supervisors directing 37 ward and operating room nurses.

Day nurses go on duty at 6:55 to receive reports from and to relieve night nurses at 7:00 o'clock. While two nurses serve breakfast the supervisor makes initial ward rounds. Time off is allowed according to a regular schedule but throughout the day there is no cessation of nursing activity.

Drugs, linens and other supplies are inventoried and replenishments ordered. Requisitions are checked against quotas and replacement orders are accompanied by worn-out items. Specimens are sent to laboratory and a schedule of special diets to dietitian. Repair memoranda and requests for dental and other special treatment are sent to the proper offices.

Bed baths are given and beds remade, hands, faces and mouths of patients are cleansed before meals, the physician accompanied on his visits, water and milk or fruit juices passed several times daily, and patients are weighed weekly. Sputum output, temperature, pulse and respiration rates are recorded twice daily, medications administered and wounds dressed, mail distributed and collected, and doctor's orders and all other essential information charted.

An evening report on every patient is sent to the superintendent before the ward is relinquished at 7:00 o'clock to the night nurse who "puts the patients to bed" and carries on nursing services throughout the night.

More than 5,000 routine items of service are performed by the nurses each day, besides which they must be ready to respond at any time to signals from patients. Hemorrhage and moribund cases require constant or instant attention and nurses must be alert for complications, for tuberculosis does not exclude other illnesses. No list could include all the attentions incident to the care of the sick.

Surgical ward and operating room nurses are kept busy with surgery scheduled for four days weekly. On the remaining two

days these nurses assist with fluoroscope and pneumothorax clinics besides making and sterilizing thousands of dressings and other supplies.

Post-operative procedure usually includes use of the oxygen tent. Blood pressure and other tests are made every few minutes for at least twelve hours and intravenous injections given as directed. Nurses must watch for complications, and carry out precisely the doctor's orders. They must be trained for a high degree of skill, endurance and alertness.

Nursing duty is alternated between day and night and is rotated through the several departments to ensure comprehensive training and experience. One nurse for day and one for night duty are assigned to the Preventorium.

Educational work is highly important and nurses must be trained to understand both the disease and the patient. They must teach the patient how to rest and the reasons for rest, how to protect others, how to get well and stay well, and finally how to carry their valuable knowledge back to farm and store, factory and office, home and community.

POST-GRADUATE NURSING COURSE

No schools of nursing in the state include tuberculosis nursing in their curricula, but the Sanatorium has conducted a post-graduate course for several years. It requires six months for completion and leads to a certificate. Approximately 150 applicants have been accepted. Thirteen are enrolled in present classes.

Registered nurses or recent graduates who have not had an opportunity to take the State Board examination are eligible. Certificates are awarded to registered nurses who satisfactorily complete the course. Nurses not registered before beginning the course must pass the State Board examination before completing it.

Lectures are given by the superintendent of the Sanatorium and his assistant, staff physicians and surgeon, anaesthetist, surgical ward supervisor, the assistant superintendent of nursing, the instructress and the secretary of the Mississippi Tuberculosis Association.

One hundred and ten hours of theoretical work are given. Subjects include anatomy, physiology, bacteriology, pathology, history, symptoms and treatment of tuberculosis, psychology of the patient, laboratory procedures, dietetics, rehabilitation, prophylaxis, X-ray, special types of treatment, tuberculosis in children and in Negroes, non-tuberculous chest conditions and medical and surgical procedures.

Practical work includes experience in infirmary, surgical and convalescent wards, fluoroscope and pneumothorax clinics, and observation in diagnostic clinic and Preventorium.

A stipend of $25 per month with full maintenance is paid. Full information may be had by application to Superintendent of Nursing, Sanatorium, Mississippi.

X-RAY LABORATORY

Technical precision is peculiarly essential in X-ray studies of the chest. Slight variations from rigid standards will damage films or make them useless. At the State Sanatorium the required procedures are managed with studious care.

Films of highest quality are used and the several steps necessary in processing them are accurately taken. Current amperage and voltage are carefully controlled for proper penetration and clearness of detail, according to thickness of the individual chest and distance from focal point of the X-ray tube to the film holder. Each patient is placed in correct position and each exposure is accurately timed.

Films are developed and fixed in fresh solutions carefully prepared and maintained at optimum temperature. Solution temperature is thermostatically controlled within narrow limits, despite which a thermometer reading is taken and development accurately timed accordingly for each film.

Finished films are interpreted by experienced physicians and findings are recorded. Weekly staff meetings are held in the X-ray laboratory and films for all cases are carefully studied and discussed. Many films are sent by physicians of the state to the Sanatorium staff for interpretation.

Films taken by field clinicians are developed at the Sana-

torium, and those taken by the factory inspector are sent for developing by the Sanatorium laboratory and for interpretation by field clinicians.

During the year ending June 30, 1939 the Sanatorium laboratory exposed and processed 4,043 films, and developed 7,038 taken by field workers.

CLINICAL LABORATORY

As in the case of X-ray facilities, a well equipped clinical laboratory is indispensable in the diagnosis and treatment of tuberculosis. Sputum examinations as well as various blood and other tests must be made upon admittance of each patient and at frequent intervals thereafter. Because of the many surgical operations performed numerous tests must be made for typing and matching blood to be used for transfusions.

The numbers of tests and examinations completed in the Sanatorium laboratory during the past biennium were as follows:

Year ending June 30, 1938	10,126
Year ending June 30, 1939	13,278
TOTAL	23,404

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	10,126
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NEGRO INFIRMARY NURSES

DENTAL SERVICE

Since 1918 Dr. T. J. Burnham, of Magee, has been staff dentist, usually coming to the Sanatorium on one day weekly and at other times to care for emergency needs. Recently a convalescent patient who is a dentist was added to the staff as part-time assistant, and his services are being employed as an experiment to determine whether or not full-time dental service can be made permanently self-supporting.

OUT-PATIENT CLINIC

The Sanatorium operates a permanent clinic for examination of tuberculosis suspects and contacts, for re-examination of former patients and for consultation service to physicians. Thorough use is made of all modern diagnostic aids including lipiodol injections when indicated. Reports are made to family physicians.

A nominal charge is made for each examination according to ability to pay.

Notice To Physicians and Patients:

Due to limited laboratory, X-ray and clinic facilities and personnel, appointments for as many examinations as can be made daily are usually scheduled for from 10 to 20 days. Therefore, request for appointment must always be made in advance. Persons coming without appointments cannot be examined.

TRAVELING CLINICS

In addition to the out-patient department two travelling clinics are operated by the Sanatorium with State Health Department assistance. Each clinician carries portable X-ray apparatus and, with exception of laboratory tests, gives the same examination as is given at the Sanatorium. The purposes of the clinics are diagnosis, consultation and education.

Arrangements for a clinic are made by the county health officer who confers with all physicians in the county and list

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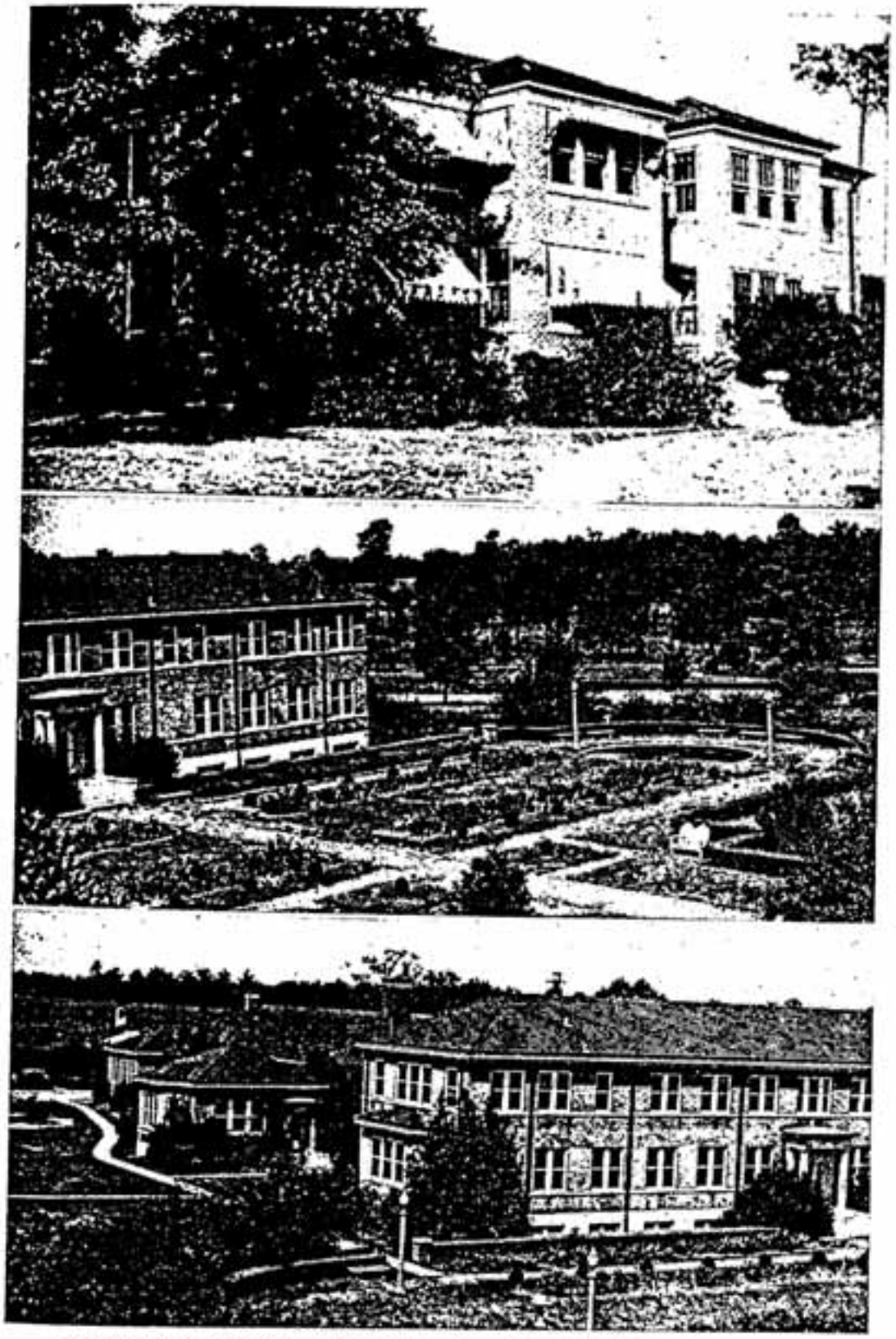

DOCTORS' APARTMENTS (above) AND SERVICE BUILDING

patients to be examined. Following each clinic the X-ray films are developed at the Sanatorium where automatic temperature control and other facilities ensure uniformity. The clinician then returns to the county and delivers a verbal and written report on each examination. No examination is made except on written request from a physician and findings are reported to the same physician. Persons desiring examination may learn from their county health department when and where a clinic will be held.

Inaugurated July 1, 1934, this department has proved so popular and helpful that with additional State Board of Health assistance a second clinic unit was added January 1, 1937. In practically every county visited immediate application has been made for a return engagement. Additional units are now needed, since present units remain several months behind with engagements.

Annually several thousand X-ray films are used, their cost in most cases being paid by County Tuberculosis Associations with Christmas Seal funds. Those organizations cooperate in other ways also, often providing transportation to and from clinics.

This clinic service is augmented by the Industrial Hygienist of the State Health Department who inspects manufacturing plants for conditions affecting health and examines employes for various communicable diseases. Using portable X-ray apparatus for tuberculosis examinations, he sends films to the Sanatorium to be developed by the X-ray department and for interpretation by the field clinicians. It is considered vitally important that this work keep pace with the growth of industrial employment in Mississippi since tuberculosis is likely to be more prevalent among such workers than in the general population unless adequate precautions are taken.

In addition to individual patients many school and college groups have been examined, with gratifying results in the discovery of early tuberculosis. At present approximately four-fifths of the patients received at the Sanatorium have the disease in moderately or far-advanced stages and one-fifth in early, easily curable stages. Therefore, an outstanding need is to provide sufficient case-finding facilities to reverse that situa-

tion so that at least four-fifths of cases will be found early, thus reducing by half the time and cost of treatment and saving many additional lives.

A recent national report showed that the per capita cost of examinations by the Mississippi clinics was lower than in any other state doing similar work.

ADMITTANCE TO SANATORIUM AND RATES

Admittance to the Sanatorium, open to residents of the state only, is by written application, forms for which are supplied by the superintendent. Rates, except for the Preventorium, are $7.00, $10.50, $14.00, $17.50, and $21.00 a week for board and routine treatment, including laundry within a prescribed limit.

Preventorium rates are $3.50, $7.00, $10.50, and $14.00 a week. To pay for barber work and other minor expenses a deposit of $5.00 for each child, renewable if necessary, is required. Any unexpended balance is refunded. Excepting bathing suits in summer and tennis shoes and sweaters in winter, all clothing is supplied by the Preventorium.

Rates are based on ability of patient and family to pay. In case of total inability the patient's county or municipal government is authorized by law to pay the minimum rate. In order that no patient will be handicapped, charges for surgery also are based on ability to pay. Special nursing (rarely necessary) is provided at cost plus $1.00 a day for nurse's board.

County quotas are based on population. Present quotas are one tuberculous white patient for every 4000 white people, one Preventorium child for 20,000 white people, and one Negro patient for every 25,000 Negroes.

There are more than 1400 physicians in the state's 82 counties. Since most doctors and all counties have patients who need Sanatorium treatment, a long waiting list is inevitable and no patient can be admitted until notified to come.

Less than eleven per cent of the patients now enrolled are paying rates above the minimum allowed by law. The amount a patient can pay does not influence consideration of an application, though age, stage of disease, opportunity for spreading

infection and other factors must be studiously weighed. I sympathetically realizing that to his family every patient is most important, the management makes every effort to ad applicants as soon as possible, within the limitation of fu provided by the legislature.

STATE SANATORIUM THE ONLY DOOR OF HOPE

Today the tuberculous are diagnosed to live or to die, depe ing upon whether or not they can procure essential treatm Only the wealthy can afford modern treatment in other tl tax-supported sanatoria.

To give an idea of the cost of private treatment a sampl of rates is presented:

Sanatorium	State	Rate per week					
A	Arizona	$20—$ 30	Exclusive	of	medical	care	
B	Arizona	$15—$ 42	"	"	"	"	
C	Arizona	$56—$ 91	"	"	"	"	
D	Arizona	$21—$ 42	"	"	"	"	
E	Colorado	$15—$ 50	"	"	"	"	
F	Colorado	$18—$ 25	"	"	"	"	
G	Florida	$28—$ 56	"	"	"	"	
H	Michigan	$28—$ 56	"	"	"	"	
I	New York	$35—$100	"	"	"	"	
J	North Carolina	$32—$ 50	"	"	"	"	
K	North Carolina	$18—$ 35	"	"	"	"	
L	North Carolina	$15—$ 30	"	"	"	"	
M	Texas	$35—$ 55	"	"	"	"	
N	Wisconsin	$28—$ 35	"	"	"	"	

Above rates require from $2.50 to $14.30 per day for lit more than bed and board. From $2.50 to $10 or more per we must be added for visits by the doctor and additional amou for any other treatment, ranging from a few dollars a week pneumothorax to $1000 or more for a major chest operation.

Tuberculosis strikes at both the poor and the rich, but m often at the lives of persons of meagre means. The wealt may seek treatment wherever they please to go, but most of t tuberculous sick must go to the State Sanatorium or else door of hope is forever closed to them.

NURSES' DORMITORY (top) AND LAKE VIEWS

BED CAPACITY OF THE SANATORIUM

Buildings	*Beds*
Main Infirmary	213
6 Convalescent Wards	122
Preventorium	50
Total for White People	385
Negro Infirmary	40
TOTAL CAPACITY	425

The capacity of the State Sanatorium is 425 beds, appr mately 100 of which are not in use because of insufficient le lative appropriations.

THE MISSISSIPPI STATE SANATORIUM IS SMALL

In many places the erroneous impression is current that M sissippi has a large sanatorium. It has been described as largest in the United States and even as the largest in the wo Such an impression might do great harm by promoting the f ing that the state has all the sanatorium facilities it needs.

The State Sanatorium is not only comparatively small is inadequate to meet the state's needs. It may be conser tively stated that two Mississippians die of tuberculosis ev day for lack of timely sanatorium treatment.

A few of the many larger tax-supported sanatoria are lis below:

Sanatorium	*Beds**
MISSISSIPPI STATE SANATORIUM	425
South Carolina State Sanatorium	515
Hudson County (New Jersey) Sanatorium	550
North Carolina State Sanatorium	625
Pennsylvania State Sanatorium (Butler)	550
Pennsylvania State Sanatorium (Cresson)	840
Pennsylvania State Sanatorium (Hamburg)	778
Pennsylvania State Sanatorium (South Mtn.)	1893
Boston City Hospital (Sanatorium Division)	616
Missouri State Sanatorium	633
Hamilton County (Ohio) Sanatorium	639
Cook County (Illinois) Tuberculosis Hospital	643

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	Beds
———	213
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	*Beds**
Hennepin County (Minnesota) Sanatorium	688
District of Columbia Sanatorium	700
Veteran's Tuberculosis Hospital (Oteen, N. C.)	729
Detroit City Sanatorium (Kiefer)	761
Detroit City Sanatorium (Maybury)	840
Los Angeles County Sanatorium	989
Texas State Sanatorium	1000
Arkansas State Sanatorium	1175
Chicago Municipal Sanatorium	1201
New York City Sanatorium	1430

(*Includes beds now under construction in several states.)

Many states, counties and cities have other sanatoria in addition to those listed.

A tabulation on the following page shows the number of sanatorium beds in all states.

RATIO OF SANATORIUM BEDS TO TUBERCULOSIS DEATHS IN THE UNITED STATES

STATE	BEDS 1939 (1)	DEATHS 1938 (2)	BEDS PER DEATH
Alabama	382	1604	0.24
Arizona	731	862	0.85
Arkansas	1417	1003	1.41
California	6817 (3)	4033	1.69
Colorado	2130	655	3.25
Connecticut	2000	613	3.26
Delaware	224	131	1.71
Dist. of Columbia	1350	588	2.30
Florida	942	987	0.95
Georgia	881	1612	0.55
Idaho	125	106	1.18
Illinois	4722	3686	1.28
Indiana	1894	1380	1.37
Iowa	811	488	1.66
Kansas	417	428	0.97
Kentucky	755	1972	0.38
Louisiana	659	1432	0.46
Maine	567	253	2.24
Maryland	1780	1333	1.34
Massachusetts	4485	1684	2.66
Michigan	4991	1866	2.67
Minnesota	2414	815	2.96
Mississippi	522 (4)	1164	0.45
Missouri	2049	1828	1.12
Montana	258	239	1.08
Nebraska	343	220	1.56
Nevada	11	71	0.15
New Hampshire	240	142 (6)	1.69
New Jersey	4296	1962	2.19
New Mexico	491	392	1.25
New York	13,481	6539	2.06
North Carolina	1973	1876	1.05
North Dakota	405	136	2.98
Ohio	4305	3090	1.39
Oklahoma	805	1162	0.69
Oregon	724	305	2.37
Pennsylvania	6955	4348	1.60
Rhode Island	856	277	3.09
South Carolina	905	917	0.99
South Dakota	220	230	0.96
Tennessee	1469	2180	0.67
Texas	2438	4119	0.59
Utah	148	99	1.49
Vermont	172	147	1.17
Virginia	1547	1802	0.86
Washington	990	718	1.38
West Virginia	902	932	0.97
Wisconsin	2451	912	2.69
Wyoming	33	56	0.59
Federal Gov't. Hospitals	8362 (5)		
TOTAL FOR U. S.	97,845	63,394	1.54

Many years ago the minimum need in sanatorium facilities was estimated at one bed for each annual tuberculosis death. After some years of experience the requirement was changed to two beds per death.

Thirteen states have exceeded the 2-bed requirement, three of them having more than three beds per death. Nineteen states have between one and two beds per death; seventeen have less than one, five of them including Mississippi, having less than one-half of one bed per death.

Only three states have less beds per death than Mississippi, which has only slightly more than one-fourth of the national average.

1. Includes beds in private and public sanatoria as listed in Sanatorium Directory April 1938, plus *tax-supported* beds added or under construction to May 1939.
2. Provisional figures subject to slight revision.
3. According to 1938 Directory. Additions since then not reported.
4. Includes State Sanatorium and county sanatoria in Hinds, Lauderdale and Jones Counties.
5. According to 1938 Directory. Does not include additions since then.
6. 1937 deaths. 1938 figures not available.

MAIDS AND ORDERLIES

FOOD SERVICE

Good food properly prepared and served at regular interva is a cardinal factor in tuberculosis treatment. This does n mean forced feeding nor gorging with raw eggs and milk sometimes practiced a generation ago, but a wide variety foods balanced for proper rations of proteins, carbohydrate fats, water, vitamins and minerals. Attention must be giv to correction of dietary deficiencies and to special diets as r quired by the condition of patients and by complications.

Food fads, finicky appetites, ill-advised reducing diets a incorrect eating habits are mighty allies of the tuberculos germ. Some of the Sanatorium food problems involve rebuil ing what those allies have destroyed or weakened.

Three meals a day are served at the Sanatorium, with mi or fruit juices between meals unless contraindicated. Mea are planned by expert dietitians and food supplies are issued l the steward in accordance with menus.

Food for the Sanatorium proper is now prepared in tw kitchens, one of them for special diets only. The Preventoriu has its own kitchen where proper food for children is proper prepared for children. Cooking is done with gas or steam scientifically indicated and is kept hot in steam tables unt served.

Separate dining rooms are maintained for ambulatory p tients, white employes and colored employes. Most patien must be served in bed, and for all of them on regular diet, foo is delivered in insulated conveyors through a tunnel to hospit wards. From a serving kitchen on each ward nurses transf food to trays which maids carry to individual patients. Speci diet meals are delivered to patients on covered trays carried b orderlies directly from the diet kitchen. Usually about 60 sp cial diet trays are prepared for each meal.

A central diet kitchen is being installed immediately adj cent to the main infirmary from where complete tray servi by means of heated conveyors will be had on all wards. Th kitchen will be equipped with the most modern appliances su as steam tables, dish warmers, and dish and glass sterilize Food will be brought from the main kitchen in insulated co veyors and placed in steam tables before each meal. Speci

diets for convalescent wards as well as for the infirmary will be delivered from this kitchen also. This new arrangement will insure as nearly perfect hospital food service as is possible.

Special menus with appropriate favors are arranged for holidays such as Easter, Thanksgiving and Christmas. Every patient's birthday is the occasion for a special menu including individual candle-lit birthday cake. Shut-in patients are served in their rooms while ambulatory patients are joined in celebrating by table mates at appropriately decorated tables in the main dining room. At the Preventorium every child's birthday is the occasion for a party. Appropriate refreshments are served and a cake for each birthday is made in the Sanatorium bakery unless the child's parents have sent one.

Food supplies are purchased by the business manager on competitive quotations for specified standards of quality and in quantities that ensure the most advantageous prices. Bids on specific brands of foods are not demanded, but brands of tested and known quality are named as standards. Suppliers offering other brands must submit samples with proof of quality and content of required food properties.

Stocks are kept in locked storerooms and are recorded on a perpetual inventory which is posted daily and verified quarterly. Food supplies are issued only on requisition from the steward and quantities are delivered on carefully computed ration estimates.

In addition to storage for staple supplies there are five cold storage rooms, two for meats and one each for fruits, vegetables and milk. Refrigeration temperatures are properly controlled for the classes of foodstuffs to be preserved. The refrigeration plant, in addition to cooling the storage rooms, produces 4200 pounds of ice daily.

Foodstuffs produced by the Sanatorium farm, more fully discussed under another heading, are invoiced and inventoried exactly as are goods purchased outright.

The Sanatorium bakery produces bread, rolls, pies, cakes and other items as planned and requisitioned by the dietitian weekly in advance. A typical weekly list of bakery products is given elsewhere.

Power driven mixers, slicers and other labor saving devices

are employed in kitchens and bakery, including a high-pressure and high-temperature dishwasher that sterilizes as it cleans.

With the single exception of bakery products, food supplies are not sold to employes. This exception to the strict rule is made for the sake of economy. Sanatorium requirements alone do not quite justify the full-time employment of a master baker who is capable of making products in keeping with the high standards demanded. In order to keep the baker employed full-time, bakery products are sold to employes whose compensation does not include board, through the use of dated and numbered coupons which must be purchased in advance at the business office and which must be fully accounted for.

Typical menu and daily food list follow:

TYPICAL MENU
(SUNDAY)

BREAKFAST

Grapefruit
Oatmeal or Branflakes
Scrambled Eggs Broiled Bacon
Buttered Toast
Cocoa or Coffee
Milk

DINNER

Clear Vegetable Soup
Fried Chicken—Mushroom Gravy
Steamed Rice Fresh String Beans
Cornbread Muffins
Head Lettuce Salad—Mayonnaise
Vanilla Ice Cream—Chocolate Sauce
Milk Tea (Employes only)

SUPPER

Vegetable Soup
Crackers
Fresh Shrimp Salad
French Fried Potatoes
White Bread
Strawberries—Cream
Pound Cake
Milk

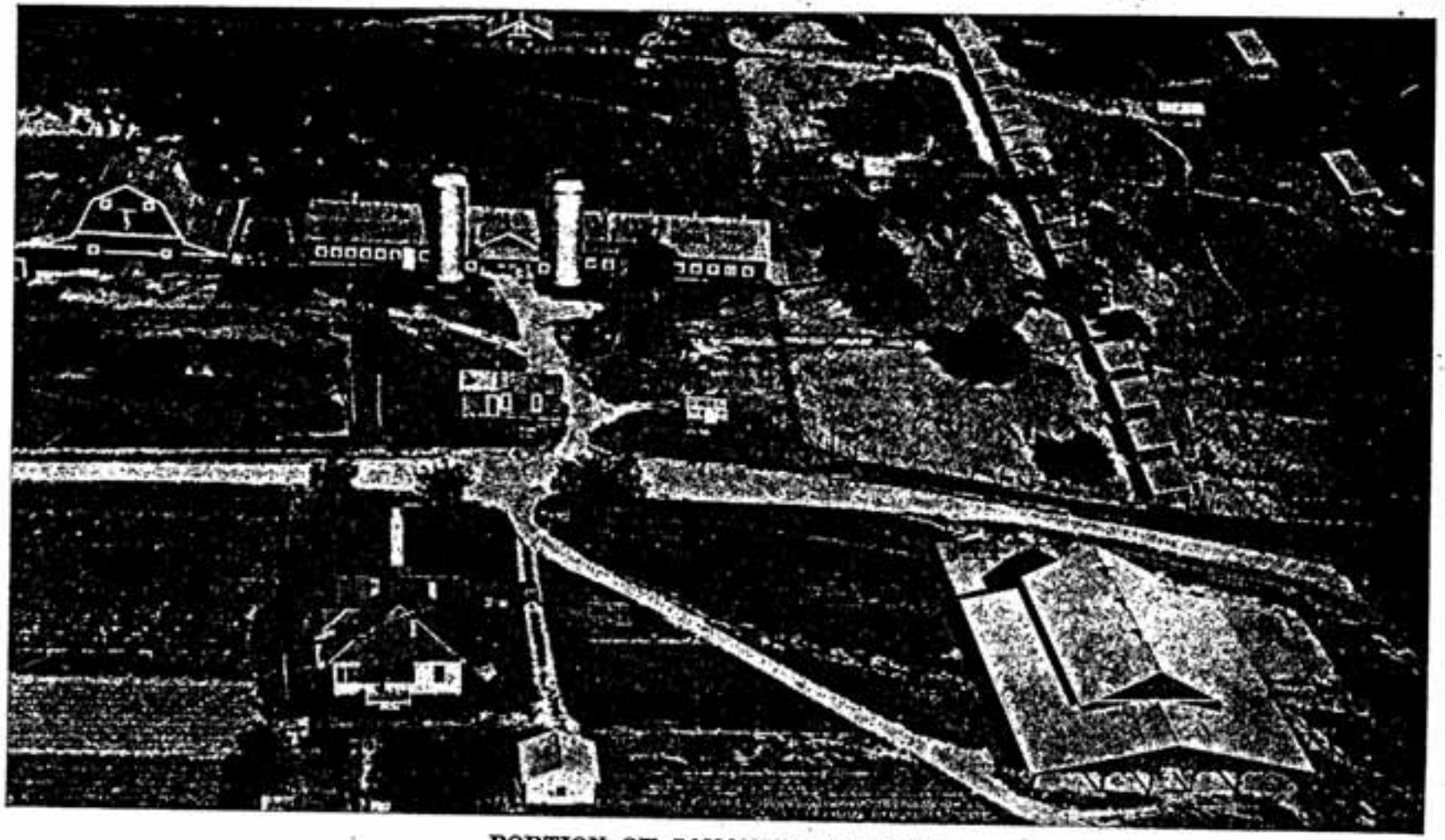
TYPICAL DAILY FOOD LIST

(According to above menu)

Grapefruits
Boxes Oatmeal
Boxes Bran Flakes
Dozen Eggs
Pounds Bacon
Pounds Cocoa (10 Gal.)
Pounds Coffee (22 Gal.)
Pounds Butter
No. 1 Cans Mushrooms
Pounds Rice
Hampers String Beans
Pounds Salt Meat
Pounds Corn Meal
Crates Lettuce
Gallon Mayonnaise
Gallons Ice Cream
Gallons Chocolate Sauce
Gallons Iced Tea
Gallons Sweet Milk
4 No. 10 Cans Tomatoes
2 No. 10 Cans Okra
1 No. 10 Can Corn
3 Pounds Carrots
3 Pounds Onions
12 Pounds Crackers
25 Pounds Fresh Shrimp
½ Crate Celery
100 Pounds Irish Potatoes
250 Pounds Chickens, Fryers
120 Loaves White Bread
18 Gallons Strawberries
5 Gallons Sweet Cream
25 Pounds Pure Lard
48 Pounds Pound Cake
70 Pounds Sugar
3 Dozen Lemons
Salt and other condiments

TYPICAL WEEKLY BAKERY LIST

625 Loaves White Bread
87 Loaves Whole Wheat Bread
50 Loaves Raisin Bread
1944 Parker House Rolls
648 Buns
460 Frosted Cookies
425 Cocoanut Squares
425 Servings Fudge Cake
450 Oatmeal Cookies
75 Pies
60 Pounds Fresh Sliced Peaches for Cobbler



PORTION OF SANATORIUM FARM

PORTION OF SANATORIUM FARM

THE SANATORIUM FARM

The farm has an area of 383 acres. Of the area not occupied by buildings approximately 80 acres are in cultivation and the remainder in pasture. The cultivated portion is partly flat, partly rolling upland, while the pasture is mostly bottom land traversed by a clear creek. Hilly fields are protected from erosion by strong terraces.

Dairy, poultry and farming operations are all performed with employed labor directed by an adequately trained manager. Foodstuffs for use of the Sanatorium and feedstuffs for cattle, work stock, hogs and poultry are grown. Eight to ten head of work stock are used. Diversification and intensification are practiced, two crops being produced annually on most of the acreage assigned to truck growing.

The 42 farm buildings and other structures include a two-unit milking barn, hay, mule, and bull barns, maternity and calf barn, 1200 bushel potato house, abbatoir, two brooder houses, 20 laying houses, vacuum pump house, incubator house, manager's residence, six employes' cottages, and three silos for storing 350 tons of sorghum. Two additional cottages for employes are planned for early erection.

The normal dairy herd consists of approximately 200 Jersey cattle, nearly all registered. They are scientifically fed and are regularly tested for tuberculosis and other diseases.

The milking barn has concrete floors and feed troughs as well as individual stalls and drinking fountains. Milking is done into sterilized containers which are sealed against contamination. From vacuum containers milk is strained into sterilized cans and taken immediately to cold storage. An abundance of rich, clean milk is always assured.

Slaughtering is done in a sanitary abbatoir and meat products are quickly transferred to refrigerated rooms at the Sanatorium.

The poultry flock of 2500 to 3500 chickens is confined to a single breed, white leghorn. Approximately 9000 eggs are incubated annually in an electrically heated incubator. Fresh eggs are delivered to the Sanatorium in cases designed to protect against soiling and breakage.

The peach orchard has 125 trees of six varieties. The 1939 season promises a large crop, probably comparable to this year's production of strawberries, approximately 1000 gallons on three-quarters of an acre.

From 40 to 50 hogs are raised annually, fed principally on skimmed milk, waste farm products and clover pasturage; never on food scraps or refuse from the hospital kitchens.

One farm improvement planned for the near future is an irrigation system for two acres of truck garden, to combat summer drought and increase vegetable production. Another is equipment for cooling, aerating, and bottling milk and for sterilizing bottles and other containers. This improvement will make it possible to serve milk in original containers, ensuring uniformity and preventing the possibility of contamination between dairy and consumer.

Bookkeeping is done in the same manner as that for any well conducted business enterprise. All cattle, implements, supplies and other assets and expenses are charged to the farm at cost, and all products delivered to the Sanatorium or sold elsewhere are credited. The manager, keeping informed daily on market prices, bills products delivered to the Sanatorium on invoice forms of the type used by wholesale merchants.

Managed and maintained in a businesslike way, the farm annually shows a satisfactory profit which is credited to the gross operating cost of the Sanatorium, thus effecting direct savings as well as providing dairy, poultry and other products of known quality and cleanliness.

Following is a tabulation of the quantities and value of food supplies received from the farm during the year ending June 30, 1939:

	Quantity	Value
Beans, butter, pounds	74	$ 111.00
Beans, string, hampers	23	23.00
Beef and veal, pounds	40,753	5,006.59
Beets, hampers	41½	20.62
Cabbage, pounds	4,671	80.30
Cantaloupes, dozen	98½	57.50
Carrots, hampers	72	40.40
Chickens, hens, pounds	16,834	2,805.26
Chickens, fryers, pounds	14,200	2,882.05
Corn, Green, bushels	197	103.70
Eggs, dozen	20,970	6,291.00
Eggplant, hampers	16½	8.25
Greens, pounds	11,480	161.35

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tity	Value
4	$ 111.00
3	23.00
3	5,006.59
1½	20.62
1	80.30
8½	57.50
2	40.40
4	2,805.26
0	2,882.05
7	103.70
0	6,291.00
½	8.25
	161.35

Milk, sweet, gallons	62,325	24,934.00
Okra, bushels	41½	64.25
Onions, green, pounds	110	2.20
Peaches, bushels	115¼	148.74
Pears, bushels	26½	13.25
Peas, English, pounds	1,604	59.47
Peas, field, pounds	2,812	61.93
Pecans, pounds	148	37.00
Peppers, green, hampers	28	14.00
Potatoes, Irish, pounds	13,980	174.71
Potatoes, sweet, pounds	18,456	221.33
Pork, pounds	803	163.28
Radishes, dozen	738	12.66
Sausage, pork, pounds	1,849	405.98
Squash, hampers	21½	10.75
Strawberries, gallons	789½	441.50
Tomatoes, pounds	6,338	170.43
Watermelons, pounds	36,690	222.51
TOTAL		$44,749.01

RESIDENCES

RELIGIOUS SERVICES

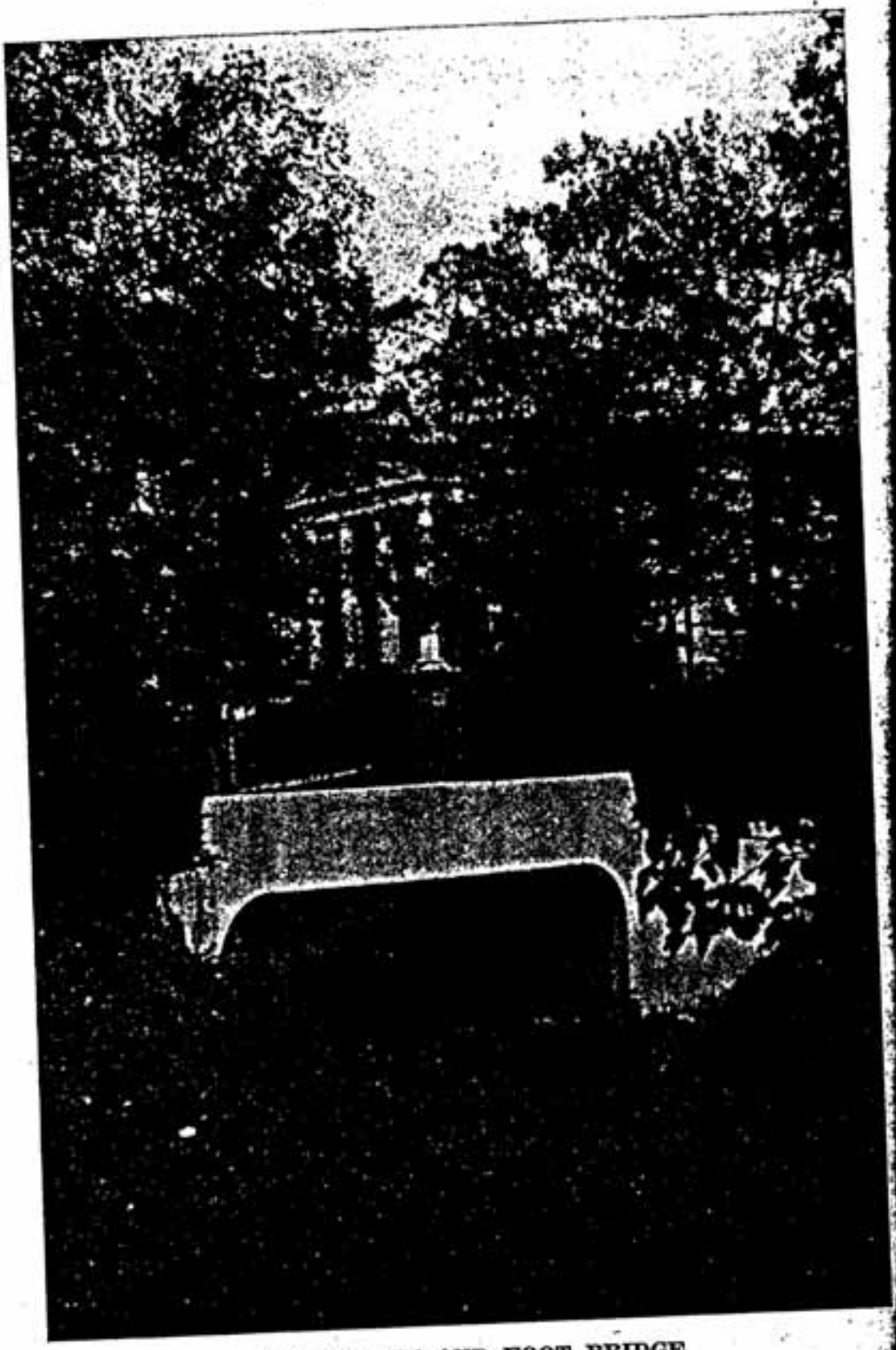
REV. W. M. WILLIAMS, Chaplain

Regularly scheduled religious services of an interdenominational character are held in the auditorium. A standard Sunday School is conducted for patients, employes, their children and their neighbors in rooms provided for the purpose. The Preventorium has its own separate Sunday School.

Preaching services are held on Sunday evenings alternately by the Sanatorium chaplain and pastors of Magee churches or other visiting ministers. Bishops and other ministers of Protestant and Catholic churches frequently come for services or ministrations, public or private, as occasions require.

Rev. W. M. Williams, of the Methodist Church, is the Sanatorium chaplain; on duty seven days a week for such ministrations as are wanted; the pastor of all faiths and all creeds, as much a part of the Sanatorium as the doctor or the nurse. Truly a laborer worthy of his hire, his modest stipend, not always sufficient but always satisfactory to him, is paid by free will contributions from Mississippi Methodist churches, from Sanatorium patients and employes and from interested friends of many faiths in many places.

"Brother" Williams, as he is affectionately known, is esteemed for his unselfish work by all who have served or been served by the Sanatorium since 1923, and by thousands of visitors who have been impressed by his cordial greetings and hospitable attentions.



AUDITORIUM AND FOOT BRIDGE

RECREATIONAL FACILITIES

Wholesome recreation is essential in the treatment of tuberculosis. The rule of "rest, rest and rest" embraces mental as well as physical rest, and contentment is a requisite of both. Diversion and entertainment are necessary for patients, and for employes also.

Three miles of paved driveways, besides sidewalks and shaded by-paths through cultivated shrubbery and groves of virgin long leaf pine, all within Sanatorium grounds, provide divergent routes for walking, almost the only form of exercise allowed the convalescent patient. Longer tramps through adjacent woods and fields are taken by the more hardy.

On and around the three-acre Sanatorium lake, ducks and geese of wild and domestic varieties, native and exotic, are a source of amusement. A number of Mexican deer in an enclosed park stocked by the State Game Commission also interest and divert, while peafowls add flashes of color to the growing collection of feathered friends.

The Sunshine Club

The Sanatorium Sunshine Club, originated by a patient in 1925, is an organization whose purpose is promotion of patient welfare and entertainment. One does not have to join. Every person at the Sanatorium is ipso facto a member and there are no fees or dues. Activities are directed by a committee composed of two employes and one patient.

In 1927 the Sunshine Club raised several thousand dollars for its work through a bazaar to which Sanatorium employes, patients, and ex-patients, as well as merchants, manufacturers, artists, authors, and others all over Mississippi and the United States contributed. Furnishings for the recreation hall were purchased and the long-desired picture show became a reality. Remaining funds were invested to provide a small income.

Card games, jig-saw puzzles and currently popular games of many sorts are provided for both the ambulatory patients and the shut-ins. Seasonal parties at Hallowe'en and on other occasions are arranged. Dramatic and musical programs are occasionally presented by interested organizations from other

places. Contributions of games are frequently received from fraternal organizations and other friends.

Picture Show

In the auditorium provided for religious services and other assemblies a fully-equipped sound moving picture show has been operated since 1930. Initial payment for apparatus having been provided by the Sunshine Club, the Sanatorium superintendent assumed responsibility for amortization of the balance, and the show was opened to Sanatorium people and to patrons from nearby towns.

Operated largely by volunteer workers, who at first paid for admissions while working without pay, it has become a permanent part of the institution and has resulted in benefits of value beyond estimate.

Any patient who is physically able to attend the show but who cannot afford the expense, need only say so and a permanent pass is issued to him. Amusement taxes are paid just as is done by theatres operated for profit.

Library

The auditorium building also houses the library which is equipped and catalogued in the standard manner. Funds for purchasing several hundred volumes were contributed in 1925 by the State Federation of Women's Clubs and other donations have been made by individuals since. It would be impossible to evaluate the benefits resulting from this library, either in reading for entertainment or in study for self-improvement.

Funds for employment of a full-time librarian have not been available, nor funds for keeping the shelves filled. While many fine books are included in the catalogue, additions and replacements are badly needed.

Swimming Pool

An outdoor swimming pool is maintained primarily for Preventorium children. Its use by them is attended by proper sanitary precautions and a trained volunteer life-guard is always present. Since the pool is used only once daily by the Preven-

torium tots it is open to employes and their children at other times, but not to persons from outside the Sanatorium grounds, among whom hygienic safety could not be controlled by Sanatorium authority. Tuberculosis patients do not use the pool nor indulge in any exercise more strenuous than walking.

Radio

The Sanatorium does not have a centrally controlled radio system such as many institutions have for entertainment, religious services and educational work, but many patients have their own radio receivers which they share with others.

Golf and Tennis

A nine-hole golf course is maintained, not with state funds, but by the Sanatorium Golf Club which is composed of staff members, employes and neighbors. The Sanatorium Tennis Club maintains two courts in the same manner.

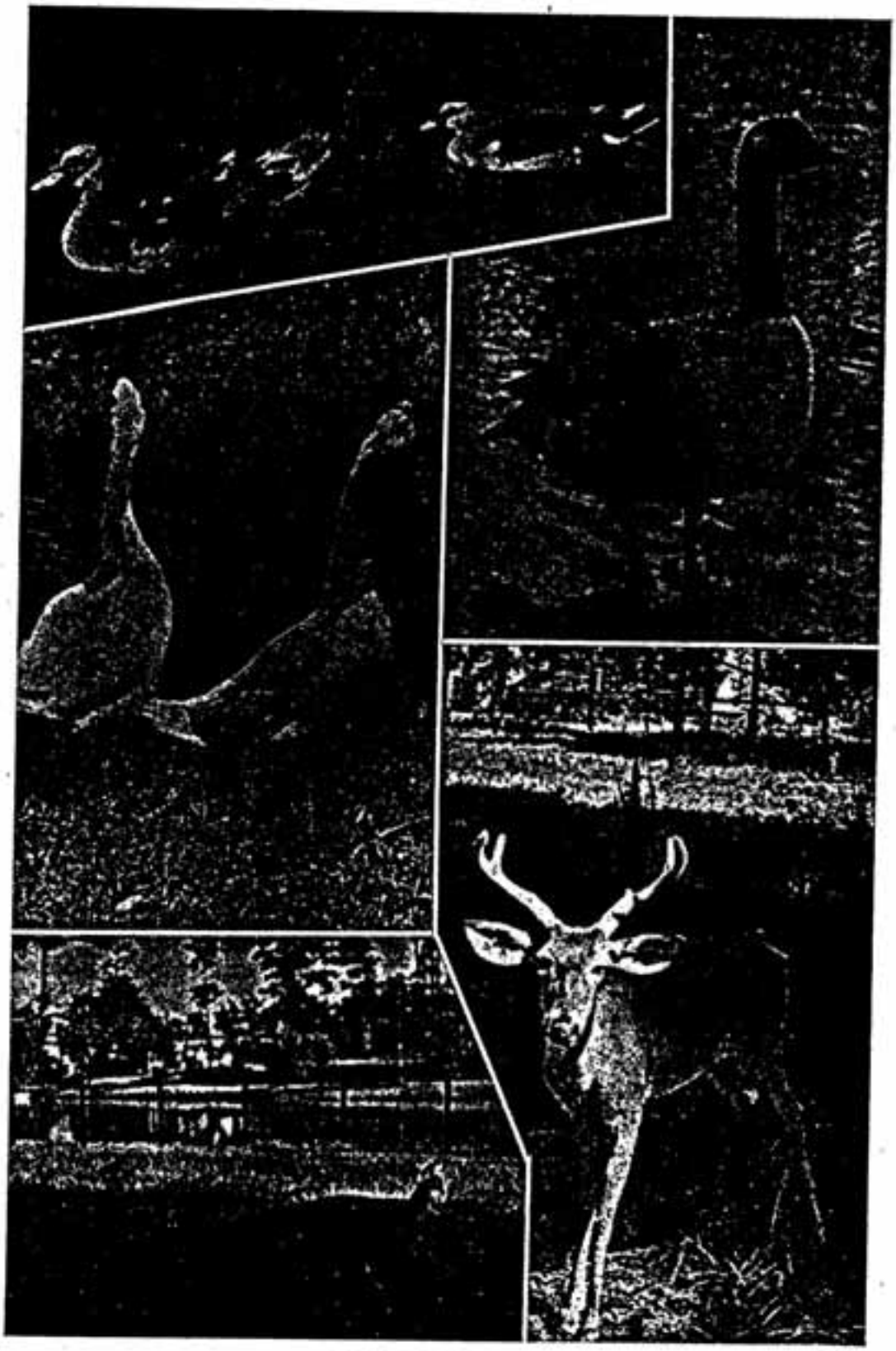
Fishing

Fishing in the Sanatorium lake which is periodically restocked by the Game Commission is open to patients who have progressed far enough toward recovery to indulge in that sport.

OCCUPATIONAL THERAPY

With assistance of a trained worker supplied by the Works Progress Administration, the Sunshine Club maintains an occupational therapy studio where patients may work at basket weaving, leather work and other interesting crafts. Materials are furnished at cost and products are the property of the makers. Knitting and crocheting materials are sold to patients at cost and a sewing machine is maintained for patients' use.

Although operated with inadequate equipment, material and personnel, this highly important department is contributing valuable aid in the treatment of patients. It is hoped that plans for extending its facilities and increasing its usefulness can be carried out in the near future.



PARK VIEWS

THE RAD REED MEMORIAL

Rad Reed came to the Sanatorium in 1919 and died here in 1923 at the age of 32, but he still lives in the hearts of many men and women and little children. Enshrined there he will live as long as the Sanatorium lasts and for many years thereafter.

Rad Reed was hopelessly crippled by a bone injury and had spent seven years in bed, most of the time in a cast. But his brilliant mind was not crippled, and from his bed of pain he edited a weekly newspaper. Coming to the Sanatorium to seek treatment, he continued his journalistic work as director of publicity and as editor of a monthly Sanatorium journal which he named "The Thermometer." His work was a powerful factor in building the Sanatorium as it is today.

Though almost constantly in pain he was noted for his sunny disposition and he always had a word of cheer and encouragement for his fellow patients, most of whom had more cause to hope than he. Rad Reed transcended pain to help others by his own example and by many words and deeds.

Here, when the Sanatorium was young, lay scores of people cut off from the helpful touch of home and the normal activities of business and society. Especially at Christmas time their lot was hard, and Rad Reed sought to bring them something of the Spirit of Christmas.

Enlisting the interest of staff members and employes, he elected himself Santa Claus of the Sanatorium. Collecting funds from all who worked here, he provided stockings for all the patients,—stockings filled with nuts and fruits, candies and little knick-knacks. For some patients it was their first Christmas present; for all of them that Yuletide of 1922 was one ever to be remembered as a truly Good Will season.

Rad Reed passed away before the next Christmas came but the work he had started was perpetuated by the establishment of the Rad Reed Memorial, a fund in trust for providing Christmas stockings every year for Sanatorium patients; for the adults and the Preventorium tots alike. The fund was raised by contributions from employes, ex-patients and interested friends all over the state. As it grew, the needful things were

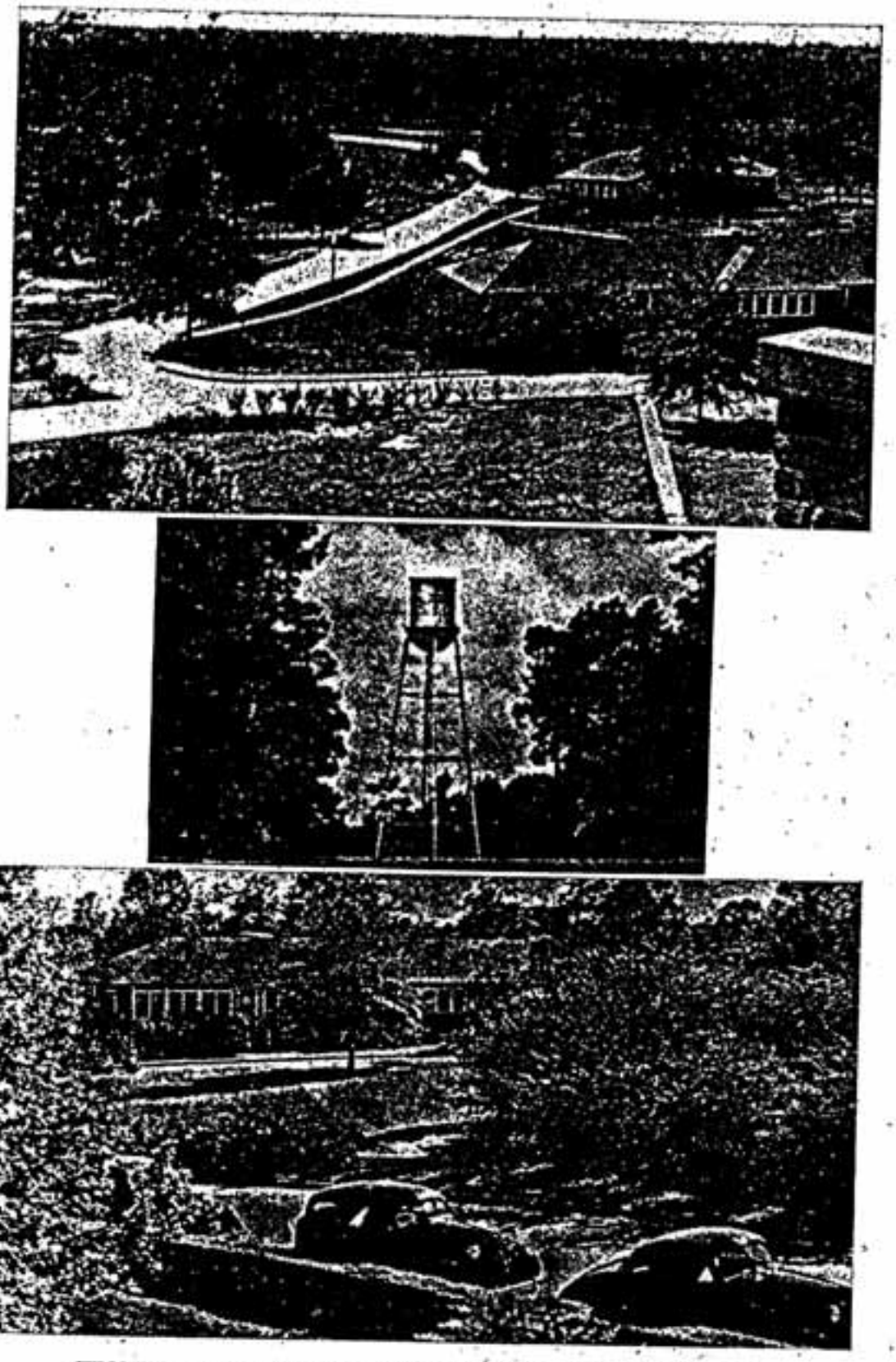
added to the gift list, bedroom clothing and other things that some patients could not buy for themselves.

The fund is at interest and the principal is kept intact. When the income does not meet the needs of Christmas time, those who built the fund are simply given the opportunity to contribute a little more and they always do it gladly. Some contributions come from people who do not know there is a fund but who know there ought to be. Let a former Sanatorium patient finish this story:

"The Rad Reed Memorial is one of the great things about the Sanatorium. I have been a patient there at Christmas time and that Christmas stands out above all the many within my memory. I have seen a man of more than three score years sitting propped in bed opening with shaking fingers his Christmas stocking to glimpse through misted eyes the first Christmas present he had ever received.

"Also I have seen a tiny girl tot who had never known in all her five years that there was a Santa Claus; who had never experienced the thrill of holding in her warm, white arms even the cheapest china and sawdust doll. I have seen her after she had found in the stocking at the head of her Preventorium bed the pretty doll she had never dreamed she would one day possess, and I witnessed her overmastering grief after she had dropped and broken her doll irreparably. But I saw smiles come through her tears again when another tiny girl tot, who had received another doll from her other home, gave one of the make-believe babies to her broken-hearted playmate to keep and to love forever.

"The Spirit of Christmas or the spirit of unselfishness; call it what you will,—but the Spirit of Christmas at the Sanatorium is the spirit of Rad Reed,—and what a memorial that is!"



WATER TANK (center) AND CONVALESCENT WARDS

SANATORIUM BUILDINGS

Among people who have not seen it there is often revealed a lack of understanding as to the physical composition of the Sanatorium. Some think of it as a sort of camp or a colony of cabins. However, most people know it for what it is, a modern hospital community with attractive grounds and with handsome buildings furnished with the necessary facilities for carrying on an extensive life-saving program.

The physical plant consists of more than 80 buildings and other structures on nearly 600 acres of land.

On the Hospital Grounds—200 Acres

Administration building: 3 stories and basement, now being remodeled. Business and medical offices, post office, telephone exchange, X-ray and clinical laboratories, medical library, fluoroscope and pneumothorax clinics, pharmacy, out-patient department, record rooms, dental and surgical operating rooms, bedrooms and oxygen distribution system for post-operative patients.

Main infirmary: over 500 feet long, 4 stories and basement. Bedrooms and porches for 213 patients, internes' quarters, serving kitchens, nurses' offices and supply rooms, sterilizer rooms, linen closets, occupational therapy studio, barber shop and beauty shop.

Service Building: 2 stories and basement. Steward's and dietitian's offices, 2 kitchens, 4 dining rooms, recreation hall, sewing room, bakery, store rooms, ice plant, cold storage rooms, and living quarters for employes.

Six cottages for 122 white patients and infirmary for 40 Negro patients. Preventorium for 50 children and living quarters for staff. Nurses' dormitory for nurses and other employes.

Duplex apartment house, quadruplex apartment house, and seven residences for physicians and other employes. Auditorium building for church services, Sunday School rooms, library and picture show. Seven cottages for Negro employes.

Power plant, laundry, carpenter shop and tool house, eight multiple and single garages, tunnel system, water reservoir and distribution tank, sewage disposal plant and sewage pump house.

At the Farm—383 Acres

Two-unit milking barn, hay, mule, bull and calf barns, potato house, abbatoir, 2 brooder houses, 20 laying houses, incubator house, vacuum pump house, manager's residence, six employes' cottages and three silos.

At the Spring—9½ Acres

Spring curb and pump house.

POWER PLANT

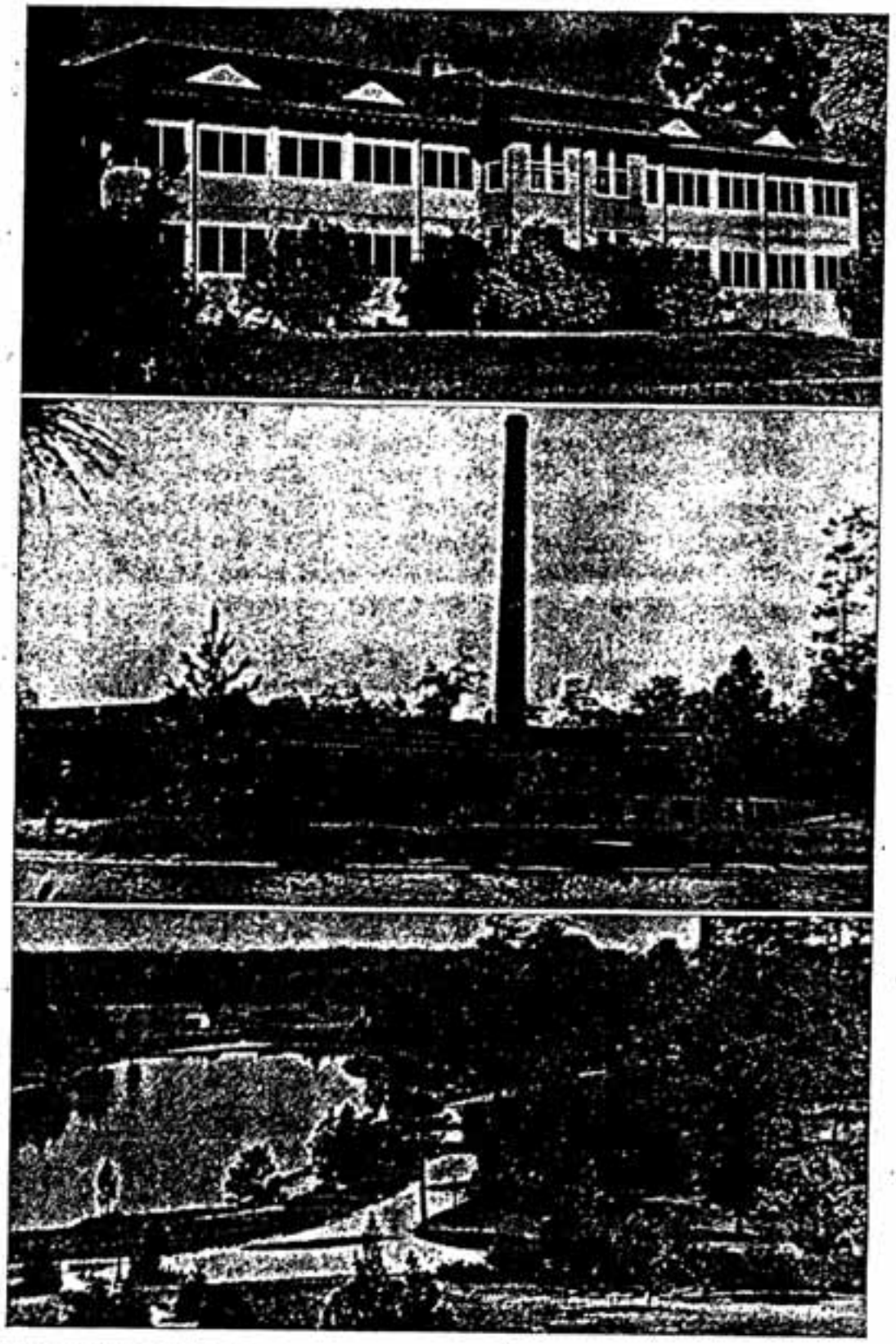
The power plant consists of two alternating current generators with capacities of 250 and 125 K. V. A., directly driven by steam engines. Three water tube boilers of 250 horsepower each, fired with natural gas, supply steam for the engines, laundry, heating, water stills, cooking and sterilizing, as well as circulating hot water.

The plant was built with space for additional boilers and generating units to provide for growth of the institution.

Steam and hot water pipes and electric wires extend to the principal buildings through service tunnels, making them readily accessible for repairs and replacements.

Uses of electric current include:

X-ray apparatus
Fluoroscope
Signal lights
Laboratory apparatus
Ray therapy lamps
Surgical instruments
Dental apparatus
Sterilizers
Machine shop
Bakery appliances
Laundry machinery
Office appliances
Building lights
Street lights
Highway caution lights
Cold storage
Refrigerators
Ice plant
Ice crusher
Water pumps
Sewage disposal
Milking machines
Moving pictures
Exhaust fans
Elevators
Fans
Bed heating pads
Radio receivers
Telephones
Sewing machines
Floor polisher
Carpenter shop
Kitchen appliances
Incubators
Laundry machinery
Slide projector



NEGRO INFIRMARY—POWER PLANT AND LAUNDRY—LAKE VIEW

WATER SUPPLY

Pure water is supplied by a spring with a capacity of 2100 gallons a minute, four miles from and owned by the Sanatorium. It is located in the middle of 9½ acres of land which is well terraced to prevent surface contamination and enclosed with a high barbed wire fence to exclude trespassers.

Three electrically driven centrifugal pumps with a combined capacity of 625 gallons a minute deliver water to a 100,000 gallon reservoir at the Sanatorium and to the Sanatorium farm enroute. From the reservoir a fourth centrifugal pump forces the water to a 50,000 gallon tank 100 feet high which provides ample pressure for fire protection as well as for ordinary uses.

Including the six inch pipe line from the spring the water distribution system has approximately 8½ miles of mains to serve the several buildings and the fire hydrants which are located at strategic points.

STATE SANATORIUM SEWAGE TREATMENT PLANT

By H. A. KROEZE, C. E., Director, Division of Sanitary Engineering, Mississippi State Board of Health.

The present sewage treatment plant of the Sanatorium was constructed in 1930 and consists of a pumping station, Imhoff tank, automatic twin dosing tanks, a trickling filter with fixed nozzle distribution system, resedimentation tank, sludge drying bed and chlorination. This plant was constructed to replace a greatly outgrown septic tank and sand filter plant built in 1920. In the construction of the new plant the old septic tank was used for a resedimentation tank for the trickling filter effluent, and one of the old sand filters was used for a sludge drying bed.

The plant is designed to handle a total volume of 300,000 gallons of sewage per day on a three-hour detention basis. The filtration rate is on the basis of 300,000 gallons per acre per day per foot of depth. The composition of the sewage is low in solids, which accounts for the somewhat high rates of flow.

Chlorine is applied to the raw sewage as it enters the pumping station and to the filter effluent as it enters the resedimentation basin. The purpose of the chlorine is to control odors

and to decrease the biochemical oxygen demand of the sewage plant effluent, as the plant discharges into a practically dry stream. The plant has been in operation since January, 1931. It has been well operated and no offensive conditions have developed.

In 1938 there was completed a sewerage system to take care of the sewage from the community adjacent to the Sanatorium. This system includes a pumping station which pumps the sewage from this area into the Sanatorium treatment plant.

SANATORIUM LAUNDRY

A well equipped laundry is operated as an essential part of the Sanatorium plant. Material to be laundered is sterilized, washed in cylinder type rotary washers, wrung in high-speed centrifugal extractors, and finished on steam-heated flat work ironers and live steam garment pressers or ironed by hand. From 10,000 to 15,000 pieces, including flat work, pillows, blankets, mattresses and garments are laundered weekly.

All material handled is sterilized, and as an extra precaution the laundry of patients and of others is handled on different days.

Sterilization is accomplished by chlorination, heat and steam. Patients' laundry is received in individual sterile bags and placed in a steel pressure sterilizer which has been preheated by passing live steam through its hollow jacket. The vault is then sealed air and steam tight, and live steam turned in. Timing of the sterilization process begins after the temperature inside the vault has reached 240° F. and is continued for 45 minutes. For mattresses and similar material sterilization is continued for longer periods.

When material is removed from the sterilizing vault it is too hot to be touched with naked hands and must be allowed to cool before marking, checking, and washing. Following sterilization the material to be laundered is processed, packaged, and delivered just as in any modern city laundry.

MAINTENANCE OF PROPERTIES

The various properties of an extensive establishment like the Sanatorium require constant attention. Where human lives and valuable investments are at stake there can be no compromise regarding maintenance, and the most expert upkeep service proves the most economical.

The chief engineer directs maintenance of power plant, water and sewerage systems, plumbing, heating, ice plant, gas distribution, telephone exchange and other mechanical and electrical wiring and appliances.

A master carpenter attends to building repairs and replacements, including windows, screens, floor coverings and other items.

A sewing room is maintained for repairing linens, as well as making gowns, masks and other surgical and housekeeping supplies.

The grounds are maintained by workmen directed by an experienced landscape superintendent whose work includes planting, cultivating and replacing shrubbery, flowers, and trees; sodding and mowing, and building and repairing roadways and walks.

MISCELLANEOUS SUPPLIES

Supplies for all departments are received, checked with invoices and inventoried. Upon proper requisition, certain supplies are issued as soon as received to appropriate department administrators. But all food; housekeeping supplies such as soaps, brooms, mops, cleaners, disinfectants and linens; power plant materials such as oils and greases; certain farm supplies, and hospital supplies such as bandages, cotton, drugs and other items not immediately needed are kept under lock and key in central storerooms to be issued only as required.

HEALTH PROTECTION OF EMPLOYES

The health of employes and their families is carefully protected. Medical service to them is rotated monthly among staff physicians. All precautions advocated by public health authorities are applied. Smallpox, typhoid and other immunizations are given and periodic examinations are required.

HEALTH PROTECTION OF THE COMMUNITY

Adjacent to the Sanatorium grounds has grown a small community with a population of approximately 100. It has stores, residences, service stations, restaurants, a hotel and a boarding house. Electric current, gas and telephone facilities have been provided by the public service companies. As a convenience and health protection the Sanatorium has provided pure water at reasonable rates, and with Works Progress Administration assistance has extended its sewerage system to serve the community. Funds for matching the W. P. A. grant were contributed by property owners.

BARBER SHOP—BEAUTY SHOP—SEWING ROOM

As an essential part of the Sanatorium community a barber shop is maintained. Patrons are served in the shop or in their rooms as circumstances require and the shop is self-supporting.

As a convenience to patients, quarters are leased for a privately operated beauty shop, and a sewing room where patients may have garments made, repaired or altered.

TUBERCULOSIS DEATHS IN MISSISSIPPI
20 Years

YEAR	WHITE	NEGRO	TOTAL
1919	488	1948	2436
1920	420	1851	2271
1921	411	1545	1956
1922	391	1488	1879
1923	378	1370	1748
1924	408	1432	1840
1925	395	1460	1855
1926	382	1480	1862
1927	369	1403	1772
1928	375	1422	1797
1929	379	1270	1649
1930	375	1375	1750
1931	343	1245	1588
1932	338	1058	1396
1933	321	993	1314
1934	302	897	1199
1935	294	841	1135
1936	312	946	1258
1937	348	952	1300
1938	309	855	1164
TOTAL	7,338	25,831	33,169

TUBERCULOSIS DEATHS IN MISSISSIPPI
By Types 1936-1937-1938

	DEATHS 1936	DEATHS 1937	DEATHS 1938
TUBERCULOSIS:			
Of the Respiratory System (Lungs)	1180	1235	1087
Of Meninges and Central Nervous System	7	11	14
Of Intestines and Peritoneum	30	24	33
Of Vertebral Column	8	2	9
Of the Bones	2	2	2
Of the Joints	3	3	4
Of the Skin and Subcutaneous Tissue	2	0	1
Of the Lymphatic System	6	6	3
Of the Genitourinary System	1	6	2
Of Other Organs	2	2	1
Acute, Chronic, Unspecified Disseminated	17	9	8
Total	1258	1300	1164
Percentage of Total Deaths Due to Lung Tuberculosis	93.8	95.0	93.4

Other forms of tuberculosis often have their beginning in the lungs.

TUBERCULOSIS DEATHS IN MISSISSIPPI

By Age Groups 1936-1937-1938

AGE PERIOD	DEATHS 1936	DEATHS 1937	DEATHS 1938
0— 4 Years	22	26	11
5— 9 Years	10	12	10
10—14 Years	16	33	26
15—19* Years	108	127	98
20—24* Years	178	170	161
25—29* Years	201	182	159
30—34* Years	129	145	126
35—39* Years	148	128	132
40—44* Years	83	87	92
45—49 Years	76	92	64
50—54 Years	72	80	72
55—59 Years	64	61	66
60—64 Years	48	39	49
65—69 Years	42	50	33
70—74 Years	33	32	32
75—79 Years	14	20	19
80 and over	9	12	11
Not Stated	5	4	3
Total	1258	1300	1164

*TUBERCULOSIS IS THE FOE OF YOUTH.

It strikes down the flower of young manhood and womanhood in the years of fullest promise.

Between the ages 15 and 45, the years of greatest usefulness, more deaths are caused by tuberculosis than by any other disease.

In the light of present scientific knowledge all tuberculosis deaths are classified as preventable.

These needless deaths could be stopped with adequate case finding personnel and adequate sanatorium facilities.

TUBERCULOSIS DEATHS IN MISSISSIPPI

By Counties 1937-1938

County	Deaths 1937	Deaths 1938
Adams	22	16
Alcorn	18	12
Amite	7	4
Attala	8	13
Benton	11	7
Bolivar	68	55
Calhoun	3	6
Carroll	8	10
Chickasaw	13	12
Choctaw	6	7
Claiborne	5	5
Clarke	4	9
Clay	12	14
Coahoma	52	39
Copiah	18	20
Covington	5	7
DeSoto	22	20
Forrest	13	11
Franklin	5	1
George	3	1
Greene	3	1
Grenada	17	13
Hancock	5	3
Harrison	19	24
Hinds	59	48
Holmes	30	10
Humphreys	12	19
Issaquena	9	5
Itawamba	5	10
Jackson	8	6
Jasper	10	11
Jefferson	7	4
Jefferson Davis	2	1
Jones	20	27
Kemper	5	4
Lafayette	10	11
Lamar	4	0
Lauderdale	38	36
Lawrence	11	4
Leake	6	9
Lee	22	15
Leflore	34	24
Lincoln	11	9
Lowndes	22	25
Madison	17	16
Marion	5	8
Marshall	12	13
Monroe	30	16
Montgomery	10	8
Neshoba	12	15
Newton	6	9
Noxubee	15	20
Oktibbeha	13	8
Panola	21	10
Pearl River	0	6
Perry	3	0
Pike	10	16
Pontotoc	9	3
Prentiss	12	8
Quitman	18	17
Rankin	53*	84*
Scott	7	11
Sharkey	12	10
Simpson	50*	53*
Smith	5	4
Stone	2	0
Sunflower	56	39
Tallahatchie	30	29
Tate	17	17
Tippah	17	10
Tishomingo	6	5
Tunica	29	19
Union	7	8
Walthall	3	6
Warren	28	13
Washington	56	50
Wayne	6	8
Webster	5	6
Wilkinson	2	4
Winston	7	8
Yalobusha	13	4
Yazoo	24	15
TOTALS	1300	1164

*The number of deaths reported in Rankin county is increased by deaths at the State Insane Hospital and those in Simpson county by deaths at the Sanatorium.

The number of cases of tuberculosis existing at any time cannot be determined except by examining the entire population. However, many surveys have indicated that there are at least ten active cases for every annual death.

TUBERCULOSIS DEATH RATES PER 100,000 LIVING PERSONS 1937 AND 1938

(Provisional figures, subject to slight correction)

STATE	1937 DEATH RATE PER 100,000	1938 DEATH RATE PER 100,000
UNITED STATES	53.6	48.6
Alabama	61.7	55.0
Arizona	260.9	206.7
Arkansas	52.4	48.8
California	72.0	65.1
Colorado	68.5	60.6
Connecticut	37.4	34.9
Delaware	55.6	50.4
Dist. of Columbia	94.9	92.2
Florida	57.8	58.8
Georgia	50.2	51.8
Idaho	21.9	21.4
Illinois	50.7	46.5
Indiana	47.4	39.4
Iowa	21.0	19.0
Kansas	26.7	22.8
Kentucky	74.6	67.0
Louisiana	71.6	66.6
Maine	33.9	29.5
Maryland	82.4	78.7
Massachusetts	42.6	37.8
Michigan	43.9	38.3
Minnesota	34.4	30.5
Mississippi	64.3	56.9
Missouri	53.8	45.4
Montana	43.6	43.7
Nebraska	19.1	15.9
Nevada	89.1	68.3
New Hampshire	27.8	27.8 (1)
New Jersey	48.1	44.8
New Mexico	113.3	91.2
New York	56.5	50.1
North Carolina	54.8	53.4
North Dakota	25.5	19.0
Ohio	49.7	45.5
Oklahoma	48.7	45.3
Oregon	35.8	29.6
Pennsylvania	48.2	42.4
Rhode Island	46.8	40.1
South Carolina	51.6	48.6
South Dakota	37.4	32.7
Tennessee	84.7	74.7
Texas	69.5	66.3
Utah	21.8	19.0
Vermont	49.6	37.6
Virginia	59.4	60.1
Washington	46.3	43.1
West Virginia	53.4	49.7
Wisconsin	35.4	31.0
Wyoming	18.3	23.9

(1) 1937 rate. 1938 figures not available.

SANATORIUM ADMISSIONS AND DISCHARGES

W-White, N-Negro, T-Total

Year Ending June 30	ADMISSIONS			DISCHARGES			DEATHS			REASON FOR DISCHARGE										
	W	N	T	W	N	T	W	N	T	Arrested	Cured*	Apparently Arrested	Quiescent	Improved	Unimproved	Exam. & Diagnosis Only	Operations Only	Special Exam. & Misc.	Deaths	Autopsies
1930	384	55	439	387	56	443	40	23	63	3	1	17	72	107	80	62	0	38	63	0
1931	320	33	353	331	37	368	31	19	50	4	0	11	72	94	34	27	0	76	50	2
1932	241	19	260	274	31	305	25	13	38	2	1	10	46	70	43	17	0	78	38	1
1933	272	13	285	272	13	285	20	6	26	1	1	12	34	82	23	35	0	71	26	1
1934	262	11	273	252	15	267	25	5	30	3	0	15	35	87	29	33	0	35	30	0
1935	244	37	281	254	25	279	27	9	36	4	0	17	60	59	26	32	0	45	36	0
1936	285	36	321	265	40	305	26	13	39	6	0	14	48	75	34	31	0	58	39	1
1937	240	38	278	297	43	340	35	9	44	0	0	11	54	112	44	21	0	54	44	2
1938	266	42	308	260	41	301	34	13	47	8	0	35	45	62	33	35	0	36	47	6
1939	284	58	342	263	55	318	30	16	46	9	1	38	61	71	24	30	2	36	46	6
Total	2798	342	3140	2855	356	3211	293	126	419	40	4	180	527	819	370	323	2	527	419	19

*Extra-pulmonary tuberculosis or non-tuberculous conditions.

The term "cured" is not used to classify result of treating pulmonary tuberculosis.

APPROPRIATIONS FOR SANATORIUM

1916 TO 1940

Year	Chap.	Page	Land, Bldg. and Eqpt.	Mtce. and Support	Total for Year
1916	68	63	$ 25,000.00		$ 25,000.00
1917	H.J	157	20,000.00		20,000.00
1918	38	46	62,000.00	$ 32,494.00	94,494.00
1919			7,000.00	45,940.00	52,940.00
1920	78	85	1,043,800.00		1,043,800.00
	21	30	28,000.00	78,800.00	106,800.00
1921			153,200.00	98,800.00	252,000.00
1922	20	26	2,856.26		
	19	26		94,800.00	97,656.26
1923				197,350.00	197,350.00
1924	69	73	30,000.00		
	39	52		175,000.00	205,000.00
1925				175,000.00	175,000.00
1926	26	36		190,000.00	190,000.00
1927				190,000.00	190,000.00
1928	271	346	330,000.00		
	252	331		240,000.00	570,000.00
1929				225,000.00	225,000.00
1930	134	340		235,000.00	235,000.00
1931				235,000.00	235,000.00
1932	53	51		160,000.00	160,000.00
1933				160,000.00	160,000.00
1934	12	15		160,000.00	160,000.00
1935				160,000.00	160,000.00
1936	121	104	6 Mo.	80,000.00	80,000.00
36-37	36	36		160,000.00	160,000.00
37-38				160,000.00	160,000.00
1938	102	81		20,000.00	20,000.00
38-39	5	14		190,000.00	190,000.00
39-40				190,000.00	190,000.00
TOTALS ..			$1,701,856.26	$3,653,184.00	$5,355,040.26

In 24 years, $5,355,040.26 for land, buildings, equipment, maintenance and support of Sanatorium, about the cost of 7½ miles of modern highway a year.

SANATORIUM OPERATING COST

For the Past Ten Years

Year Ending June 30	Net Cost for Year	Average No. of Patients	Total Hospital Days	Daily Cost per Patient	Portion of Cost Paid by State	Portion Paid by Patients
1930	$343,053.75	348.6	127,230	$2.696	$1.846	$ .85
1931	342,870.44	363.2	132,563	2.586	1.74	.846
1932	263,484.59	327	119,289	2.21	1.545	.665
1933	212,515.59	295	107,755	1.977	1.387	.59
1934	233,714.76	310	113,260	2.063	1.373	.69
1935	266,072.12	311	113,542	2.318	1.608	.71
1936	255,834.58	307	112,116	2.28	1.39	.89
1937	253,909.31	275	100,315	2.57	1.64	.93
1938	237,559.55	254	92,878	2.56	1.567	.993
1939	266,832.14	281	102,637	2.60	1.85	.75

GIFTS AND BEQUESTS

The law under which the Sanatorium was established empowers the State Board of Health to accept gifts to be used for carrying out the purposes of the institution.

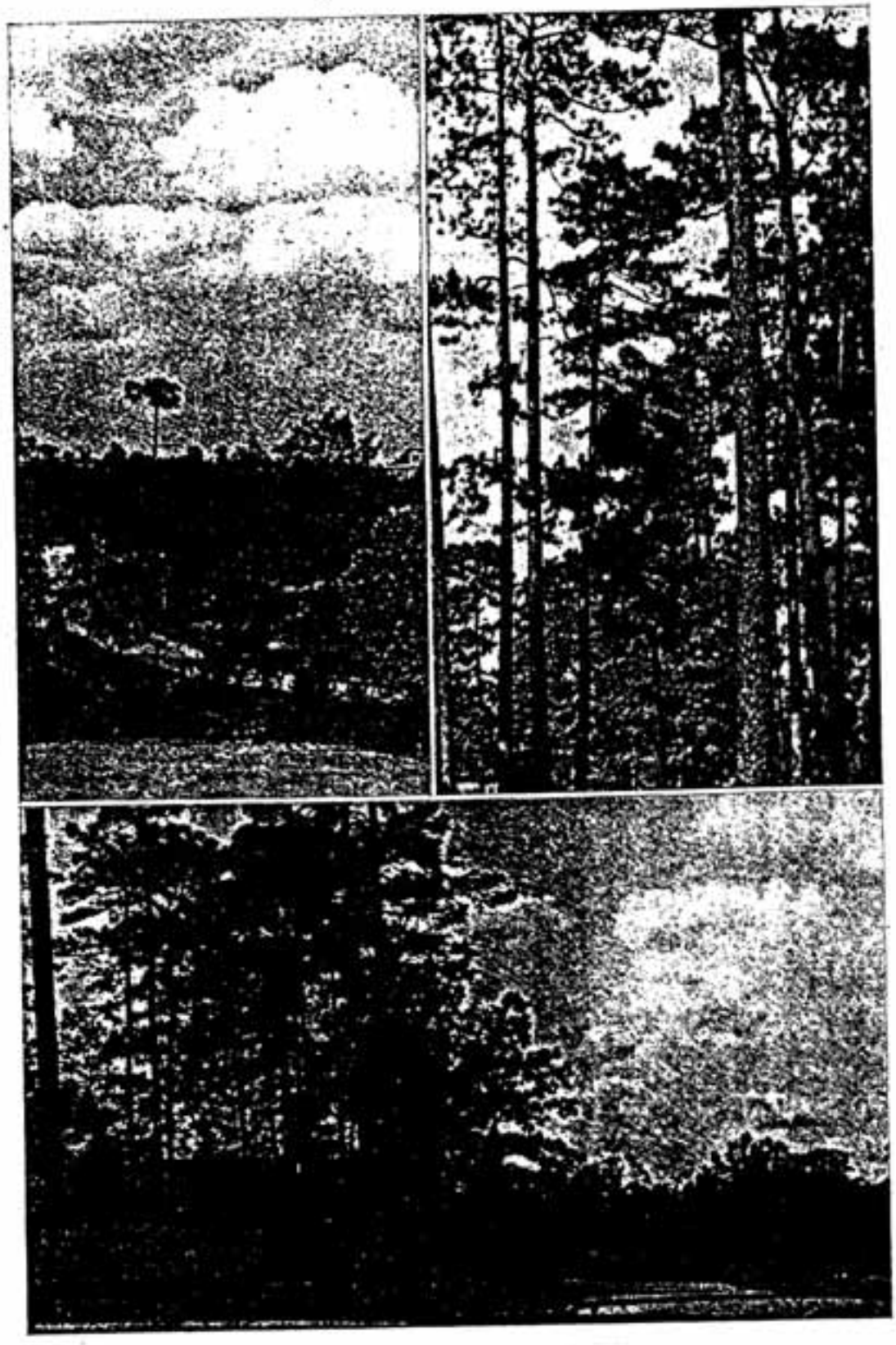
Form of Gift:

I give to the Mississippi State Sanatorium (or to the Mississippi State Board of Health for the Sanatorium) the sum of $_____to be used for carrying out the purpose for which the Sanatorium was established.

Form of Bequest:

I will and bequeath to the Mississippi State Sanatorium (or to the Mississippi State Board of Health for the Sanatorium) the sum of $_____to be used for carrying out the purpose for which the Sanatorium was established.

NOTE: Specific uses for funds given or bequeathed may be designated.



SANATORIUM LANDSCAPES

SANATORIUM HISTORY IN BRIEF

1916—Law establishing the Sanatorium and appropriation of $25,000 passed.

Two hundred acres of land donated by Eastman-Gardiner Lumber Co., and citizens of Magee, and $2,000 by citizens of Magee and G. & S. I. Railroad Company.

Dr. W. H. Rowan appointed first superintendent, died before first buildings finished.

1917—Dr. Henry Boswell appointed superintendent when plant consisted of four buildings, all incomplete.

Special session of legislature appropriated $20,000 and authorized anticipation of additional funds to pay for light, water, equipment and sewage disposal facilities.

1918-1919—First patients admitted February 4, 1918. Two 20-bed cottages filled by early summer.

$69,000 appropriated for lands, buildings, equipment, roads, fences, dairy, mules, hogs and cows; and $78,434 for operation two years.

Farm acquired, 383 acres.

Campaign for increased facilities launched with help of State and County Tuberculosis Associations, newspapers, women's clubs, churches, commercial and other organizations.

1920-1921—$1,043,800 appropriated for buildings and facilities, said to have been the largest single appropriation granted by any state for a similar purpose up to that time.

$181,200 appropriated for equipment and miscellaneous needs; $177,600 for operation.

Two 20-bed cottages donated by Jones and Lincoln counties.

1922-1923—$292,150 appropriated for operation; $2,856.26 to pay for buildings erected by individuals.

Main infirmary 213 beds, and Negro infirmary 40 beds finished, along with nurses' dormitory, service building, power plant and laundry.

1924-1925—$30,000 appropriated to buy McNair Spring, 9½ acres, new water works, power line and pumps, making available pure water at 2100 gallons a minute to replace failing deep wells.

$350,000 appropriated for operation. Four cottages donated by Hinds, Forrest and Tallahatchie Counties and the Masonic Order. Library donated by State Federation of Women's Clubs.

1926-1927—$380,000 appropriated for operation.

1928-1929—$450,000 appropriated for operation and $15,000 to cover deficit due to flood relief work.

$330,000 appropriated for Preventorium, auditorium, apartment house, cottage for assistant superintendent, new dairy barn and landscaping.

1930-1931—$470,000 appropriated for operation. 1928 building program completed and Preventorium opened.

1932-1933—$320,000 appropriated for operation, a reduction of $150,000 from the appropriation of the previous biennium.

1934-1935—$320,000 appropriated for operation.

1936-1937-1938—Due to change of fiscal year, $80,000 appropriated for operation first half of 1936, and $320,000 for two years ending June 30, 1938.

With Works Progress Administration assistance, 3 miles driveways paved.

Because of insufficient operating funds 100 patients discharged and Preventorium closed January 1937. Preventorium reopened in August 1937 upon authorization by the Governor.

1938-1940—$20,000 appropriated to cover deficit due to reopening Preventorium and $380,000 for two years' operation, an increase of $60,000.

Appropriation of $95,000 for repairs and replacements disallowed by 1938 legislature in anticipation of $1,000,000 appropriation for such needs at all state institutions. To July 1939 only $25,685 have been allotted to the Sanatorium from the $1,000,000 fund.

Old administration building, opened in 1918, remodeled.

AID FROM FEDERAL WORKS AGENCIES

The Sanatorium has been fortunate in being able to avail itself of benefits offered by the various federal public works agencies during recent years. With the exception of sums which were negligible when compared with the needs, no funds had ever been provided by the legislature specifically for maintenance or improvement of the properties until the 1938 session. However, by using for the sponsoring pro rata such funds as would ordinarily have been used for minor repairs, plus liberal grants allowed by the federal agencies, a great deal has been accomplished.

Physical properties of the institution have been kept in excellent repair and substantial improvements in the form of changes and additions to existing buildings, erection of minor units, paving and other projects have been made.

To the Public Works Administration and related agencies the Sanatorium is indebted for that valuable assistance. To their administrative workers the Sanatorium management is grateful for considerate treatment in all relations with them. On its part the Sanatorium has made every effort to realize the greatest possible benefits from all projects assigned to it.

Space does not permit a detailed account, but it is desired to present some idea of the immediate and potential value of the work performed.

Perhaps the outstanding improvement was the paving of 3 miles of concrete driveways and thousands of feet of sidewalks. In the truest sense the Works Progress Administration lifted the Sanatorium out of the mud and entirely eliminated the dust nuisance. The value of labor and material supplied by that agency on the paving project approximated $75,000, while the cost to the state above labor and equipment regularly employed did not exceed $5,000. It would be impossible to estimate the value of the resulting benefits. They are reflected in practically every function of the institution's operation, more especially in the surgical procedures. Without the paving improvements the extensive surgical program inaugurated by the Sanatorium would have been impossible because of dust.

Through the help of the federal agencies all frame buildings both at the Sanatorium proper and at the farm have been re-

roofed and repainted where those improvements were needed. All defective screens, windows, doors, steps, etc., have been replaced or repaired. The entire water distribution system has been rearranged for maximum efficiency. The landscaping which was started in 1930 but left incomplete has been extensively carried forward and recreational facilities have been improved. The efficiency of the Sanatorium farm has been increased fully one-third through the erection of two modern barns, additions which practically doubled poultry facilities, and various other minor but important improvements.

At present a highly essential project to cost approximately $100,000 is in progress and it is hoped that the entire program can be completed. However, due to changes in Works Progress Administration policy it was necessary for the state to pledge about $35,000 as compared with approximately $50,000 allotted by the federal agency. Since only half of the amount required of the state has been made available to the Sanatorium, further state funds will be necessary in order to enjoy full advantage of the liberal W. P. A. allotment.

The work now in progress includes rehabilitation and enlargement of the old administration building, originally erected in 1917, in which will be located X-ray and clinical laboratories, surgical department, out-patient clinic, administrative offices, and other departments. It also includes transforming the obsolete open porch wards into quarters that will be comfortable in all seasons, further farm and landscape improvements and other items of a minor nature.

The total value of direct benefits from the aid granted by the federal agencies is conservatively estimated at $200,000.

THE TUBERCULOSIS ASSOCIATION

Since the Sanatorium is the center about which all tuberculosis work in the state revolves, the Mississippi Tuberculosis Association has its central office here. The State Association is composed of approximately fifty county groups in widely separated parts of the state and is affiliated with the National Tuberculosis Association.

The first objective of the Association is education, a powerful weapon against disease. Nationally it furnishes educational material to state organizations at mass production cost, conducts institutes for training workers and provides field services on medical care, child health, legislation and other programs. It carries on research in quest of a specific cure for tuberculosis and for improved methods of diagnosis and treatment, and disseminates information gained on those subjects anywhere in the world. It publishes magazines for workers and promotes the movement which has resulted in more than 1000 sanatoria with nearly 100,000 beds for treatment of tuberculosis.

The State Association is the organizing, educating, accounting and supply agency for local groups all over the state. It prepares hundreds of articles about tuberculosis in the publication of which state newspapers and magazines cooperate generously. It distributes high-grade educational material to doctors, nurses, hospitals, schools, colleges, patients and others. A valuable booklet entitled "What You Should Know About Tuberculosis" is mailed to every tuberculosis patient reported by every doctor in the state.

The State Association has provided package libraries on tuberculosis for all Adult Training Classes and is sending them to all schools that ask for them. It serves as a bureau of information about tuberculosis and cooperates in many ways with the Sanatorium and all other public health agencies. It provides Christmas Seal supplies free to county groups and helps in their campaigns.

County Associations maintain more than 130 portable isolation cottages for patients who must be treated at home. Each year they supply thousands of X-ray films used in case finding programs. They promote tuberculin testing of school children, supply educational material for distribution by health offices,

furnish transportation to clinics and Sanatorium, pay for Preventorium care and do many other worthy works to the limit of their resources.

The annual sale of Christmas Seals, the only source of revenue for the Tuberculosis Association, is educational in itself. Coming every year between Thanksgiving and Christmas when people are most considerate of human needs, these little messengers of mercy appear by millions to remind everyone of the menace of tuberculosis lest they forget for too long. Every seal used on business and personal mail carries a double message. It identifies the user as a helper in the crusade against tuberculosis, and silently it appeals to him who receives it to enlist his interest also.

The control of tuberculosis must not be left to the official health agencies alone but is the responsibility of every person and every organization. In Mississippi more than 400 Tuberculosis Association workers, only one of them paid full time and less than one per cent of them paid at all, lead the crusade of volunteers against needless deaths from tuberculosis and provide the way for everyone in the state to help in the fight.

A partial list of educational material distributed free by the Mississippi Tuberculosis Association follows:

Healthful School Living
The Educator and Tuberculosis
An Appeal to Leaders
What is Tuberculosis?
The Story of the Christmas Seal
Diagnostic Standards (for Doctors)
A Room for Health
Teacher's Inventory of Health Assets
What You Should Know About Tuberculosis
Why Does Tuberculosis Run in the Family?
Tuberculosis — Facts in Picture Language
Christmas Seals Around the World

FINANCIAL REPORT

Dr. Henry Boswell, Superintendent
Mississippi State Sanatorium
Sanatorium, Mississippi

Dear Sir:

We are pleased to hand you herewith financial statements covering the biennial period July 1, 1937 to June 30, 1939 as required by law. For purposes of comparison and for future reference, separate statements by fiscal years in the form of schedules have been prepared. These schedules as they appear, together with explanatory data pertaining thereto, are as follows:

SCHEDULE No. 1: Statement of Receipts and Disbursements for the Fiscal Year, July 1, 1937 to June 30, 1938.

SCHEDULE No. 2: Statement of the Daily Cost per Patient during the Fiscal Year, July 1, 1937 to June 30, 1938.

SCHEDULE No. 3: Statement of Receipts and Disbursements for the Fiscal Year, July 1, 1938 to June 30, 1939.

SCHEDULE No. 4: Statement of the Daily Cost per Patient during the Fiscal Year, July 1, 1938 to June 30, 1939.

SCHEDULE No. 5: Recapitulation of Receipts and Disbursements for the Biennial Period, July 1, 1937 to June 30, 1939.

SCHEDULE No. 6: Recapitulation of Daily Cost Statements for the Biennial Period, July 1, 1937 to June 30, 1939.

In order that all transactions pertaining to the income and expense incident to the operation of the Institution could be shown, it was necessary to classify as "Receipts" the products produced by the institution farm and used by the institution. Prevailing market prices were used as a basis of arriving at the values of these products. The receipt of these items is included in the item of "Miscellaneous Sales" in each of the Schedules 1 and 3, and the disbursements of them is reflected under the various items of "Disbursements" in the same schedules. These items might have been left out of these schedules with the same net result maintaining but the elimination of them would render these statements incomplete and technically of no value.

Under Schedules 2 and 4, you will find the cost per patient per day during each of the fiscal years making up the biennial period. Under Schedule 6, you will find a recapitulation of these costs which embraces the entire period. We might suggest here that in the consideration of the more accurate cost per patient, it would seem advisable to take the cost for the full period as a basis. There is always some overlapping of expense items as between the two years of a biennium thereby assessing one year with costs that should have been applied against the other year. These points are worthy of note especially in view of the difference in costs between the two years as shown by the schedules above mentioned.

With further reference to the cost statements, your attention is called to certain deductions shown therein. We refer particularly to the item appearing under the caption, "Farm Products Used and Sold and Other Sales". These deductions represent sales of hides from beef cattle, second hand sacks, etc., and all farm products used by the institution. Since the expense of producing these products would not have resulted had not the products been produced and vice versa, it follows that the operating accounts should receive credit in the amount of the value of said products. This procedure is in keeping with standard accounting methods as evidenced by the reports of the audits made by the State Accounting Department.

You will find under Schedules 2, 4 and 6 statements showing the cost per patient per hospital day as the said cost pertains to state funds and other funds. These statements should prove of interest for it is shown that less than two-thirds of our per capita cost comes from the state, the balance being met through board collections and other revenues.

For purposes of consideration of the period as a whole, we have prepared a recapitulation of the receipts and disbursements for the two years under Schedule 5.

Trusting that this report will open to your entire satisfaction, and thanking you for the opportunity to serve you, we remain

Respectfully,

JNO. H. ROWAN, Business Manager.

E. E. LOWRY, Bookkeeper

SCHEDULE No. 1

CONDENSED ANALYSIS OF OPERATIONS

July 1, 1937 to June 30, 1938

GROSS OPERATING RESOURCES

Cash on hand—July 1, 1937		$ 4,573.15
Receipts:		
Appropriations	$145,537.90	
Collections for Board and Treatment	88,044.54	
Examination Fees	3,041.50	
Sales of Farm Products	896 80	
Children's Fund	190.28	
Surplus Account	519.86	
Gifts and Donations	500.00	
Exchange	6.34	
Miscellaneous:		
Farm Products Delivered to Institution	38,676.08	
Surplus	467.60	
Live Stock Sold	930.69	
Difference in Inventory	455.54	
Accounts Payable	2,558.55	281,825.68
		$286,398.83

GROSS OPERATING EXPENSES

Disbursements:			
Office and Administration		$ 25,323.19	
Subsistence		81,798.99	
Housekeeping		15,120.52	
Laundering		4,722.20	
Medical and Surgical Care		31,897.43	
Nursing and Attendance		27,546.86	
Light, Heat, Power and Water		33,345.69	
Care of Buildings, Grounds and Equipment		8,665.22	
Instructional		14,116.16	
Recreational		1,387.90	
Agricultural		36,426.34	
GROSS OPERATING COST FOR YEAR		280,350.50	
Miscellaneous:			
Accounts Receivable	$829.87		
Improvements	131.90		
Children's Building Fund	156.36		
Surplus	56.00	1,174.13	281,524.63
Cash on hand—June 30, 1938			4,874.20
			$286,398.83

SCHEDULE No. 2

STATEMENT OF DAILY COST PER PATIENT FOR THE FISCAL YEAR

July 1, 1937 to June 30, 1938

Gross Operating Cost for year (See Schedule No. 1)		$280,350.50
Less Farm Products used and sold and other sales		39,572.88
		240,777.62
Less Store Room Credits, etc		3,218.07
		237,559.55
Plus Property and Live Stock Depreciation		37,127.39
		$274,686.94
Total Number of Hospital Days		92,878
Average Number of Patients Treated per Day		254
Cost per patient per Hospital Day:		
Including Depreciation		$2.96
Not Including Depreciation		2.56
Based on Expenditures from State Funds	$1.567	
Based on Expenditures from Other Funds	.993	$2.56
Cost By Functions:		
Office and Administration	$ .273	
Subsistence	.88	
Housekeeping	.163	
Laundering	.051	
Medical and Surgical Care	.343	
Nursing and Attendance	.296	
Light, Heat, Power & Water	.36	
Care of Buildings, Grounds and Equipment	.093	
Instructional	.152	
Recreational	.015	
	$2.626	
Less Agricultural (Farm Profit) etc.	.066	
		2.56
Plus Property Depreciation		.40
		$2.96

SCHEDULE No. 3

CONDENSED ANALYSIS OF OPERATIONS
July 1, 1938 to June 30, 1939

GROSS OPERATING RESOURCES

Cash on hand—July 1, 1938			$ 4,874.20
Receipts:			
Appropriations		$190,224.93	
Collections for Board and Treatment		90,727.53	
Examination Fees		4,703.79	
Sales of Farm Products		1,353.23	
Children's Fund		243.90	
Surplus Account		141.14	
Gifts and Donations		1,292.40	
Exchange		3.26	
Building and Repair Commission		5,126.98	
		$293,817.16	
Miscellaneous:			
Farm Products Delivered to Institution	$44,749.01		
Live Stock Sold	808.41		
Difference in Inventory	5,199.06	50,756.48	344,573.64
			$349,447.84

GROSS OPERATING EXPENSES

Disbursements:			
Office and Administration		$ 28,529.42	
Subsistence		87,041.63	
Housekeeping		18,599.98	
Laundering		9,552.70	
Medical and Surgical Care		44,048.43	
Nursing and Attendance		29,494.96	
Light, Heat, Power and Water		35,261.23	
Care of Buildings, Grounds and Equipment		10,176.65	
Instructional		16,489.91	
Recreational		2,397.85	
Agricultural		36,049.64	
Gross Operating Cost for Year		317,642.40	
Miscellaneous:			
Accounts Receivable	$ 462.53		
Accounts Payable	7,532.12		
Buildings	2,600.00		
Administration Building, etc.	9,174.25		
Children's Building Fund	3.75		
Surgical Operations	25.00	19,797.65	337,440.05
Cash on hand—June 30, 1939			12,007.79
			$349,447.84

SCHEDULE No. 4

STATEMENT OF DAILY COST PER PATIENT FOR THE FISCAL YEAR

July 1, 1938 to June 30, 1939

Gross Operating Cost for year (See Schedule No. 3)		$317,642.40
Less Farm Products Used and Sold and Other Sales		46,102.24
		271,540.16
Less Store Room Credit, etc.		4,708.02
		266,832.14
Plus Property and Live Stock Depreciation		24,239.93
		$291,072.07
Total Number of Hospital Days		102,637
Average Number of Patients Treated per Day		281
Cost per patient per hospital day:		
Including Depreciation		$2.84
Not Including Depreciation		2.60
Based on Expenditures from State Funds	$1.85	
Based on Expenditures from Other Funds	.75	2.60
Cost By Functions:		
Office and Administration	$ .278	
Subsistence	.848	
Housekeeping	.181	
Laundering	.094	
Medical and Surgical Care	.429	
Nursing and Attendance	.287	
Light, Heat, Power and Water	.343	
Care of Buildings, Grounds and Equipment	.099	
Instructional	.16	
Recreational	.024	
	2.743	
Less Agricultural (Farm Profit), etc.	.143	2.60
Plus Property Depreciation		.24
		$2.84

SCHEDULE No. 5

RECAPITULATION OF CONDENSED ANALYSES OF OPERATIONS FOR THE BIENNIAL PERIOD

July 1, 1937 to June 30, 1939

GROSS OPERATING RESOURCES

CASH ON HAND, July 1, 1937			$ 4,573.15
Receipts:			
Appropriations		$335,762.83	
Collections for Board and Treatment		178,772.07	
Examination Fees		7,745.29	
Sales of Farm Products		2,250.03	
Children's Fund		434.18	
Surplus Account		1,072.60	
Gifts and Donations		1,792.40	
Exchange		9.60	
		$527,839.00	
Miscellaneous:			
Farm Products Delivered to Institution	$83,425.09		
Live Stock Sold	1,739.10		
Building and Repair Commission	5,126.98		
Difference in Inventory 7/1/37 and 6/30/39	5,654.60	95,945.77	623,784.77
			$628,357.92

GROSS OPERATING EXPENSES

Expenses By Functions:			
Office and Administration		$ 53,852.61	
Subsistence		168,840.62	
Housekeeping		33,720.50	
Laundering		14,274.90	
Medical and Surgical Care		75,945.86	
Nursing and Attendance		57,041.82	
Light, Heat, Power and Water		68,606.92	
Care of Buildings, Grounds and Equipment		18,841.87	
Instructional		30,606.07	
Recreational		3,785.75	
Agricultural		72,475.98	
Gross Operating Cost for Biennium		$597,992.90	
Miscellaneous:			
Accounts Receivable	$1,292.40		
Accounts Payable	4,973.57		
Improvements	131.90		
Buildings	2,600.00		
Children's Building Fund	160.11		
Administration Building, etc.	9,174.25		
Surgical Operations	25.00	18,357.23	616,350.13
CASH ON HAND, June 30, 1939			12,007.79
			$628,357.92

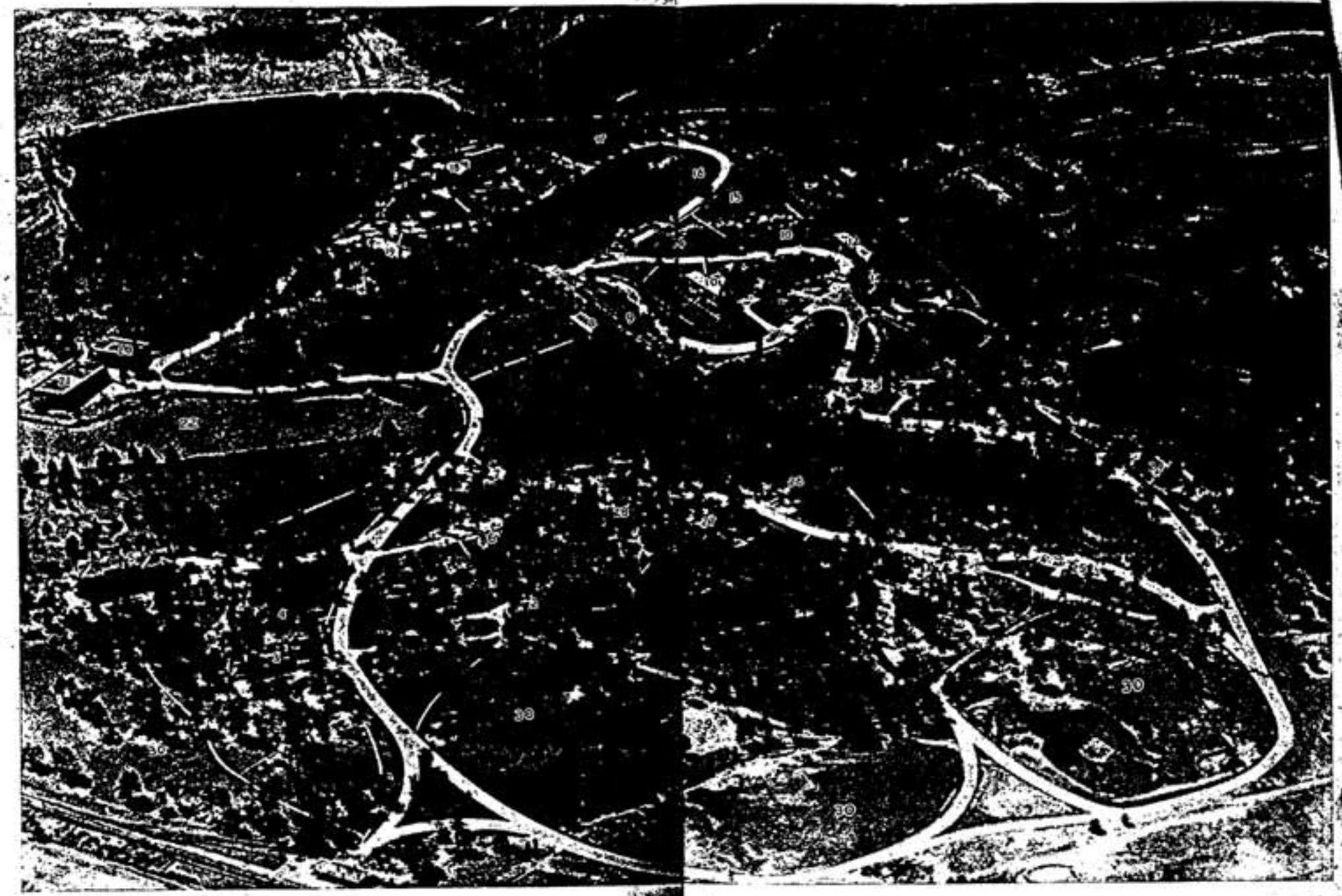
SCHEDULE No. 6

CONDENSED STATEMENT OF DAILY COST PER PATIENT FOR THE BIENNIUM

July 1, 1937 to June 30, 1939

Gross Operating Cost for Biennium (See Schedule No. 5)		$597,992.90
Less Farm Products Used and Sold, and Other Sales		85,675.12
		512,317.78
Less Store Room Credits, etc.		7,926.39
		504,391.39
Plus Property and Live Stock Depreciation		61,367.32
		$565,758.71
Total Number of Hospital Days		195,515
Average Number of Patients Treated Per Day		268
Cost Per Patient Per Hospital Day:		
Including Depreciation		$2.89+
Not including Depreciation		2.58
Based on Expenditure from State Funds	$1.72	
Based on Expenditure from Other Funds	.86	2.58
Cost By Functions:		
Office and Administration	$ .275	
Subsistence	.864	
Housekeeping	.172	
Laundering	.073	
Medical and Surgical Care	.386	
Nursing and Attendance	.291	
Light, Heat, Power and Water	.352	
Care of Buildings, Grounds and Equipment	.096	
Instructional	.156	
Recreational	.019	
	$2.684	
Less Agricultural (Farm Profit)	.104	2.58
Plus Depreciation		.32
		$2.90

MISSISSIPPI STATE SANATORIUM



1—Main Entrance
2—Superintendent's Residence
3—Business Manager's Residence
4—Physician's Residence
5—Nurses' Dormitory
6—Ass't Superintendent's Residence
7—Physicians' Apartments
8—Administration Building
9—Main Infirmary
10—Service Building
11, 12, 13, 14, 15, and 17—Convalescent Wards
16—Swimming Pool
18—Preventorium
19—Auditorium
20—Laundry
21—Power Plant
22—Lake
23—Employes' Apartments
24—Servants' Quarters
25—Negro Infirmary
26, 27, 28—Residences
29—Tennis Courts
30—Golf Course

LETTERS AND GREETINGS EXPRESSING BEST WISHES

FOR

DR. HENRY BOSWELL AND THE SANATORIUM

ON

HOMECOMING DAY

November 3, 1957