

JOHN HARVEY KELLOGG (1852-1943)

**SUBJECT FILES, CA. 1885-1920
(PRIMARYLY CONCERNING TOPIC OF
MEDICAL MISSIONARIES)**

MEDICAL FACULTY MEETINGS

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MEDICAL FACULTY MEETING, Jan. 30, 1900.

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DR. KELLOGG presented the following "paper:"

Mr. Chairman : I must beg the audience to excuse me for not having my paper with me. Perhaps it is fortunate for you that I left it at home, for it might be too voluminous to read. So I hope to get enough before you to close in a reasonable time. The subject of prescription writing is, from a rational standpoint, a very large question; but the subject which I wish especially to bring before the Faculty is that of introducing or organizing a new plan, -- or rather an improved plan of dealing with patients in the Sanitarium -- rather a Sanitarium matter than a scientific question, but we may consider it from both aspects.

One of the difficulties that we find in dealing with patients is to keep them in the Sanitarium the necessary length of time in which to bring them up to the right level of health, so that they will remain well when they are at home. The reason an invalid is sick is, not because he takes cold, overworks, meets with changes of weather, or anything of that kind: The reason he is sick is because he is a deteriorated man. It is different with an acute disease, for example: A man has small-pox; that is because he has caught it of another man who was infected with it; and he might have the disease, even if he were an able-bodied man. But the reason the chronic invalid is sick is because he is deteriorated; his vital energies have been wasted, and for a long time he has been sliding down the hill, and he is so near the bottom that he lives in an atmosphere of quagmires, morasses, fogs and marshes of disease, and so he is all the time ready to collapse; he is simply upon the brink of a precipice, and such a thing as a little cold that he may take is simply a little wind that will blow him over.

That is the condition of the deteriorated man. He once had wonderful heart-capacity: He could run a mile and he could exercise

until his muscles get so full of blood that he would fall down in a collapse. His liver has so much capacity that he can do all this extra work without injury, for in half an hour he will be all right again. I have seen young men exercise in the gymnasium until they turned pale and were ready to fall upon the floor, and in ten minutes they were as vigorous as ever. He is able to digest enormous dinners on Christmas and New Years and Thanksgiving occasions, and indulge in gormandizing at all hours of the day and night, eating all sorts of abominations, and his liver has been able to do all the work required of it up to the present time. But now he finds he has a torpid liver. Now a torpid liver is a worn-out liver. The great capacity of the liver by which it could destroy ptomaines and purify the blood--that capacity is gone: it is gone, and he can never get it again; it is gone forever, and he now has a debilitated and a depreciated liver. The worst trouble with that man is, that his liver is depreciated. The kidneys normally have an enormous amount of extra capacity: Sometime ago a man came to see me about his son, and I said I thought his urine should be examined, and asked him to send a twenty-four specimen. A couple of days afterwards a dray came up to the door with a bushel basket filled with bottles of urine, twenty-eight pints in all, being a twenty-four hours' specimen. Examination of the urine showed that he had diabetes insipidus. I have seen a report of a case in which the twenty-four specimen amounted to forty pints. That is an illustration of the enormous capacity of the kidneys have for work which is not ordinarily demanded of them. Their ordinary rate of secretion is less than a thousand c.c. which is really less than two pints; that is the average normal daily amount, according to our observations here. The same thing is true of the bloodvessels and all the

tissues and glandular structures of the body.

We see evidences of deterioration in a variety of ways,-- one of which is in the teeth: Very few chronic invalids have sound teeth. Decay of the teeth is only an indication of general bodily deterioration. If a man brings a horse with bad teeth to a horse-dealer he don't want to buy him because he has bad teeth; he knows if the horse has unsound teeth he has a bad stomach; and he knows if he has a bad stomach he has bad nerves, bad muscles and bad blood, and consequently has no endurance; he has a general condition of lowered resistance. The most important thing to be done for such a man is, not to try to increase the action of his liver,-- that is what his doctor at home has been trying to do by giving him various laxatives and cathartics to stimulate his liver,--it is not that; but the thing that is necessary is to raise his whole vital tone. He has a weak heart; but the thing to do is, not to try to ~~strengthen~~ strengthen the heart but to build up the man. His blood is deteriorated, as shown by arterio-sclerosis, etc., and the thing to do is to improve ^{him} ~~the whole man~~ by raising the vital tone of the whole man.

In order to accomplish anything for our patients, then, we must adopt some plan of treatment that will make a new man of the patient; treatment that will remove the old man and put a new man in its place. I want to get this point graphically before your minds if I can, as a foundation for general mode of procedure in dealing with chronic invalids.. We must also mark out a general plan of treatment for the invalid that will improve his whole vital condition,--in other words, we need a tonic and reconstructive treatment for our patients; that is the thing that will increase power of resistance, and then his own vital powers,--the vital healing

power within him called by medical authorities the "vis medicatrix naturae," but, in reality the divine power in man--the life that is within him, which will, by being restored to a higher level of activity repair and restore the whole man. The tendency of the body is to cure itself: If a man has an ugly sore upon his hand or shin and does not heal; that is because the blood is not in good condition; that is a thing that the common people know,--they know that when a man has a sore that does not heal, there is something the matter with his blood. It is curious how often we find that the common people have gotten at a grand truth, and they comprehend fundamental truth which scientific men have overlooked. It is only recently that scientific men have recognized the fact that it is the blood that heals, and that if you make the blood right, it will take care of the animal. Now you may try to heal an old sore and put on all sorts of lotions but you can't make it heal; but you simply make the man better and his sore gets well., because it is the man that heals the sore; it is not the medicine but the man who heals the sore., so if you improve the general vital resistance of the man, his sore will get well.

Now what are some of the most effective means by which we can accomplish this reconstruction of the man? As has been stated,--if you will raise the whole vital status of the man, the body is able to repair those weaknesses that have been brought about by disease -- the body itself will repair them, ^{fact it} ~~in~~ is not necessary to give any especial attention to the liver, the kidneys, the heart or any other part of the man, if we can only make the man do what he should **do**. That is the reason we often see people get well by a change of climate: A man has some old chronic trouble that the doctor has been treating: ~~he has had~~ his liver, kidneys, and stomach have been treat-

for a long time and didn't get any better; he goes to a mountainous region and recovers. We see this wonderfully illustrated in tuberculous cases: Everything possible has been done for the lungs by both internal ^{and external} applications, but the patient gets no better; he goes to a mountainous region and gets well. What is it that heals the patient? It is the improvement which has been made in the whole man,--it is the vital stimulus of the climatic change and the new conditions into which the man goes; it is the increased vital activity in the man; that is the thing that heals his lungs. It is not because the air is dry; it is not because the sunshine is bright and kills the germs; it is not because there is any specific action of the climate upon germs, but it is the action of the environment upon the man, as a whole. It is because the body is no longer a fertile field for germs to grow in; the body has gained such resistance that it is able to compete with germs and destroy and eliminate them.

It has been said that life is a continual struggle against germs; I think it was Lauder Brunton who made that statement. Even the large class of maladies which are not known as germ-diseases, such as liver disorders, intestinal disorders and renal disorders, when we come down to the bottom facts we find that they are largely due to the formation of ptomaines in the stomach through abnormal fermentations caused by the action of germs in the alimentary canal, and the consequent introduction of toxins into the body to such an extent that the whole body becomes infected with toxins and the man is suffering from auto-intoxication. I think we can at the present time almost say that acute diseases are produced by a specific germ,--one class of diseases being produced by a specific germ and the other class by non-specific organisms which become dom-

iciled in the alimentary canal. Now if we can raise the resistance of the body so that it will destroy these toxins by suppressing the formations that cause these fermentations in the alimentary canal, we can accomplish that, and the man will get well without any specific medication.

The first and most important thing to be done for our patient is to get the general tide of vitality turned toward health by a reconstructive treatment. Then comes the application of specific remedies for the liver, stomach, lungs, etc., but this is secondary.

Now in regard to the treatment of the chronic invalid: He understands that his condition is exactly the thing that he feels; he does not know that symptoms are only indications of his condition. He has a pain which he attributes to his liver, and so he wants something to strengthen his liver; he does not know that his real trouble is due to disorders of the stomach. He has cold hands and feet; he does not appreciate the fact that this is due to a prolapse of the internal organs causing a strain upon the nerves connected with the sympathetic centers. He takes exercise by walking, thinking to warm his feet; but the more he walks the colder his feet become; he wonders why his feet do not get warm; he does not know that these nerve-spasms are caused by a prolapse of the viscera which drag down upon the nerves, increasing the irritation in the nerve centers while he is exercising, and so the spasms get worse. Let him lie in bed until he gets warm and the spasms are relieved, the tension of the abdominal organs being relieved. He thinks he wants more blood, and he wants to take things that will make blood, -- iron, etc. He does not know that the difficulty is, -- not that he does not have iron enough in his blood -- he has plenty of it in his food. The trouble is, that his blood-making organs

are not doing their work as they should. It may be that his digestive organs are not making hydrochloric acid so that he can digest his food properly; and if he is not able to digest his food properly, he has not enough blood, and he wants something that will make blood." He has backache and other symptoms, and he keeps calling the attention of his physician to his symptoms, -- he wants something done for them, and it is almost impossible for the physician to avoid the habit of simply prescribing for symptoms, so he prescribes a fomentation to-day for a pain in some place, and an application of electricity to-morrow for a pain in some other place, and in this manner he chases the symptoms of the patient around, but he makes no progress. He says, "My symptoms at the end of three or four months, "My symptoms are changed, but I feel no better;" he thinks he is no nearer well than when he commenced taking treatment, -- and he is right about it. On the other hand, if we should give the patient a strong drift towards health by means of reconstructive treatment he might get well, as people go on a journey or go to the seashore for their health and get well; this is because of the improvement in their general environment.

Now in the Sanitarium we must bring to bear these great forces of which ~~is~~ ~~is~~ of fundamental importance: for the ~~force~~ of reorganization and reconstruction ~~is~~ the force that cures -- ~~this~~ ~~is~~ the force which we see at work on taking a trip in the woods -- they are constructive. We must bring that same power to bear in our treatment, also applying to the patient such palliative means as will make him comfortable while the work of reconstruction is going on; it is very important to keep these two things going on at the same time. So we have two classes of agencies which we must use, -- one class being curative, and the other class, palliative, One class of treat-

ment which will be systematic and progressive and continually going on, irrespective of little difficulties coming in because of special complaints, and another class of treatment which by which we will endeavor to meet, every day, the ever-changing symptoms which are constantly developing in these chronic cases because of the extreme susceptibility of the patient because of his environment and the fluctuating condition of the ^{vasomotor} and sympathetic system so that he is naturally sensitive to external excitants and irritants.

Now let us consider for a moment the things which are of most importance in producing a general trend of the patient toward health,--the systematic curative treatment which he should have : This thing should be put down as a fundamental truth,--that cold water is the great physiological tonic, as strychnia is the great medicinal tonic; strychnia and mercury are said to be the Samsons of materia medica. Now cold water is the Hercules of our treatment; it is the one great fundamental power or means by which we may develop the energy of ~~man~~. It seems curious that this is the case, because cold is depressing: You may examine a little amoeba in on a slide: a little water; as the water gets cold, it stops its movements. Put a hot penny on the end of the slide, and as the slide begins to warm up and the water gets warmer, the amoeba begins to move, and as the water gets warmer, it becomes more lively, so we see that heat is a stimulating agent, while cold is a depressing agent. But the depressing effect of cold is not utilized in the employment of cold water as a restorative,--or, it is avoided in the employment of cold as a restorative agent. In order to produce a depressing effect, it is necessary to continue the application of cold so long that the activity of the protoplasmic cells of the body is diminished so that the temperature of the body is lowered. When you make such an application of cold as will be

ment which will be systematic and progressive and continually going on, irrespective of little difficulties coming in because of special complaints, and another class of treatment ~~which~~ by which we will endeavor to meet, every day, the ever-changing symptoms which are constantly developing in these chronic cases because of the extreme susceptibility of the patient because of his environment and the fluctuating condition of the ^{vasomotor} and sympathetic system so that he is naturally sensitive to external excitants and irritants.

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er the temperature of the body, then you get a depressing effect. But when you apply cold water to the body in such a way that you have not actually lowered the temperature of the body, but you have only notified the body that you are going to lower the temperature, having simply made an impression of cold without abstracting heat from the body, you will then get a tonic effect; and this tonic effect is due, not to cold, directly, but it is due to the reaction of the body to the cold; it is due to the resistance which is awakened in the body to the application of cold which you have made. Such an application is a sort of excitant, as you might say: Suppose a mad dog should come rushing into this room foaming at the mouth: I dare say that all the people in the room would be excited, and that we would all get out of here as quick as we could. The dog might not bite any of us, but we would be afraid he was going to do it, and that would be a wonderful stimulus to us all. If a "rattler" should drop down among us, the effect would be the same. It is so with cold water applications: The cold water strikes the skin and makes an impression that the temperature is going to be lowered, and it is that impression which arouses the sensory nerves, travelling through them and awakening every nerve-center in the body, and all the motor influences and all the resisting forces of the body are rallied; the heat-making forces in the cells are set to work, the glandular activity is excited, and thus there is an excitation which is developed in every part of the body. The most exciting thing that you can possibly bring to bear upon a man is a very short application of cold water. Suppose some one should pour a little cold water down the back of your neck: It would have an exciting effect. I remember, when I was a boy, that another boy poured a pitcher of cold water down my neck: It produced an exciting effect that I didn't get over

in a long time,--at least,not until I had accomplished the same thing for him.

Now this excitability we get by a very short application of cold water; the colder the application, and the shorter the application, the better will be the effect: Because the shorter the application the less will be the amount of heat extraction, and the colder the application the stronger will be the impression made. We know the reason for that. The impression upon the skin depends upon the difference between the temperature of the water and what we may call the zero temperature of the skin--the zero temperature sense, which is the temperature of the skin itself. Now the temperature of the atmosphere may ~~differ~~ vary: It may be a warm day, or it may be a cold day when the application is made, but the ^{greater the} difference between the temperature of the skin and the temperature of the application, the greater will be the difference of the sensation made. What is true of water is ^{not (?)} true of other irritants or excitants: for instance, mustard when applied to the skin does not produce a tonic effect; it will not cure a cold; it produces redness of the skin but produces no tonic effect,--and the same is true of pepper and ^{other} ~~similar~~ irritants--you get no tonic effect from these articles. Why? Because there is only one kind of reaction produced by pepper or mustard, and that is circulatory reaction, simply a widening of the bloodvessels, but there is no thermic reaction. But when cold water is applied, the temperature sense is influenced, and through the temperature sense the heat centers are notified that the temperature of the body is going to be lowered dangerously and life imperilled, and the whole vital force of the body is aroused to resistance and a reaction takes place. The application of ~~we~~ cold water to the skin is the thing by which a tonic effect is secured; cold is depressing, and the reaction which follows an applica-

of cold produces a tonic effect which is the most powerful that can be brought to bear upon the body in any possible way. We say, then, that cold water is the sheet-anchor of hydrotherapy. If I were to choose but one thing out of all therapeutic agents, I should choose water,--and I should choose ice-water, because I could modify that, if I wished to do so.

The thing for us to do then, in the treatment of chronic invalids, is to train every one of them to the application of cold water, and to the application of cold water in every case,--I don't know of a single exception or case in which cold water is not applicable; but it must be used with the greatest care and discretion, for it is possible to do an immense deal of harm. Here is where ^{there} is an opportunity for the exercise of great wisdom and care,--the employment of cold water in such a manner as to get its good effects and not its bad effects.

Let us consider for a moment the bad effects of cold water : When cold water is ~~first~~ applied to the skin, the first effect is to quicken the heart's action. The heart's action is quickened by the sensory excitation of the application; and the secondary effect is a slowing of the heart caused by the increased ^{arterial} tension: The blood-vessels of the skin are contracted so that the caliber of the arterial system is lessened, and as it is lessened so that the channels through which the blood has to flow are smaller, the heart must work with greater energy to pump the blood through, and consequently the arterial tension is raised, and then the heart beats more slowly, as it always does when the temperature is elevated. In the application of heat, the opposite is true: At the beginning of the application, heat slows the heart's action, but later, it is quickened,--the secondary ~~effect~~ quickens the heart's action, while in a cold application the first effect is to quicken the action of the heart, and the

second effect slows it. It is very interesting to notice these effects in making applications of heat or cold; I have always noticed it in experimenting upon myself. You get into a hot -bath and you will be surprised to see how ~~much~~ rapidly the heart's action is slowed, but in a short time, it is greatly quickened. Now this first slowing of the heart by the application of heat is due to the very opposite cause of slowing the heart's action by the application of cold,--it is caused by a dilatation of the bloodvessels. The good effect of cold is its stimulation of vital change: As has been shown by Winternitz and others, the effect of a short cold application to the skin is to increase the oxidation; that is because the heat production is increased; this increases the consumption of carbon in the body, so there is an increased production of CO_2 which actually comes from the increased production of heat; the natural result of the burning up of fuel in the body is CO_2 , and of course the more heat we have, the more smoke, or CO_2 we will have. Cold also increases the acidity of the blood and the absorption: It causes deeper respiratory movements and an increased force of heart-beat. One of the most important things of all is, that there is a widening and an increased activity of the peripheral vessels. If you will examine a frog's foot, you will see a rhythmic movement in the arteries; now there is a beating of the heart there--a peripheral heart; all the small arteries are engaged in the rhythmic movement by which the blood is pumped along, so that, as some one has expressed it, "the blood is milked out of the veins;" it is a sort of peristaltic movement, as Winternitz calls it, by which the blood is conveyed into the ~~veins~~ arteries from the veins. Now heat lessens that movement, and as the result of this, there is a dilatation of the veins and an accumulation of blood in the skin, so

the heart is thus excited it does not subside into its ordinary rate of movement.

upon the heart.

Another evil effect of a general application of cold water to the skin: The patient may have a weak heart,--and that is indicated by a feeble pulse, a low temperature, a purple-colored skin, or blueness of the lips--give that man a cold douche, for example, and what would be the effect? It would drive the blood into the interior of the body and increase the arterial tension: the heart is so weak that it cannot do the work which is required of it,--it cannot drive the blood back to the surface; you have driven the blood inward by a sudden contraction of the arterial vessels, and the heart cannot drive it back again; the heart has to increase its energy, after the application of cold water, in order to drive the blood back into the skin. When you have thus driven the blood inward by the application of cold, you have no reaction, the skin remains cold after the cold application, the blood remains within, and the ~~amount of~~ blood ~~in the skin~~ is actually diminished instead of being increased, because the vessels are dammed up by their contraction. Reaction does not take place because the heart is too weak to produce reaction, so the patient remains without reaction. Now there is no more wretched thing in hydropathic treatment than failure of reaction. You give a cold application to a patient in such a way that reaction does not occur, and your patient is left in a most wretched and miserable condition. That is a condition which we must be on the lookout for in our treatment; if a man has a feeble heart, we cannot give him a general cold application.

Here is a patient with unduly excitable nerve-centers; he is, perhaps very excitable: We give him a very cold application and he has too much reaction,--he has such a powerful reaction that when he

comes from the bath his heart is excited, his head is full of blood; he is so excited that he cannot get quiet and he cannot sleep at night, and the movement of the blood throughout the body is excited to such a degree that his vital machinery cannot slow down enough to allow him to go to sleep at night; so he is left in a worse condition after the bath than he was in before the bath; so he complains that his treatment excites him so that he cannot sleep. I have seen such cases. And headache may result from an improper application of hot water as well as of cold water.

Now we have a rheumatic patient: He has pains in his joints; we give him a cold bath and it drives the blood inward and he takes cold, and he says, "My rheumatism is worse, and I took cold in the bath-room; and I had a cold spray and then I took cold and my rheumatism has been worse ever since, and I don't want any more of that kind of treatment!" A man has sciatica, and he has a cold bath or a cold douche or a hot-water douche over him, and he goes out of the bath-room with a terrible attack of neuralgia. A lady has facial neuralgia and she is getting over it; she goes into a cold-bath and comes out with a pain in her jaw, and soon has a regular ~~neural~~ attack of neuralgia, and she says it was the bath that did it.--and it was. The cause of the trouble was that the blood was driven into the interior of the body and that induced increased congestion; the bloodvessels became congested, lost their tone and remained distended and an attack of neuralgia is the consequence.

There are other cases in which harm may be done by the application of cold: A man is anaemic and feeble; his heart is weak and his whole body is in a state of feebleness and weakness. you apply a cold-bath to him and he fails to respond,--he fails to

react; he is left chilly and the internal viscera are congested; his head aches, his feet are cold; he feels a general malaise--he is generally wretched and miserable, and he knows that his treatment is not doing him any good. It is important to know these bad effects; there are many more of them, but we will not try to consider them all at present.

Since there are bad effects which result from the improper administration of cold water, it is necessary to know how to graduate it: We must educate the patient to bear, each day, water at a little lower temperature, until he is finally able to take his full dose of hydriatic medicine, if you please,--until he can take a full jet from a strong hose or a regular percussion douche or hose-douche ~~with high force~~ with a high force-- thirty to fifty pounds pressure--and immediately react. Now if a doctor were going to give treatment himself, it wouldn't be necessary to understand each case and write out a prescription for it, because he could watch the patient and continue the application until he reacted, and then he could stop, and you would modify your treatment to suit each individual case. But you cannot always do that; You can't always give treatments yourself; many times the treatment must be administered by trained nurses, so that it is necessary that prescriptions should be written which are adapted to each case, so that the bathmen can give it intelligently. The bath cannot be given as intelligently by proxy, however, as by the physician: In Germany the doctor gives the applications; it is not, in Germany, considered proper to allow the bath men and women to administer a douche; it is too powerful and important a procedure to be administered by a person not medically trained,--it is really an operation, and harm may be done, if it is not properly ~~done~~ administered. I confess that

when I see the way in which our douches have been given, it makes me tremble, and I wonder that so many patients escape,--it seems wonderful to me that they don't receive much harm in this manner.. We have been making some improvements, however, and things in the bath-room have been going on better than they have done. An experienced bath-man is sometimes taken away and a new man put in his place, and he does not always possess the necessary amount of intelligence, care and discretion.

How can we graduate our application of cold? The douche is the only method of applying cold, but we have a regular, graduated scale of applications which can be ~~arranged~~ in such a way as to be made progressive. The simplest and the safest thing to be done, in the first place, is the cold wet hand rub: this consists in simply dipping the hand in cold water and then rubbing the skin. I was reading in a medical journal to-day, an elaborate description of the manner which a sponge-bath should be given,--how the patient should be placed and every part~~d~~ of the body treated--and all was to be finished in from fifteen to twenty minutes. The doctor who wrote the prescription said you would find, at the end of the treatment, that the temperature ~~(of the patient)~~ would have fallen from ten or fifteen degrees. A patient who could survive that treatment must have a strong constitution. I think perhaps there has been too much of that kind of sponging given. We are now ~~talking~~ about tonic effects: We must not simply wet the surface. We would begin at room-temperature, say 60^o, for we would have to use such water as we could get. First dip the hand in water, and then rub the arm,--for how long? If the patient were very feeble, one dip would be enough. Make up your mind that a patient cannot be so feeble that he cannot have cold water applied to him. Sometimes a patient will say, "I can't take cold water, because I am too feeble." ~~It~~

You can graduate the treatment by a wet-hand rub. We begin with cooling the head; we do this in order to protect the ~~head~~ brain from an inrush of blood from the other parts of the body. We will then rub the arm,--how long? ("Until it is red.") If the patient is very feeble, the application must consist of just one dip, rubbing the arm until it is red and warm. If the patient can bear a little more, we will dip the hand in very cold water, give three or four rubs, and another dip, and so on until we get three or four dips, and we may apply five or six dips on the same surface, until we have made a number of impressions of cold upon the skin, increasing the vigor of the rub; but the skin of the part must be made red before leaving it,--and this must be done, in this manner, over the whole body, producing a reaction in each part, until we have gone over the entire surface of the body. The effect, while not so intense, is as great as though the whole thing had been accomplished in ten seconds by a very strong douche applied to the whole surface of the body.

The next thing would be the cold mitten friction, the mit being rubbed in water and then rubbed upon the surface of the skin until it is red. The rubbing has the effect to encourage the return of the blood to the skin,--and that is useful.

The next thing would be the wet-towel rub; this is a different thing from the preceding treatments, as to the manner of application, as we put the wet towel upon the skin and rub the outside of the towel, and we will have a larger quantity of water applied to the skin, and spread over a larger surface,--perhaps ~~XXXXXX~~ ~~XXXXXX~~ 300 square inches of wet surface at one application, for we may have a towel a foot wide and two feet long--two or three square feet of cool surface in contact with the skin; thus we ^{have} ten times as much ~~surface~~ cool surface applied to the skin as before.

we can graduate the area, laying the towel down smooth upon a portion of the surface of the skin and ~~rubbing~~ making friction outside of it. While we increase the thermic effect in this manner, we increase the cellular stimulus by the towel rub far beyond what we could by the mitten-friction as by the latter, the little water that we use is soon warmed up so that we don't get the thermic effect, but we get a mechanical effect and without so much effect upon the cells as in the former method. It is the lowered temperature that increases tissue-changes; that is the temperature effect. The mechanical effect ~~that~~ we get by rubbing, the douche, etc., producing circulatory reaction; and circulatory reaction is produced by cold, as we know.

The next thing is the wet-sheet rub: This is the same thing as the wet towel-rub, only the wet sheet is hung upon the shoulders and the friction is made on the sheet; it sticks to the surface of the body and the rubbing is on the outside until the sheet is warmed. We can graduate that ~~operation~~ by changing the sheet or by pouring cold water over it; ~~so~~ we may have one, two, or three different towels. We may also graduate the water by lowering the temperature one degree a day., until we get down to ice-cold water.

The next step is the shower-bath: In this bath, the patient sits in water three or four inches deep, at 70^o. The attendant rubs his sides and back and chest and limbs, and he rubs his abdomen and the insides of his thighs. Frequently dipping water over the body encourages the thermic as well as the circulatory effect.

The douche is the most powerful of all the hydropathic procedures. We can make the effect of it as intense as we like: We can make it strong enough to paralyze a man and render him unconscious in a very short time; we can make the effect almost anything

we wish: We can graduate it so as to have it so gentle that a child or a very feeble person is able to take the douche. So there are six of these procedures, in all.

Now we can arrange a schedule for the patient, according to his condition: If he is very irritable and nervous and feeble, we will begin with a wet-hand rub, giving him a very short treatment at mid-day and at bed-time. If he is a robust business man, we can start him with a cold friction, and in a few days we can give him a cold towel rub, and perhaps in a few days more give him a wet-sheet rub, and we can get him into the douches much sooner than feeble cases.

We can graduate the wet-hand rub rub with water at 60° , lowering it one, two, three, to five ^{de}degrees a day till we get down to ice-water, and we can increase the number of dips to four or five. Mensaging a cold-mitten friction we can start with water at 60° and run it down to 32° . We can hasten the mit-rub, by using a moist mit, or a filled mit,--according to the time we hold it in the water.

We can graduate the towel-bath. And we can use the wet sheet-rub at 60° , starting with one, two or three minutes' rubbing,--at any rate until the sheet is warm. We can graduate the hollow-bath in the same way. We can begin the douche with the Scotch-douche, and we may rain or shower, and then, if the patient is very feeble, gradually cooling down the temperature to 80° . The next day the temperature of the shower might be 102° to 104° to start with for a minute or a minute and a half, and then graduate down to 75° ; gradually lower it to 75° and then bring a percussion douche onto his back, because that is the part that will stand the most vigorous treatment. With this application we can affect all the spinal centers,--we can bring them all into activity by this application, because there are branches travelling over that area from to every spinal nerve-center. ~~so,~~ If we wish to make an application to

the arm, we do not reach all the spinal centers,--and so of other parts of the body.. So it seems that the back may be looked upon almost as a keyboard for hydriatics to play upon,--the upper portion of the back to affect the heart and the respiratory organs, the middle of the back to affect the kidneys, spleen, stomach and bowels, and the lower part of the back to affect the genito-urinary viscera and the legs. So we can regulate the baths according to the cases.

After we have made our general applications for the purpose of giving the patient a general uplift, we must begin to modify our prescription so as to suit some special ailments,--we must begin to localize things, and hang them, so to speak, onto this trunk of our tree, so as to suit individual cases; some form of cold treatment must be applied in every case. Suppose we have a rheumatic case: We must give our patient hot treatment? Why? We want to get rid of the uric acid. ~~Why will we want to~~ get rid of the uric acid? ("By elimination.") But we must first dissolve the uric acid which is stored up in the tissues and joints,--because it won't dissolve, and the blood is saturated with it, and a hot bath won't do any good so long as the uric acid won't dissolve.-- ("We must oxidize it.") Yes, that would render it more soluble,--but we must do something more: We must make it drink a lot of water, thus increasing the volume of blood, diluting the blood by making the patient drink; that is the first thing; we must put water in before we can get it ~~XXXXXXXXXX~~ out; then, as the water comes out, it will bring uric acid out with it. We don't give a hot bath simply to get the water out,--why wouldn't it be just as well to give a diuretic as to give a hot bath?? Why wouldn't it be just as well to give him jaborandi or some other sudorific? ("The hot bath would relieve internal congestion."). Yes; but there is another thing.

How are you going to increase the oxidation of uric acid? Uric acid is a proteid waste; it belongs to the nitrogen class of wastes of the body.--("Applying heat brings about thermic reaction first.") Yes, but there is something more, and I will call your attention to it now: Cold increases oxidation of carbon,--that is, if you lower the temperature of the body, nature begins to burn up more carbon in order to raise the heat of the body--suppose you raise the body-temperature, what is the effect upon metabolism? It lessens carbon oxidation for some time; the first effect is to lessen the oxidation of carbon,--but what is the specific effect? (To increase the oxidation of nitrogen.") Yes, that is a universal rule; and it makes no difference whether the body temperature is raised by heat, by vapor bath or a wet-sheet pack--anything that will raise the bodily temperature above ~~the~~ normal will increase the oxidation of nitrogen; so you can see what a beautiful thing ~~the~~ hot bath is. By the hot-bath these waste substances will be attacked first,, because they have no resistance to the oxidizing process, so they will be readily attacked and easily dissolved and carried out. So the first thing for the rheumatic patient after this treatment would be to give him plenty of water to drink,--but we must go farther back than that: we must shut off his supply of meat and see that he does not take an excess of nitrogenous food; and he might take too much proteids-~~s~~ eggs, etc.--so we will give him a fruit and grain diet, ~~any~~ with nut-products sparingly; he needs fat, but he don't want too much. We will cut off his meat altogether, also his tea and coffee, the thein and caffeine which they contain being allied to xanthine bodies; more that forty years ago, Lehmann called attention to this fact; Haig has also called attention to it. We will give the patient from three to five pints of water every day. We will give him distilled water to start with,--why? By a law of osmosis, the movement of

water in the body will be toward the fluid which has the greatest specific gravity, hence its movement will be towards the blood, and the less salt we have in the ~~water~~ the more readily it will be absorbed; pure water will be absorbed more quickly when there is no salt in it. We will use carbonated water,--why? Because if the water is acidulated, the blood being alkaline, and the water being acid, the movement of the water toward the blood will be increased. A slight acidulation of water with carbonic acid gas increases absorption. The carbonic acid gas is a relief to the stomach; it quiets the stomach so that it will tolerate more water, and it will not readily accept it without such acidulation. Then we will give the patient hot baths, and the application must be continued long enough so that the temperature of the body will rise; and, in order to see just what effect you are producing, you must take the temperature of the body both before and after the bath, and report; the temperature should be taken and noted down immediately after the bath so that you can see what you have accomplished. If you have raised the temperature one degree only, then there has been not much oxidation; but if you have raised the temperature three or four degrees you have increased the oxidation of nitrogen considerably, and that must be noted down.

But this Patient wants something done for him besides the oxidation of nitrogen: because if we give him hot baths day after day, day after day, after a while he will say, "These baths are making me weak, and I can't stand it." If we continue the hot baths in this manner, the whole vital status of the patient will be lowered so that his rheumatism will gain ground instead of losing it, the activity of the kidneys and liver will be diminished because of the general impairment of the patient's ~~condition~~ vital condition; his

metabolism will be depressed, the reparative effect of the treatment will be depreciated and the patient will actually become worse from a too long continuance of these hot baths. Now as an antidote for the bad effect of the hot bath, we must give the patient a little cold-bath: Whenever you apply hot water, you must apply cold water right along with it, as an antidote for its depressing effects. A short application of hot water is stimulating, as is a short application of cold water; but a long application of hot water is very depressing, so we must apply cold water along with the hot water as an antidote for its bad effects. So by a proper combination of the hot bath and the cold bath we may get just the effect we want.

Now we want a long hot bath in rheumatism because we want to get an eliminative effect upon the uric acid, and the patient must have a short application of cold, because we don't want such a degree of internal congestion as to increase the pain of the patient and interfere with the oxidation of the nitrogenous substances which we have set up by the cold-bath; we will do something more for the patient: The half-bath will be followed by a cold application or Scotch douche,--the Scotch douche is best for the rheumatic patient, because we have a hot application to start with and a very short cold application to end with; the cold short application is long enough to tone up the skin and keep it active, and thus overcome the relaxing effect of the heat..The cold application followed by a cold towel rub is also valuable.

But we must do something for the rheumatic joints: fomentations and the heating compress are just the things for that. And while the patient is taking the douche we must be careful and not get the cold water on his sore joints, as it will cause him pain there; instead of that, we will put on a douche of hot water just sufficient to tone the skin, while the cold application is made chiefly

to the spine in order to get a tonic effect upon the nerve-centers.

But my "paper" is not yet done: We have taken up one single kind of case--a rheumatic case--but I would like to take up every other form of chronic disease if I had the time. But the thing I especially wish to present to you at this time is this: the fact that our hyđriatic prescriptions must be formulated with more care than a physician exercises in the preparation of medicinal prescriptions: Medicinal prescriptions are based largely upon empiricisms, while some physicians make prescriptions and others follow them,--for instance, you will notice that the medicinal prescription for rheumatism is salicylic acid. So frequently have the changes been rung upon salicylic acid in connection with rheumatism that it almost seems as though rheumatism were spelled "Sal.," for whenever you see "rheumatism," you see, as a prescription for it, "Sal.:" The patient takes the dose and feels better, but the relief afforded is only temporary. The patient's vital condition has not been improved. He has no better liver, stomach or movement of blood, and his joints are no better; he is the same old fellow that he was before taking the medicine, and he furnishes the same old soil for rheumatism to grow in, and he is going to drift back into the same old trouble again as soon as he stops taking that medicine. Now the application of hot and cold water will take out the uric acid and reconstruct the man so that he will be placed on a higher plane, and his tendency to rheumatism as well as the rheumatism itself will be removed.

Question: Would it not be well to use salicylic acid in connection with these other things, in order to render the blood more alkaline?

Ans. Our hot-baths do the same thing; cold baths render the blood acid while hot baths increase the alkalinity of the blood,--

but there is another thing that we can do: We can give the rheumatic patient large quantities of water to drink, and that will also increase the alkalinity of the blood. If there were no other means of making the patient sweat, we might fall back upon salicylic acid, but very likely we would not find that either; but if we didn't have anything to make the patient sweat we could ^{put} an overcoat or warm clothing on him and make him walk briskly for a quarter of a mile and make him perspire in that way,--that is better, even, than the hot-bath. But the question is, "Would it not be well to use salicylic acid in connection with these other things?" The fatal objection to that is, that salicylic acid is a dernier resort--it is a poison and would add to the burdens of the kidneys and liver, and these organs are already weakened. So it is better to use those measures which will aid nature in the work of eliminating poisons than it is to try to use antidotes, thus doing a more rational and scientific thing and accomplishing a much better and greater triumph than by merely making the patient feel more comfortable by the use of drugs.

Q. Is acute rheumatism always produced by a specific germ?

A. I don't think that question is entirely settled. But so far as chronic rheumatism is concerned, I am satisfied that it is a dyscrasia which is the result of errors in diet. Haig says, "Rheumatism is the meat-eater's disorder,--" and I think that is true also of a number of other maladies.

Now the thing that I wish to bring about in the Sanitarium is the adoption of a rational plan of making prescriptions, and putting a card into the patient's hands stating what his treatment is to be, so that he will understand it, and will know, as well as the doctor what progress he is making. I would like, Mr. Chairman, to

have our Faculty consider this matter and see whether this would not be a good method of dealing with our cases.

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MEDICAL FACULTY MEETING, Feb. 6, 1900, (con.)

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DR. KELLOGG: Suppose we have a clinical case to-night, for a
prescription: I had a case not long ago, some of the symptoms of
which I noted down; as it proved to be quite an obstinate case, and
quite often encountered, I thought it would be well to present them
here. This patient complained that he couldn't breathe; that he
was dying; that he couldn't digest any more; that his bowels didn't
act any more; that he had Bright's disease of the kidneys; he has
quite a little albumen in the urine, and casts. He cannot keep his
hands and feet warm. He has a good deal of headache, and is very
much depressed.. He has got in the habit of complaining until he
is a depressed neurasthenic. The symptoms that he complained of
most is that his feet are cold when he goes out walking,--they keep
cold all the time; the more exercise he takes, the colder his feet
get. That is a fact,--his feet are cold.

DR. STEWART: He told his feet were freezing, one morning,
but I found that they were quite warm.

DR. CRAIG: He claimed that he had no feeling. He got up
by the refrigerator, and was told that he must be careful or he
would be burned. "No" he wouldn't, he said, but he put his toes
against them and cried out "Ouch!"

DR. FULTON: It is a case of hypochondria, and the de-
lusions are of a personal character.

DR. CRAIG: I gave him a cold enema for his constipation, and
after that he was happy, and before that, he was in a great panic.

DR. KELLOGG: I remember a lady who was here some two years
ago. Her husband came to see her, but she told him she was dead,--
said she, "My husband comes to see me, but I don't care a fig for

him; I am not at all glad to see him.." She said she wasn't hungry; that she didn't care whether she ate or not. She said she knew she had no brain; that she couldn't think, and that she was utterly dead. Of course it was a mental case, and was treated as a mental case. This woman has been in absolutely sound health for three years. For the first six months she got worse, but it was simply a development of the disease. Her name is Mrs. Foster. This was six or seven years ago. She was lean when she came here, but she gained in flesh greatly and made a beautiful recovery.. I have seen a number of these cases get well,--they are slow, sometimes, but they get well after a while; I don't know as they all get well, but I have seen a great many of them get well.

Now this coldness of the feet of this patient,--he does have cold feet, I have no doubt; this is just the sort of patients who do have cold feet. The only way was, to take his symptoms down one by one.. Cold feet is a characteristic of neurasthenics; many of them have cold hands and feet when they are on their feet and undertake any exercise. They go to bed and lie horizontally and are warm and comfortable.. The best way to deal with such cases is to employ the Scotch douche or else a running foot-bath: the tub is not more than a half an inch deep, the water running in and out of the tub. The patient stands in the tub and rubs one foot with the other; this is continued until the feet become red and burn and tingle, and there will be a strong sensation in the feet. Begin with a half -minute application and increase the applications from half or a quarter of a minute, until at the end of the week the patient will be able to continue the bath for ten minutes. The colder the water the better; the feet will be red three or four minutes after th

the bath,--they will be red, just as your hands used to be red after snowballing, the vessels being permanently dilated by this means. But if they are dilated with hot water, the difficulty returns ; yet * if there is not much vigor, it is necessary to dilate them with water to start with, following this up with a short cold application so as to transform the reaction of heat into a reaction of cold . The most permanent effects are produced by the running cold-foot-bath and rubbing the feet. If the patient is very feeble and cannot rub his own feet while standing, his feet may be held over the bath and rubbed for him. The cold plantar douche has a similar effect; rubbing the feet helps ^{in producing the} ~~increase the~~ reaction ,-- you get a double action and accomplish a double purpose--he is rubbing the sole of one foot and the back of the other at the same time.

Another symptom the patient spoke of,--headache after treatment; he says that for about fifteen minutes after the bath ,he feels better, and then he begins to feel worse, and he says his treatment gives him a headache. There are several things which will cause headache after a treatment. One of the things that will cause a headache after treatment, is a hot bath without a proper cooling off afterwards, leaving the heart excessively excited, too much blood pumped into the head, the circulation not being properly balanced. The next thing most likely to produce headache , is a cold-bath producing too strong a reaction causing an excitement in the circulation and too much blood sent to the brain. The third and most common cause of ~~reactive~~ headache is a deficient reaction; there is congestion produced by a failure to react; the head remains

congested with the blood which is forced into it; the blood is also forced into the internal viscera, and does not return to the skin.

Patients who have this excessive reaction have hot heads, the face is flushed and congested, and the vessels are swollen and the pulse excited, while the patient who has deficient reaction has cold feet, and the pulse is small and of high tension.

What are the causes of excessive reaction? It might be a too long bath, but it is more likely to be too cold a bath. An excessive reaction is not nearly so common as a deficient reaction. But the patient may have a long hot bath and not be sufficiently cooled off afterwards--if the patient has a long hot bath and a very short cold application afterwards, the reaction will be very excessive and very strong, because a cold bath in itself makes a strong reaction.. That matter can be remedied by giving the patient after his hot bath a prolonged ~~rain~~-douche or shower at a temperature of about 92°, gradually cooling the skin down, and if the skin had been cooled down to a normal temperature, and it up with a short cold application. The difficulty is, that when a ^{very} short cold application is employed after a hot bath, the such heat remains in the skin and the patient is in a state of excitement and reaction and is inclined to perspire. The reason patients perspire freely is because they have not been cooled off enough, and this should be done by a bath at 85°, and by a short-sharp cold application with a good deal of pressure--as much as they will bear.

If the patient has a failure to react, this might have been due to a too prolonged, or a very cold application, or a cold application that was not at a sufficiently low temperature, or the application was not cold enough, or was an excessively prolonged and very cold application. If the water is not cold enough the re-

action will fail, for the reason that the skin is not sufficiently excited, and if the patient is too cold and the bath too prolonged, then the reaction fails because so much heat is extracted from the body that the feeble patient is unable to manufacture heat enough to warm him up. Of course there will be different classes of patients.

A patient who has a failure to react: This may be because the application was not prolonged sufficiently, or because the temperature was not low enough, *thus, may be the case* in any kind of patient, because the reaction depends upon the temperature. The patient who is likely not to react because of excessive cold, is the feeble patient who is not making very much heat,--diabetics, for example, and chronic dyspeptics with dry, inactive skins, very feeble neurasthenics--people whose nervous systems are exhausted, or feeble convalescents, or people just recovering from a fever--and generally feeble patients. Patients who are strong and vigorous always react after a cold application, even if it is quite prolonged. Such patients will have an excessive reaction after a prolonged application, while feeble patients will have deficient reaction. This is generally indicated by cold feet, headache, languor, a feeling of great exhaustion and debility nervousness and helplessness--all these are indications of visceral congestion.

Now what made this man's head ache I don't know; but when the patient complains of headache, it is important to investigate his treatment and see what was the cause of it. Perhaps the hot bath was excessively prolonged so that the patient's internal temperature was caused to rise too high. Neurasthenics don't stand hot baths,--it is the worst thing in the world for neurasthenics, because *they will produce oxidation of the nitrogenous substances in the*

body, causing an accumulation of toxic elements which will increase the patient's nervousness and neurasthenia. So the neurasthenic must have a short hot bath--just enough to induce the beginning of perspiration, and depending upon the cold-bathing for building him up; there must be more hot-bathing after he has more nerve-tone; that is the reason the treatment must progress very slowly in these cases.

According to my experience, a long neutral bath is ^{not} the best thing for the neurasthenic; he cannot stand the prolonged neutral bath,--they cannot stand either ^{prolonged} hot or cold, as a rule, although there is an exception now and then. We may give him a very hot bath 115° to 120° for ten to fifteen seconds, and it will have a very excellent tonic effect afterwards, and the patient won't take cold.

Very hot baths must be short, and must be given with all the pressure you can produce, so you can by a very hot bath produce the same effects as by a very cold bath, but it must be very hot and very short--you might get it up as high as 122° to 125° .

Now what should be done for the constipation? The patient's bowels are very inactive and tense. There are a number of things that I have prescribed with success in such cases: The first thing that I might mention, and the best thing to try, to begin with, is the graduated enema--the warm enema, at a temperature of 92° to 95° . Give him a copious enema while lying upon the right side so as to empty the colon completely. Begin with an enema large enough to fill the colon--about two quarts to five pints, so that you can thoroughly empty the colon. The next day, use a half a pint less, and replace the half-pint with very cold water; the next day leave out another half pint, and so on, replacing it with another half pint of cold water, and so on, diminishing the quantity of warm water and lower-

ing the temperature, so that at the end of the week the patient will have an enema with only a pint of cold water at 50° to 70° . You can usually in almost every case, get just as good a movement by the use of cold water as you did with warm water. The patient may continue the use of the pint of cold water indefinitely without harm; the harm in the use of enemas is the continued use of warm water, which is relaxing and the bowel loses its normal sensibility. If you put the patient into a neutral bath ~~and~~ it will diminish the cutaneous sensibility, and if we introduce water by enema at the same temperature it will diminish the mucous sensibility of the bowels so the normal sensibility of the rectum is diminished and the patient must depend upon mechanical means, stretching the colon till it is forced to contract and empty the bowels. Now if you use cold water, it produces a reaction, and the circulation is stimulated and the parts are brought into a more healthy condition, and we can use cold water right along continuously--two or three months--with improvement of the bowels, just the same as we get an improvement of the skin by the application of cold water to the skin; it is very important to note that fact, and to assure patients of it so they won't feel alarmed because you are using the cool enema for some little time. The patient is able to dispense with the enema because the tone of the parts is improved.--

Q. If the bowels don't move after the cold enema shall we use the warm enema?

A. Yes,--but always use the cold enema at the close. You use the warm enema for the purpose of relaxing the bowels, afterwards use the cold enema for the tonic effect upon the bowels; the warm enema should always end up with the small cold enema.

Another excellent thing to be used is the graduated enema,-- getting it down to a pint, following it with a cold enema, and continuing this for some little time. But suppose you find that a pint does not move the bowels: Increase it; when the patient can tolerate the cold water, increase the quantity until the cold water does move the bowels; then gradually decrease the quantity again using cold water only, using just as little as you can, decreasing it ounce by ounce, if necessary, until the patient is able to get along with a very small quantity.

Another thing that is valuable and at the same time perfectly harmless, is the use of linseed oil at night. It is important to inquire why the bowels do not move; I let the patient tell me that. At one time the patient will say "My bowels don't move because the stools seem to be ^{hard, dry} top hard and dry. In these cases the stools are ^{sometimes} packed in large masses and is in that form when the movement occurs. This is rather an uncommon form. Another patient will say: "I have no desire whatever for my bowels to move,--I don't seem to have the slightest desire for it." In that case, there is a loss of normal sensibility. In the case in which the stool is dry and hard the cause is a deficient secretion of fluid. In this case I was very much puzzled because the patient ~~became~~ became constipated after he came here; I gave hot baths, and he ~~became~~ became constipated and I couldn't tell why, but it was because so much fluid had been taken away, the action of the fluid being toward the surface instead of being inward, and consequently there was an excessive action of the ^{skin} and sweating ~~was~~ produced an excessive absorption of the mucous membrane. Now experiments show that sweating-baths increase the absorbing power of the mucous membrane--it increases the activity of the absorbing power of the mucous membrane, and that is the reason the

way the stool is hard and dry under hydriatic treatment, in some cases. So it may be our treatment that is making the patient constipated; we must determine that question. If the patient is having a sweating-bath every day to reduce a fever, such patients are likely to suffer most in this respect. Rheumatic patients are likely to suffer in the same way. Rheumatics, obese persons, and sometimes diabetics are likely to suffer in this respect. You can see why diabetics would suffer,--because of the elimination of great quantities of water through the kidneys, the sweating-bath besides, increasing the activity of the skin--these classes are especially likely to suffer from constipation. First of all, local applications should be given,--I first ask the patient how he is getting along. The patient says he is constipated; the stools are so dry and hard that he can hardly expel them, and he wants his bowels to move. Another patient will say. Another patient will say he has no desire that his bowels shall move. The trouble with a majority of such cases, is, that there is a very low nerve-tone. The patient's legs are weak, and he cannot take much exercise in the gymnasium, when you get his strength tested, it is about one-half what it should be, the intestinal muscles are unable to contract as they should, and the abdominal muscles are too weak to aid in defecation. Many of these patients who have no desire to have their bowels move, have flatulence, which means the retention of fecal matters in the colon,--intestinal flatulence always means that--and it is a good thing to remember that, and to wash the colon out. If the patient has flatulence in the stomach, that means constipation of the stomach, as a French writer calls it.

One reason for this loss of sensibility is due to the

"Pratt operation",--the operation of Dr. Pratt or some of his rectal specialists, by which the sensitive portions, which are the external ends of the rectal reflexes, and the reason the fecal contents are expelled is because they work down, little by little, into the colon, being crowded down, ^{and out} by the previous meal and the peristaltic movement and coming in contact with the rectum where there are sensitive nerve-endings which are drawn in, through the centers controlling the abdominal muscles, and also the intestinal muscles; when the patient has sensitive ganglia we know the abdominal muscles are drawn in permanently. Now ordinarily that drawing-in of the abdominal muscles is set up by the contact of the fecal matters with the lower portion of the rectum. When the patient has neglected to move his bowels at the proper time, he by-and-by accustoms himself to this contact ^{of} with fecal matters ~~fecal matters~~ with the rectum and does not mind it, so it is a common thing to find the rectum loaded with fecal matters. Ask the patient if his bowels have moved today, and he will say "Yes," but the rectum is always full in these cases, and the colon becomes absolutely filled up, and there is simply a portion crowded out, but the rectum is left full. Such patients have lost the normal sensibility of the rectum, and this must be restored by some means.

There is still another class of patients which is very common: The patient says, "I feel an extraordinary desire to evacuate my bowels, but there seems to be something that closes the rectum, and I can't make my bowels move; I have not power enough to expel the contents of my bowels,--there seems to be something which ~~shuts~~ shuts down at the anus and won't permit the contents of the bowels to pass out." What is the matter? There is a reflex spasm of the

sphincter muscle, which is not so common as the rectum-specialists assert it to be, --but it does occur sometimes, especially where there is a local lesion of any kind, which produces an excessive irritation of the lumbar ganglia of the sympathetic and a reflex spasm, as there is sometimes a spasm of the bloodvessels.

You can readily see that these different cases require a different kind of treatment, and it is important to differentiate these cases; there are still other cases, --and I might mention just one more:

The patient is entirely careless as to the way in which his bowels move. Now the movement of the bowels is a rhythmical movement: When the food is taken into the stomach it sets up a peristaltic movement which travels the whole length of the alimentary canal; it takes fourteen hours for the meal to reach the colon, and then it remains in the colon ten hours more in order that absorption may be completed; that is the normal condition of things.. When a person takes his breakfast, peristalsis is set up causing further movement of the contents of the colon further along the colon until it reaches the point where it sets up a reflex movement by which the whole contents of the colon will be expelled. Now suppose a person misses his breakfast: If he misses his breakfast he misses that vis a tergo which moves the contents of the bowels along, and he becomes constipated simply by irregular meals, and the result will be an irregular habit of evacuating the bowels. So it is important to explain to constipated people the philosophy of the daily evacuation of the bowels and of regular meals, the ~~first~~ morning meal being the stimulus that causes the peristaltic movement.--

Q. Then should there be as many vacations of the bowels as meals?

A. No, because absorption takes place in the night while the patient is at rest...The morning cold bath is a good thing for the stimulation of the peristaltic movement.

Q. Does the innervation of the small intestines and the large intestine come from the same source?

A. No; those of the intestines come from the lumbar ganglia; those of the solar plexus go chiefly to the stomach, and there is a small portion sent to the kidneys, liver, spleen and pancreas; but the intestines receive their supply chiefly from the lumbar ganglia.

Now the things to be done in constipation depends upon the kind of constipation you have to deal with;— and it is important to find that out. There is no such thing as treating constipation by a routine prescription. Suppose the patient has a dry stool: The cold enema will help that, because the reaction which follows will increase the amount of secretion of fluid. The application of the cold bath in these cases is of great value, for it drives the blood in and produces an increase of the secretion of the mucous membrane. Drinking cold water is also of great value in these cases, for the same reason.--

Q. What would give in case of the spasm referred to?

A. A cold enema. That is one of the best things to increase the secretion of the mucous membrane. ^{The patient} He will be greatly helped by simply giving him shallow baths and wet rubs and an oil enema at night--four to six ounces--every night. I got that idea from a quack doctor in Chicago: A lady told me that he gave her this remedy and

it cured her constipation .

Another reason for the good effect of oil: It lubricates the bile.. I don't see why those who have the appendix removed does not have this trouble. Dr. Andrus has shown that the appendix secretes a mucous which lubricates the end of the colon, smearing over the fecal matters so that they can pass along. I cannot believe that the appendix is a vestige of the time when men lived in the tree-tops and brushed the flies off their noses with their ears; I don't believe it is a "vestige of a third stomach". I believe it has a function just as much as every other organ of the body has a function. You know they used to tell us that that was true of the thymus gland in childhood, but now it is recognized as a poison-destroying gland, and helps us in typhoid fever and in pneumonia.

Now, turning back to the cases of dry stool again: Cold water and linseed oil enemas--four to six ounces of oil--to be renewed every night. The oil itself is stimulating to the bowel; when taken by the mouth in these cases it operates in the same way. When it is taken in large quantity, it is not digested, but passes into the colon and lubricates the mass. I knew a man who was troubled with constipation, and he took two table-spoonfuls of vaseline every day after each meal; he has done so for the last ten years, and it has worked well; it will work satisfactorily in the majority of cases. In some cases it is necessary to take the cold water enema before breakfast, and sometimes to add it after breakfast. In some cases it is entirely sufficient to introduce a half pint or a pint of cold water slowly at night and retain it over night. That will excite the secretion so that in the morning the bowels will be ready to move. Sometimes one of these methods will succeed and sometimes another,--

and sometimes we have to try them all..

Now the cases of deficient sensibility when there is a loss of the rectal reflex: We cannot say the rectum is paralyzed, but it has no sensation,--they recognize that to be the truth. The cold enema is ^{of great value} ~~grateful~~ in this case, because the reaction set up by the cold restores the normal sensibility: one of the best means of restoring normal sensibility is the cold enema,--it is one of the best remedies we can use, in the first two forms. Hot and cold irrigation of the rectum is excellent, temperature 120° for hot and as low as you can get it for cold, say 60°. We have little irrigators for that purpose that you can get at the pharmacy. I had them made first about fifteen years ago, I think; I have used hundreds of them since.

The use of electricity is very valuable in these cases. The Galvanic current is hardly safe to use, because it sets up an irritation, and may introduce a little infection; it might be used, however, if properly protected with cotton. I have found best results from the Sinusoidal current, using the slowly interrupting current, applying one electrode to the rectum and the other to the abdominal muscles. It is useful ^{for the abdominal muscles,} ~~when we have paresis of the rectum,~~ we almost always have paresis or paralysis of the rectum when we have diminished activity of the abdominal muscles: this occurs in atonic cases; so it is useful both for the rectum and the abdominal muscles; it should be applied strong enough to make the abdominal muscles contract. With each movement of the current--with each alternation--there should be a good strong movement of the ascending colon.

The alternate hot and cold douche is another measure of great value in cases of this kind. A short, very cold douche is useful. Compresses can be used in place of the douche, when you can't get the douche--the hot and cold compresses.

There is another series of measures which are valuable in these cases: The glycerine enema at night,--a small amount of glycerine introduced into the rectum--a glycerine suppository at night, and before breakfast---after breakfast waiting ten to fifteen minutes for the bowels to move. I used to use, in such cases, camphor water--twenty or thirty minims of camphor in a couple of ounces of water--and I found it quite serviceable. A small cold soap enema may be used adding a little cool water,--but I rarely ever prescribe these things, for glycerine will accomplish the same thing all that is necessary.

Another measure which is good for both kinds,--the larger constipation and the less,--for the rectal reflex: The patient should sit in water about four inches deep and of a temperature of 55° to 75° , rubbing continuously; the cold water causes a contraction of the involuntary muscles and of the intestines, and also increases the activity of the glands; it increases both secretion and intestinal contraction; it increases the contraction of the abdominal muscles also. The patient sits in the cold water rubbing, with the abdomen drawn in tight, and breathing hard, his chest acting in this way (illustrating.) while the water is being plashed upon him. That involuntary action is evidence of the powerful reflex action which is being produced,--it is entirely involuntary and the patient cannot help himself, so you can see that it must have a very excellent effect.

of the rectal muscle:
spasm, --In these cases the very opposite thing must be done: The patient should take a warm enema., the temperature being from 95° to 102°, and he should have a prolonged warm sitz-bath, so as to relax the parts; the patient should take that often, and about the time for the bowels to move. Sometimes a patient must be relieved by having some water poured into the "chamber" when boiling hot, and the patient sits over the chamber with the boiling water in it--or he may use a pail ^{containing} with boiling water --this would seem to relax the muscles of the anus so that the bowels are permitted to move. Such cases sometimes occur in neurasthenics with strong, high nerve-tension, --extremely nervous; can't sleep; an extremely nervous irritability will cause this spasm of this sphincter muscle. I don't think these cases often require surgical measures, but I think that once in a while a surgical procedure is justifiable. Gradual manual dilatation is sometimes just as good as thermal dilatation, --first introduce the thumb into the rectum, and then the thumb and forefinger which makes a wedge, then put in both ^{thumbs} fingers, starting in this way (illustrating) and making firm pressure upon the anus, the patient bearing down until both thumbs are introduced; then spread the ends of the thumbs out just a little, and you will have a little leverage in this way, and by degrees the sphincter may be made to relax. The introduction of vaseline suppositories or cocaine is very useful in these cases. A prolonged neutral bath is very good for the patient, as a means of relaxing the general nervous system and lowering the nerve-tension. When the patient gets over his neurasthenia this difficulty will disappear. The application of the moist abdominal bandage is very valuable also in these cases, allaying abdominal irritation.

Q. What diet should be used ?

A. Let the patient have granose, gran nut and similar foods, regulating his nutrition in such a way as to afford relief. Malt & nuts and the coarse grain preparations are all of them laxative. One reason the patient gets constipated is, that he does not have ^{sufficient} fat-tening foods. We used to have a deficiency of fat in our foods, but our nut-products are easily digestible and relieve constipation in many cases. Malt-honey is laxative, and I have made arrangements for it for use, so that it can be supplied to patients when necessary. I have been trying it, and, although I can't eat sugar without a sour stomach, I can eat a saucer-full of malt-honey without any bad effects; and I let one of my little boys at home eat what he wanted of it, and without the slightest inconvenience from it. Mrs. Kellogg takes six or eight ounces of it every morning, and has done so for some time; she has been using it instead of bread for a year; she can't take bread because she can't digest starch in that state. She can digest malt-honey because it is simply bread digested. Those who like sweet can take it in this form, and those who want to take starch can take it in this form without difficulty,--when your patient wants to get the effect of ~~starch~~ malt or digested starch he can use malt honey.

Q. Would you use the moist abdominal bandage in any other condition except spasm?

A. Yes; it is of great value as a means of increasing the intestinal secretion. In these cases it is better to apply the heating compress without the protection of rubber, when you can; but if the patient says he is cold, it is better to put on the rubber protection, because they are then not likely to get overheated,--

such patients have such small heat-making powers that they are not likely to be overheated; but the full-blooded patient who can wear the heating compress should wear it without the rubber protection, because in such a case the rubber protection will cause such an amount of heat that the result will cause a congestion of the bowels and increase the tendency to hemorrhoids. The heating compress is good in all kinds of cases of constipation.--

Q. It increases the amount of blood in the canal, and thus increases the secretion?

A. Yes; it increases the amount of blood by dilating the bloodvessels, and the same application that causes the dilatation of the bloodvessels causes the dilatation of the glands.

Q. You mentioned the fact that it had a sedative effect, and relieved the pain?

A. It acts as a fomentation,--it is an analgesic; the cold at the beginning is what produces the reaction in the intestine, and the accumulation of heat later acts as a sedative...

I am sure if you keep these principles in mind and follow them, you will be relieved of a great deal of trouble in these cases of constipation; they used to trouble me, and I resorted to the use of medicines, Cascara, etc, until I got disgusted with them and threw them away. I think we can master every single case ^{better} without medicine *than with it.*

ADJOURNED.

I would like to say ^{a word} at the close of my speech in regard to the necessity of abdominal massage, mechanical movements, etc., in connection with the treatment of the patient.

Dr. Kellogg.

The Battle Creek
Sanitarium

MEDICAL
MISSIONARY
TRAINING-SCHOOL

ORGANIZED 1883



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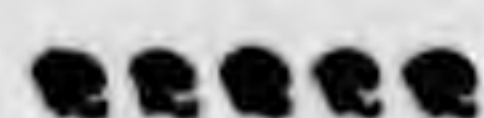
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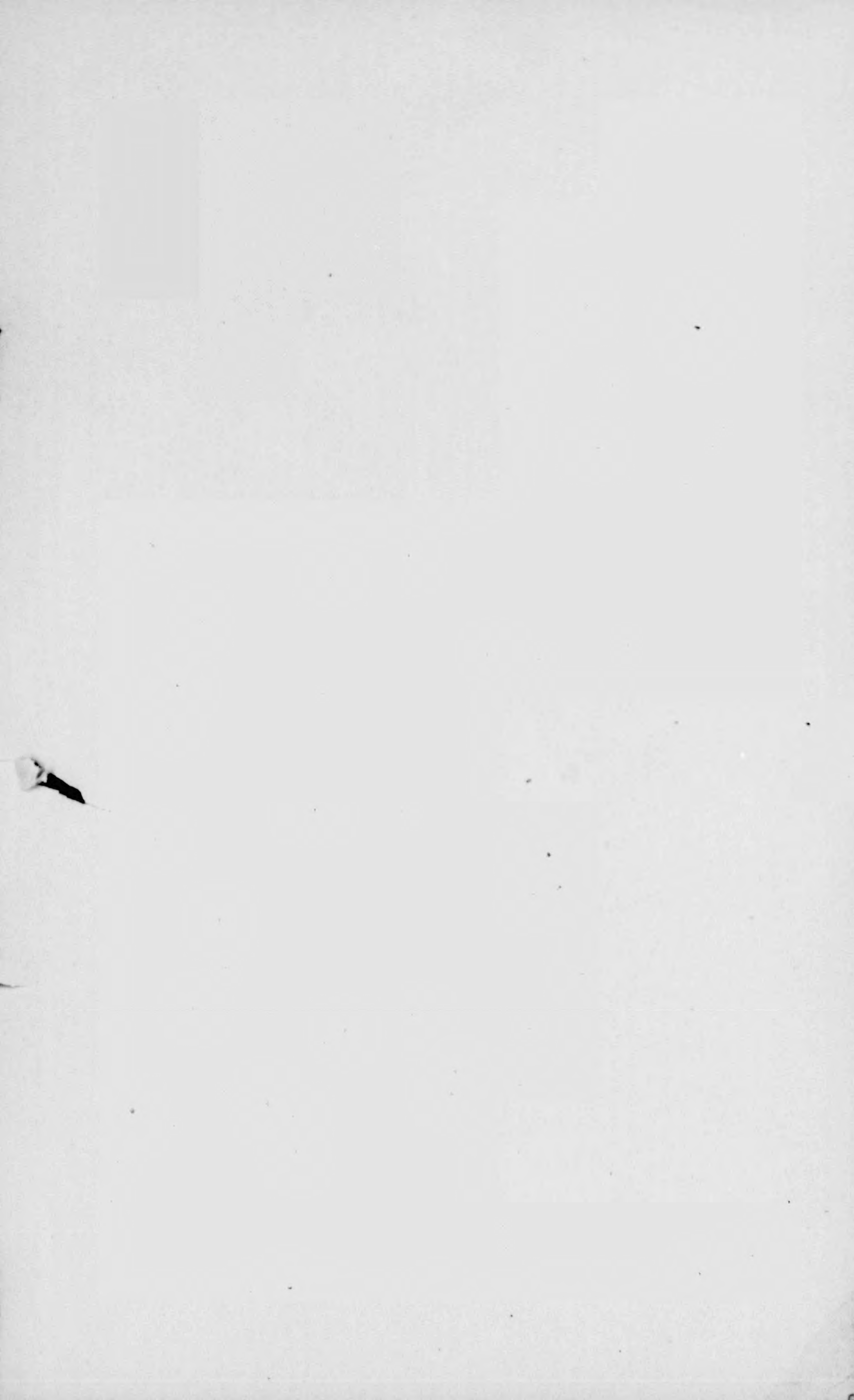
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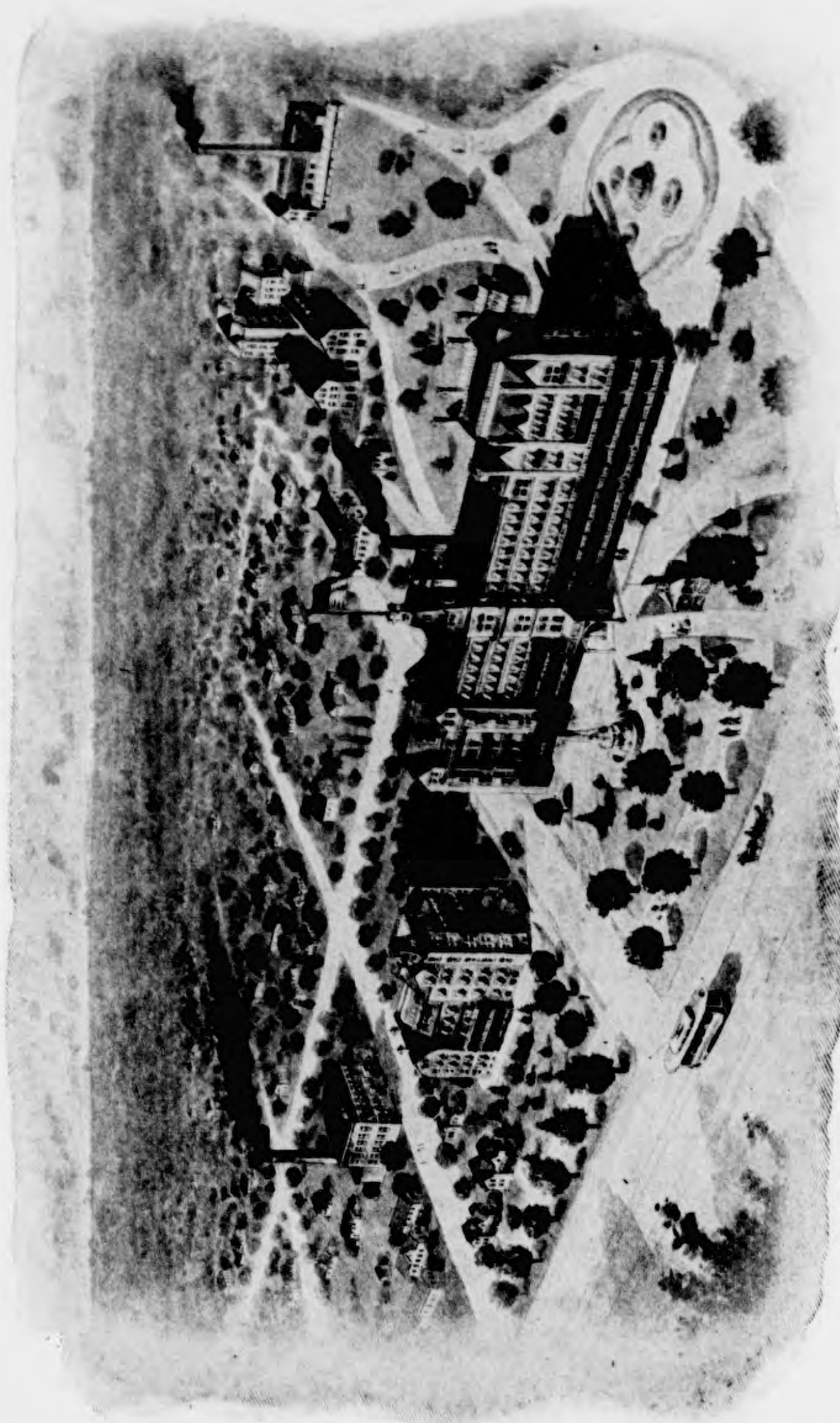
Battle Creek Sanitarium

Medical Missionary
Training-School



ORGANIZED 1883





BIRD'S-EYE VIEW OF THE BATTLE CREEK (MICH.) SANITARIUM AND GROUNDS.

ORIGIN AND SCOPE OF THE BATTLE CREEK SANITARIUM MEDICAL MISSIONARY TRAINING-SCHOOL.

THIS is an institution for the training of young men and women to engage in various lines of medical and other philanthropic work on a gospel and Christian basis, under the direction of regularly organized missionary boards. The school is evangelical, but unsectarian in character. The gospel is made the basis of all its work. No pupils are received in any branch for merely professional training; only those are received who give evidence of having a divine call to missionary effort along the lines which it is the purpose of this school to promote.

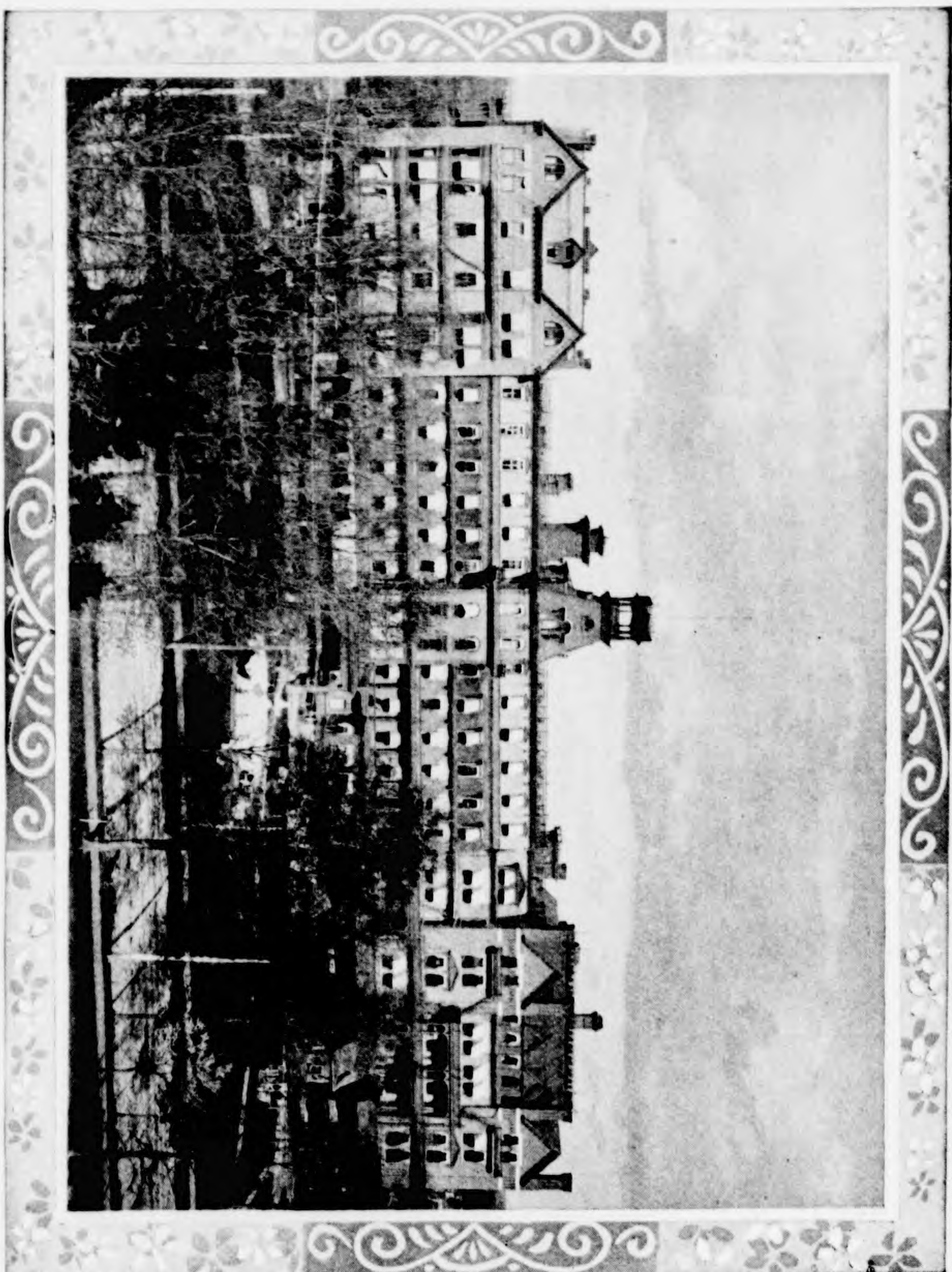
The first systematic educational work began Oct. 1, 1877, in the organization of a School of Hygiene, which a few years later developed into a Nurses' Training-School, the organization of which was completed in 1884. The thorough course of instruction and the excellent facilities for practical work called many hither who came from varied motives; some from love of humanity and a desire to increase their capacity for service in God's work; others with a view to entering an occupation which would prove lucrative, and to which open doors would be readily found by those who could secure the credentials of this institution.

In 1888 steps were taken for the organization of a distinctly Medical Missionary Nurses' Training-School, which was completed a year or two later, since which time no persons have been received as students except those who were believed to be fully consecrated to medical missionary work.

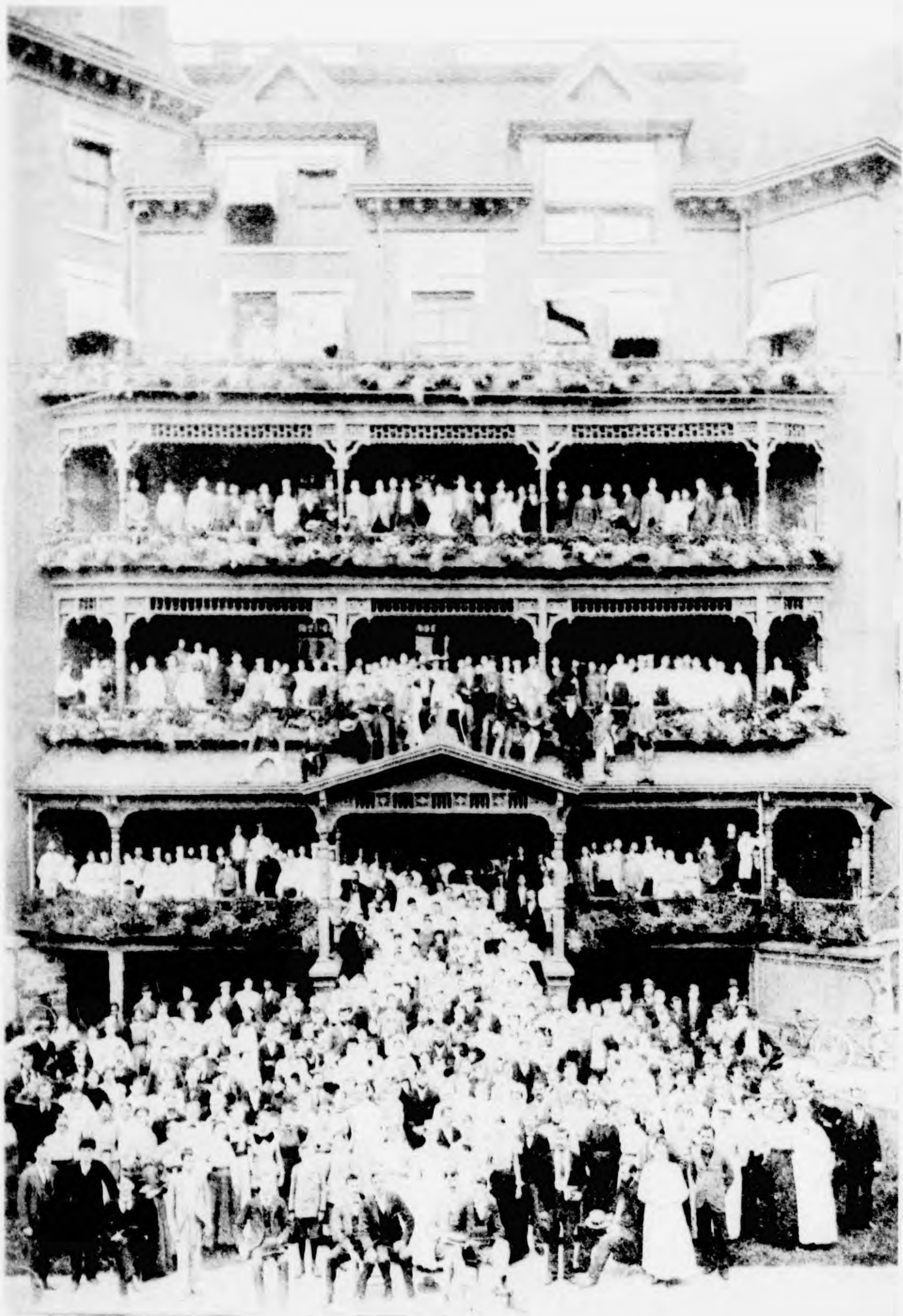
From year to year other training courses have been added, until at the present time it is believed that the Battle Creek Sanitarium Medical Missionary Training-School presents larger and more varied advantages for the training of missionary workers in medical and philanthropic lines than any similar in-

stitution which has heretofore been established. The school is indeed quite unique in the extent and variety of its training and in the specially favorable opportunities which it affords its students for both theoretical and practical work.

The purely professional opportunities are so varied and complete that applications for admission are received every week from persons who desire to avail themselves of the training afforded as a preparation for purely professional work. But such applicants are constantly refused. In addition to these facilities and advantages, abundant opportunity is afforded for practical experience as well as theoretical instruction in all the various lines of gospel and rescue work. The details of the several courses of instruction, and, so far as possible, the methods employed, will be found in the following pages.



THE MAIN BUILDING OF THE BATTLE CREEK SANITARIUM.



DEPARTMENTS

....of the....

BATTLE CREEK SANITARIUM MEDICAL
MISSIONARY TRAINING-SCHOOL

....and....

AUXILIARY COURSES OF INSTRUCTION.

| | | | | |
|-----------------------------------------------|---|---|---|---------------|
| Missionary Nurses' Training-School | - | - | - | 2 years. |
| Health Teachers' Course | - | - | - | 1 year |
| Missionary Mothers' Course | - | - | - | 2 years. |
| School of Scientific Cookery | - | - | - | 6 months. |
| Special Summer Course | - | - | - | 10 weeks. |
| Course in Physical Culture and Rational Dress | - | - | - | 6 months. |
| Industrial, or Preparatory Course | - | - | - | 1 year. |
| Medical Missionary Institute | - | - | - | 4 to 6 weeks. |
| Chicago Medical Missionary Training-School | | | | 40 weeks. |
| The American Medical Missionary College | - | - | - | 4 years. |

Change

INSTRUCTORS OF THE BATTLE CREEK SANITARIUM TRAINING-SCHOOL FOR MISSIONARY NURSES.

| | |
|----------------------------------|--------------------------------|
| J. H. KELLOGG, M. D., | JEANNE WHITNEY, M. D., |
| DAVID PAULSON, M. D., | MRS. E. E. KELLOGG, |
| H. F. RAND, M. D., | MRS. M. S. FOY, |
| ABBIE M. WINEGAR, M. D., | MRS. S. M. BAKER, |
| LAURETTA KRESS, M. D., | ELDER G. C. TENNEY, |
| MARY WILD-PAULSON, M. D., | MISS LENNA WHITNEY, |
| C. E. STEWART, M. D., | F. O. RAYMOND, |
| MRS. E. H. WHITNEY, | MRS. S. M. I. HENRY, |
| MRS. MARY BYINGTON NICOLA, M. D. | |

Regular terms begin ~~November~~ 1 and ~~May~~ 1.

REQUIREMENTS FOR ADMISSION.—Students are admitted at any time when classes are not full.

1. Students should not be under twenty-one nor over thirty-five years of age.

2. A good moral character, and a genuine Christian experience.

3. Good health.

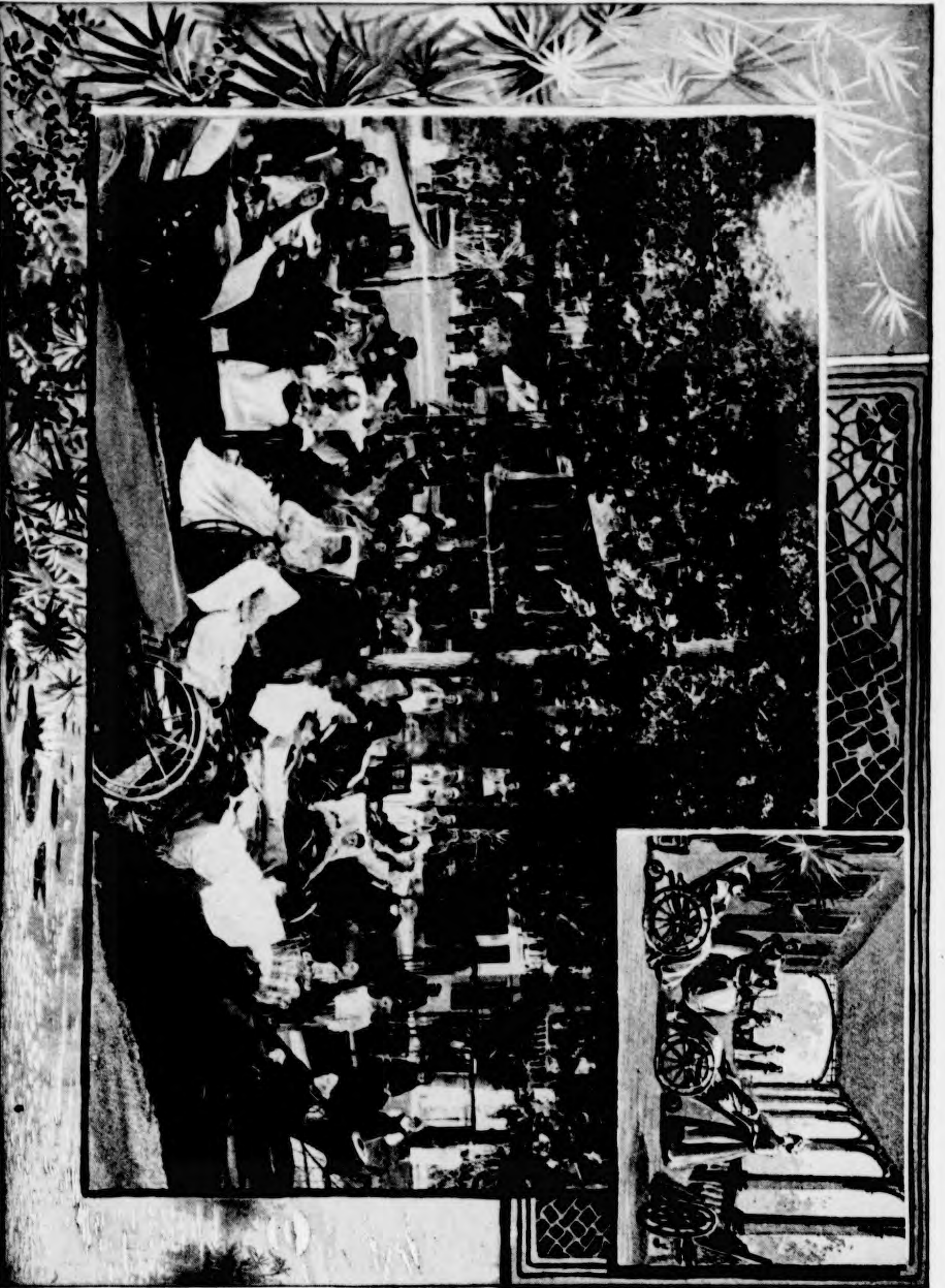
4. At least a good common school education.

5. Physical and mental adaptability to the work of nursing.

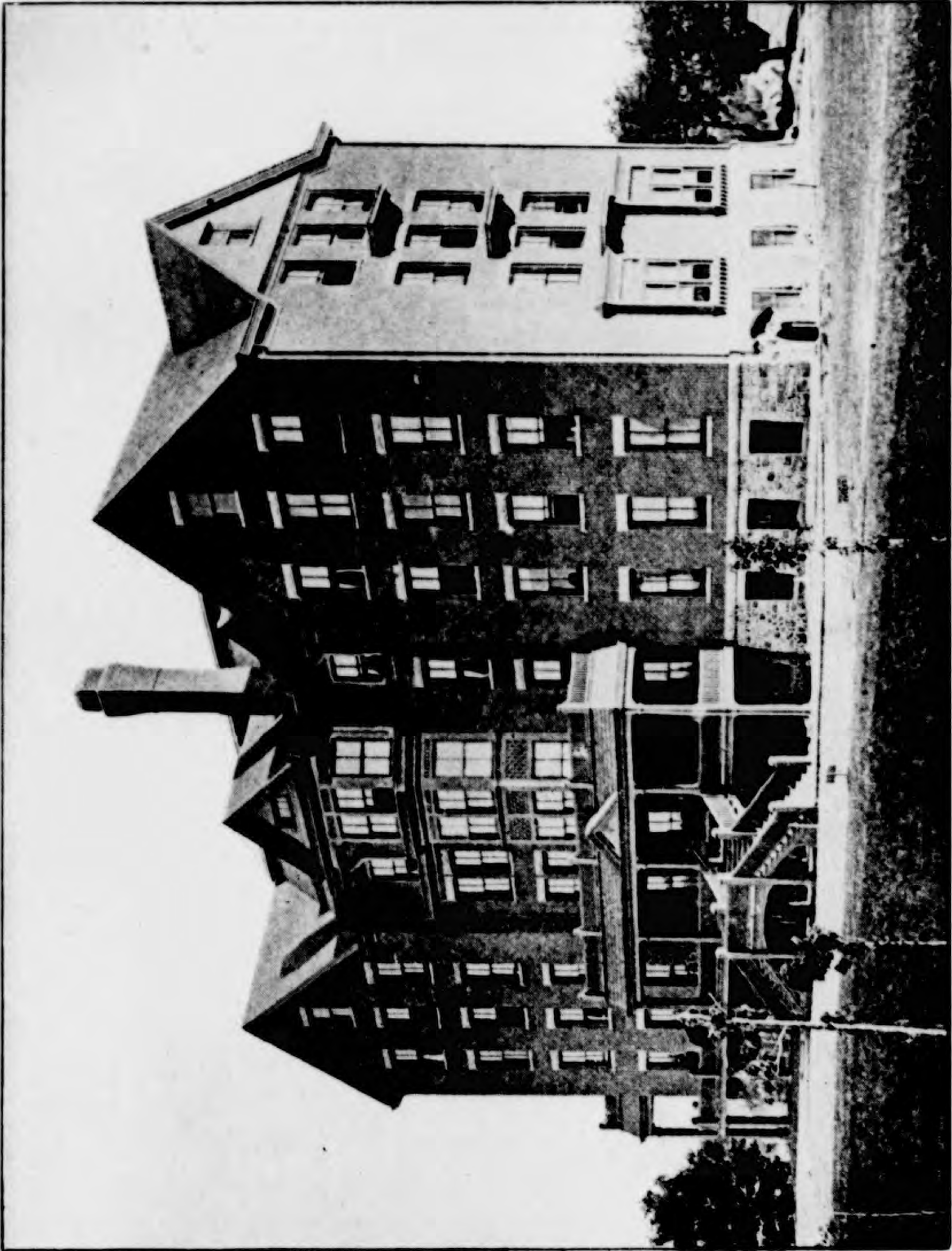
6. An intelligent consecration to missionary work, and a set purpose to devote the life to medical missionary work in lines conducted by the International Medical Missionary and Benevolent Association.

7. Satisfactory recommendations from reliable persons with whom the managers are acquainted.

TERMS.—During the first year of the course the students receive uniforms and books, besides board, room, and instruction, and are expected to work full time. After the first year a small salary is paid for full-time work in addition to board, if the work is done satisfactorily.



A WHEEL-CHAIR SOCIAL ON THE SANITARIUM LAWN.



[8]

THE NURSES' DORMITORY.

GENERAL PLAN OF INSTRUCTION AND TRAINING.

The Sanitarium Training-School is no exception to the rule that a certain amount of what is called domestic training is necessary before a nurse is passed on to her specific duties. It is needful that she shall know how to make beds and take care of her patients' rooms, as well as to give treatment. She must know how to prepare and serve foods nicely, to set a tray attractively, and numerous other things that go to make an ideal nurse, and without which her work for the sick must always be unsatisfactory. These things she learns in the preliminary weeks of chamber-work, care of the halls, or work in the dining- or serving-room; she may also be called to the ironing-board or sewing-room; or if the nurse is a man, he may have to assist in cleaning carpets or moving furniture, or other domestic or out-of-door work. Meantime the course of theoretical and practical instruction is going on; and when the nurse is sent to the bath-room for actual work, he or she has already a fair idea of what is required, and the work with patients is not an experiment.

OUTLINE OF THE COURSE OF STUDY.

FIRST YEAR.

| | | | | | |
|--------------------------------------------------|---|----------|---|---|------------|
| Bible and Missionary Study | - | - | - | - | 100 hours. |
| Anatomy, Physiology, and Hygiene | - | - | - | - | 75 hours. |
| Surgical Nursing | - | - | - | - | 15 hours. |
| Drills for Surgical Ward and Operating-Room Work | | | | | 16 hours. |
| Practical Nursing | - | - | - | - | 25 hours. |
| Practical Hydrotherapy | - | - | - | - | 25 hours. |
| Practical Applications of Electricity | - | - | - | - | 10 hours. |
| Physical Culture | - | - | - | - | 75 hours. |
| Scientific and Healthful Cookery | } | Lectures | - | - | 10 hours. |
| | | Practise | - | - | 30 hours. |

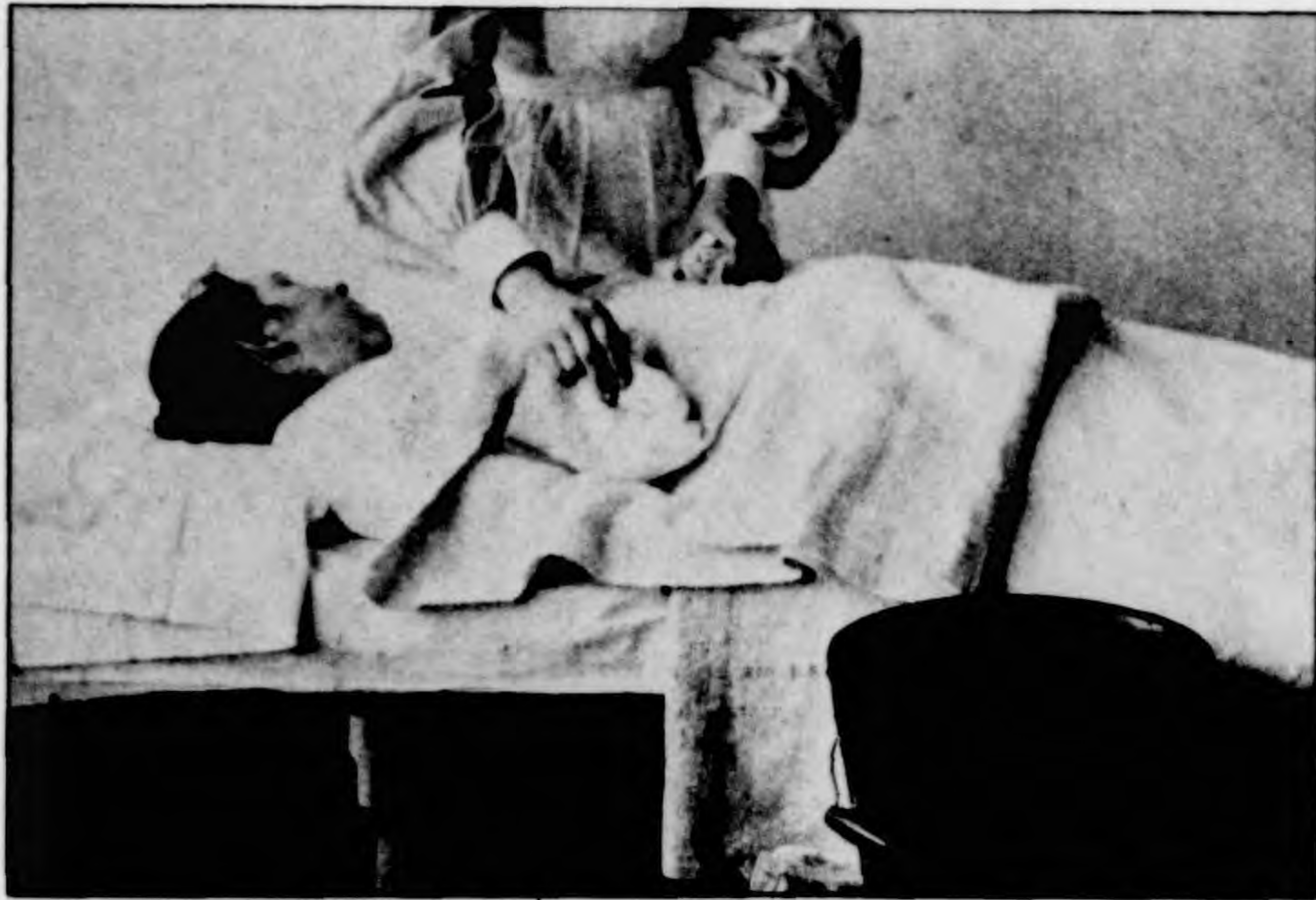
In this work, the student goes into the Cooking-School kitchen, and carries on a four to six weeks' course of responsible work, actually doing the cooking of the meals for the Hospital patients and surgical ward patients, including the baking of all kinds of breads, the making out of bills of fare, etc.

SECOND YEAR.

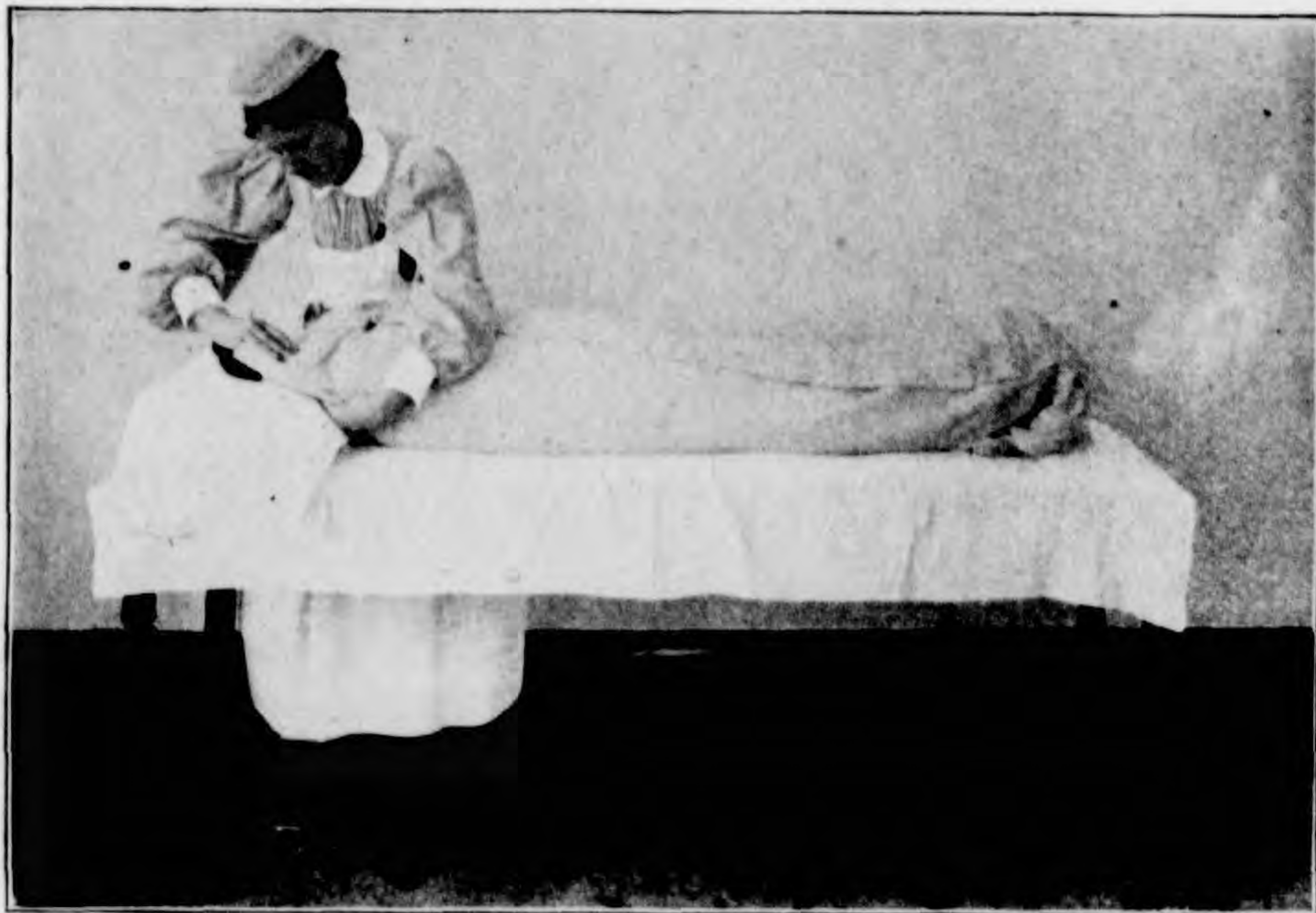
| | | | | | |
|----|-----------------------------------------|--------------------|---|-----|--------|
| | | (Digestive Organs | - | 10 | hours. |
| 50 | Diseases and their Treatments | { Fevers | - | 10 | hours. |
| | | { General | - | 10 | hours. |
| 15 | Gynecology (ladies only) | - | - | 15 | hours. |
| 15 | Obstetrical Nursing (ladies only) | - | - | 15 | hours. |
| | Massage | { Theoretical | - | 15 | hours. |
| | | { Practical | - | 20 | hours. |
| 50 | Manual and Mechanical Swedish Movements | - | - | 32 | hours. |
| 12 | Bandaging | - | - | 12 | hours. |
| | Physical Culture | - | - | 75 | hours. |
| | Missionary and Bible Study | - | - | 100 | hours. |
| 12 | Children's Diseases | - | - | 10 | hours. |
| 25 | Principles of Electrotherapy | - | - | 10 | hours. |
| 25 | Principles of Hydrotherapy | - | - | 15 | hours. |

The course comprises an average of eight recitations weekly, in text-book and other theoretical work.

The practical training, which keeps pace with the theoretical instruction, is a very interesting part of the course, and the thoroughness and careful attention to detail on the part of the instructors is especially noteworthy. The instruction is carefully and naturally graded, as will be shown by the following course in practical work : —



GIVING A FOMENTATION.



THE HOT BLANKET PACK.



APPLICATIONS OF MASSAGE.

FIRST YEAR.

Practical application of the principles of Domestic Sanitation, practical work in the Diet Kitchen, Cooking-School, Health Food Department, and the various other branches of practical work, while receiving instruction in hydrotherapy, massage, etc.; Bath-Room Work; General and Surgical Nursing of light and convalescent cases, etc.

The course in Hydrotherapy includes a series of class drills, in which each student is made thoroughly familiar with the details of all the different applications of water before he undertakes to apply treatment to a patient.

SECOND YEAR.

Bath-Room Work; General Nursing; Surgical Nursing; Fever Nursing; Obstetrical Nursing; Manual Swedish Movements and Massage; Mechanical Swedish Movements; Test Meals and Lavage; Medical Office Work; Electrical Department; Physical Culture and Anthropometry; General Nursing and Missionary Work in the field.

All nurses are expected to answer a call to any emergency wherever and whenever they may be needed, and are expected to spend three months in field work, if so directed.

SURGICAL TRAINING.

The surgical work is an important feature of the Sanitarium; therefore this department receives much attention in the Training-School, and the practical drill is very thorough. The preparation and use of disinfectants; the preparation of instruments and the various appliances used in the operating-room; the preparation of the patient's room, with all the details of getting a patient ready for each of the various operations usually performed; the special care required after the operation and during convalescence,—all these points are carefully studied, and all that is possible of the procedures is gone through with in practical drill.

The class is taken in sections into the operating-room, where the students pass through the various steps of the operation which is the lesson for the day. They must become familiar with the instruments used in each case, and know the name and use of each different instrument, so that a nurse suddenly called upon to prepare the instruments for a case will know, without special instruction, what is required, what preparation must be made, and the nature and use of each instrument, and will be able to place them at once in the operator's hand.

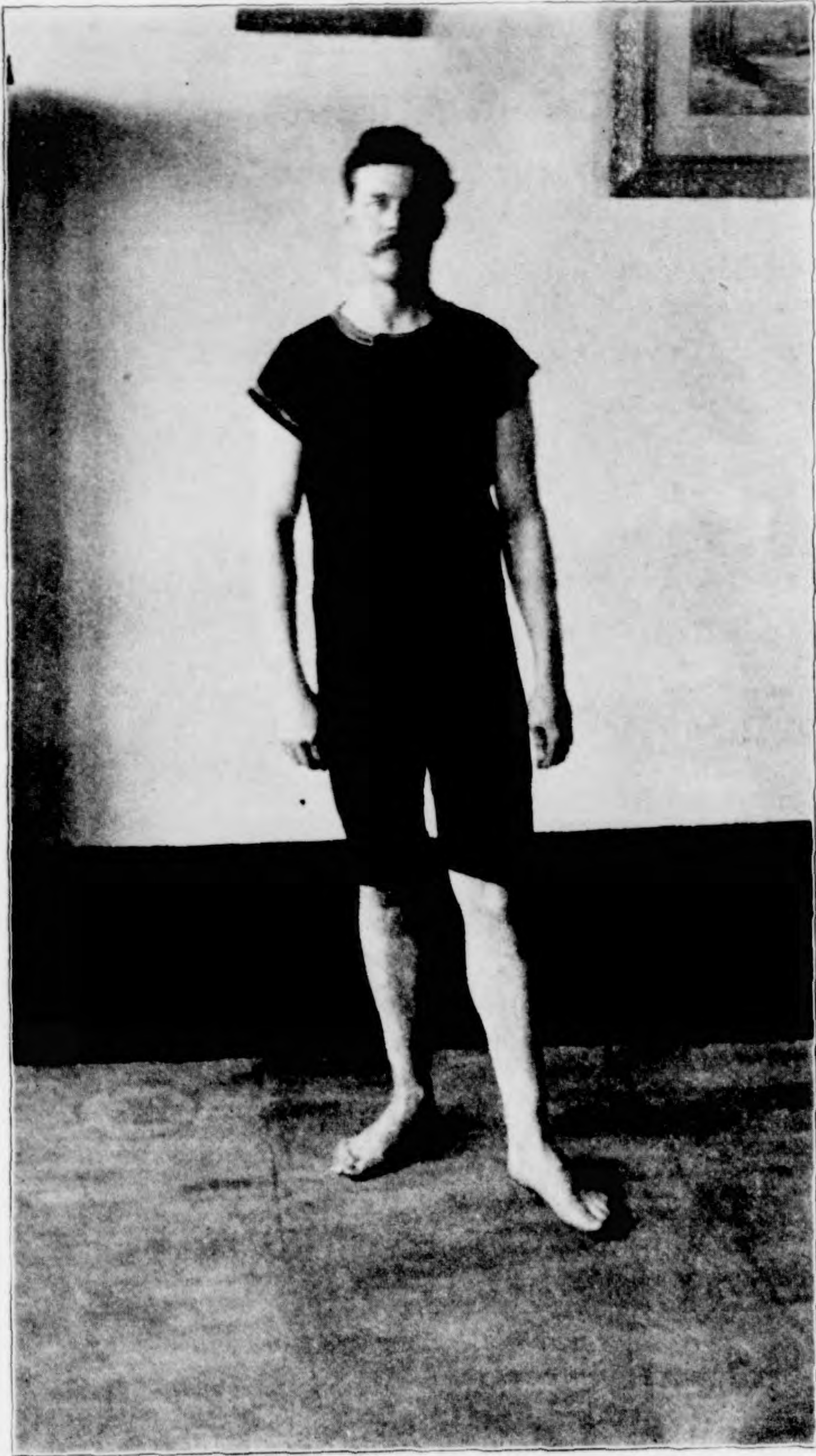
Another drill is the bandaging class. In this class, bandages of all kinds are applied for different supposed cases, the students practising on one another.

BIBLE AND MISSIONARY STUDY.

The Bible study has come to be one of the most interesting features of the work. It is continued through the entire course. The instruction is thoroughly practical, designed to enlarge the spiritual life and to deepen the experience of the students, and teach them how to work for others. The missionary study is designed to give the students an acquaintance with the history of missions, mission fields and methods, and missionary characters.



BATH GIRL IN UNIFORM.



[16]

BATH MAN IN UNIFORM.

HEALTH TEACHERS' COURSE.**Physiology, Anatomy, and Hygiene.**— Dr. Rand.**Cookery.**— Mrs. Kellogg.**Chemistry: Theoretical, Practical.**— Dr. George.**Hydrotherapy: Principles, Practise.**— Dr. Paulson, Dr. Stewart, Mrs. S. M. Baker, and Mrs. Foy.**Physical Culture: Principles, Practise.**— Dr. Kellogg, Dr. Jeanne Whitney, Dr. Mary Wild-Paulson, and Miss Lenna Whitney.**Simple Remedies for Common Diseases.**— Dr. Rand and Dr. Winegar.**Care of Young Children.**— Dr. Winegar.**Accidents and Emergencies.**— Dr. Rand.**Sanitary Science.**— Dr. Mary Wild-Paulson.**Dress: Principles of Healthful Dress, Dressmaking, Making Over Garments, etc.**— Dr. Winegar, and others.**Sewing for Children in Classes.**— Mrs. S. M. Baker.**Mothers' Work: Mothers' Meetings, Clubs, etc.**— Mrs. Kellogg, Mrs. Whitney, and Mrs. Baker.**Boys' and Girls' Clubs.**— Mrs. Baker and W. S. Sadler.**City Mission Work.**— Mrs. S. M. I. Henry and Dr. J. H. Kellogg.**Personal Work.**— Mrs. S. M. I. Henry, Elder G. C. Tenney, W. S. Sadler, and M. E. Olsen.**Cottage Meetings.**— Elder L. J. Rousseau and Miss Evelene Helman.**Christian Help Work.**— Dr. J. H. Kellogg, Mrs. S. M. Baker, and Miss Lillian B. Eshleman.**Rescue Work.**— Mrs. S. M. I. Henry, Dr. Brighthouse, and Mrs. T. Mackey.**Voice Culture, Practise in Public Speaking, etc.**— Professor J. W. Beardslee.**Bible Study and Doctrine.**— Dr. David Paulson, Dr. D. H. Kress, and Elder G. C. Tenney.**Rational Medicine.**— Dr. Paulson and Dr. D. H. Kress.**General Nursing.**— Mrs. Foy and Mrs. S. M. Baker.

TRAINING-SCHOOL FOR MISSIONARY MOTHERS.

INSTRUCTORS.

MRS. E. E. KELLOGG,
H. F. RAND, M. D.,
LAURETTA KRESS, M. D.,
MISS MAY WOODWORTH,
MRS. S. M. BAKER,

MRS. E. H. WHITNEY,
MRS. MARY S. FOY,
DR. MARY WILD-PAULSON,
MRS. MINNIE HARNDEN,
J. H. KELLOGG, M. D.

For further information address Mrs. E. H. Whitney,
Battle Creek, Mich.

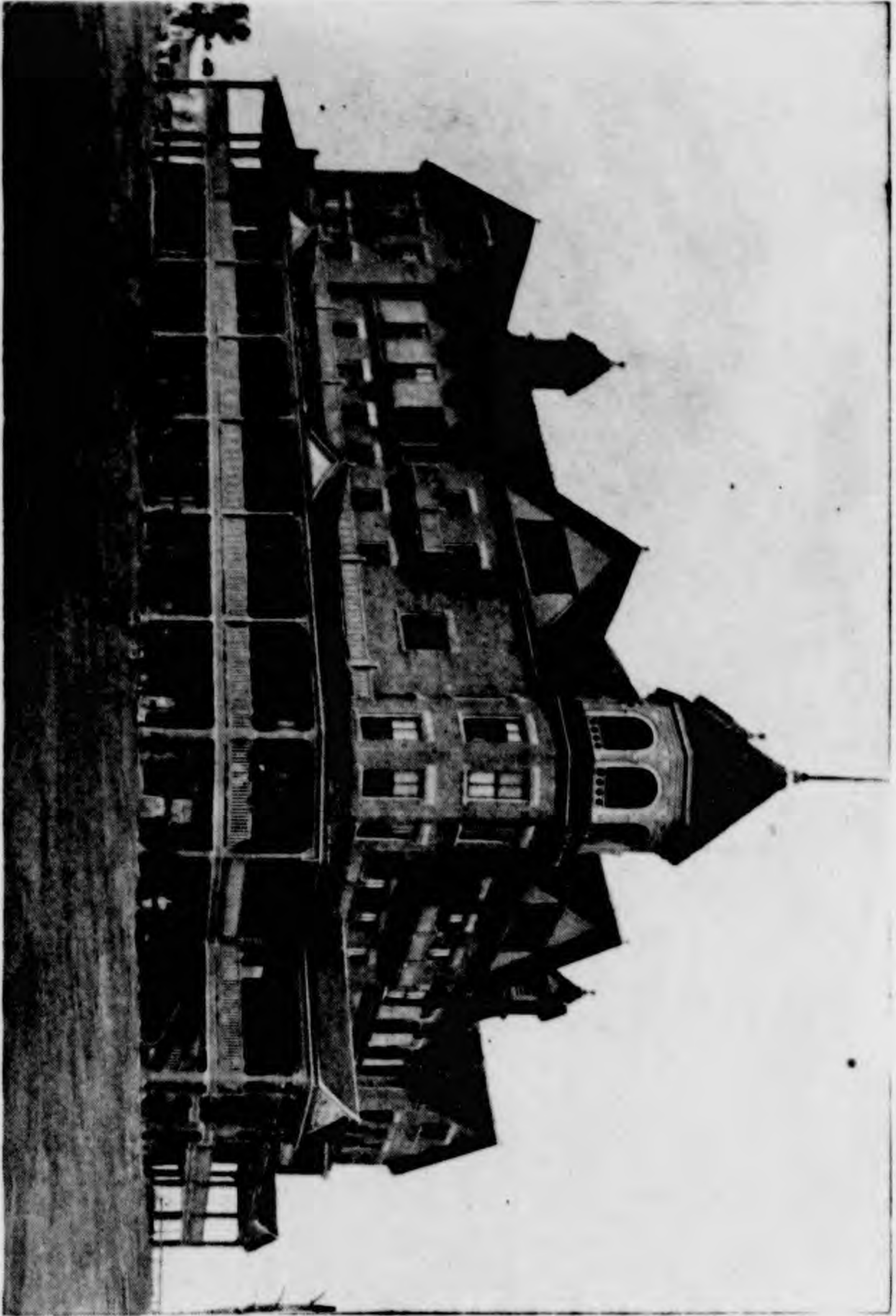
Regular course begins November 1.

Students received at any time.

This school is now in its fourth year under its present form, though the essentials of the present plan of study have been carried out in longer or shorter courses for several years longer. Besides the classes which have completed the regular course, quite a number of others have availed themselves of the opportunities thus afforded, and are making excellent use of the instruction thus gained in various forms of missionary work. There is scarcely a field of missionary effort where the knowledge thus obtained will not be of great benefit, and in specific work for children a wide missionary field is presented in which the experience gained in this course of instruction proves invaluable.

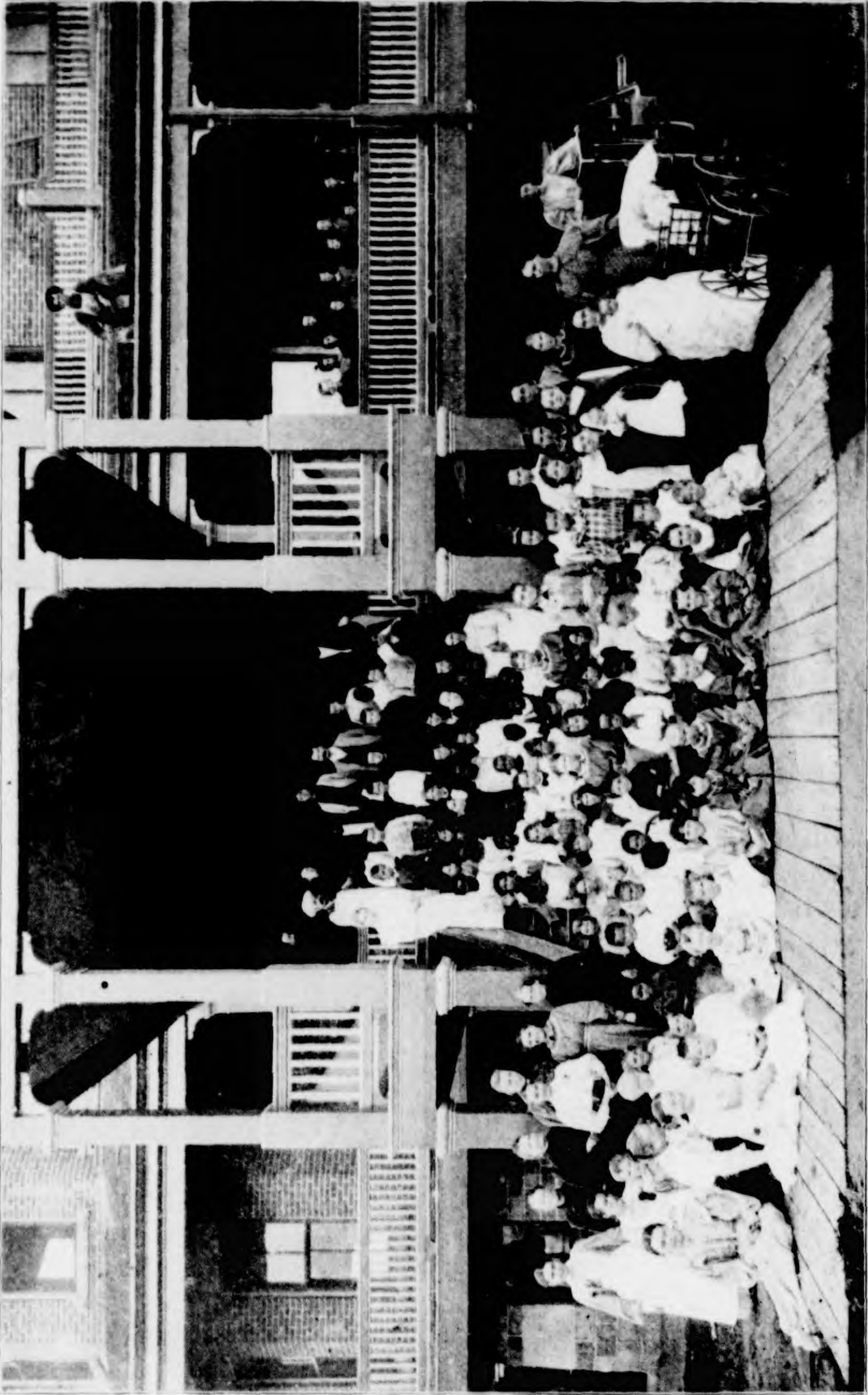
COURSE OF INSTRUCTION.

The course of instruction comprises regular lectures, recitations, and practical instruction and work throughout the year, with advanced work for any who may take a second year's instruction. The instruction is given by those who have made a special study of the work, and have had practical experience in their several lines,—members of the Sanitarium Nurses' Training-School Faculty, teachers trained in the best methods of kindergarten, sloyd, kitchen-garden, grade work, etc. The following are among the subjects taught:—



THE HASKELL HOME FOR ORPHANS.

[19]



HASKELL HOME FAMILY

Kindergarten, Child Nature and Character Building, The Training of Children, Physiology and Hygiene, a short course in Practical Treatments, Hygienic Cookery, Physical Culture, Domestic Economy, Sloyd, Primary Sewing, as adapted to Children's Classes and City Mission Work, Bible Study. Addresses on the education of children and nature study are given from time to time, and the students have also the privilege of attending the parlor lectures at the Sanitarium.

The above courses vary in length from a week to ten months.

To those whose proficiency during the first year makes further study seem advisable, courses are open in more advanced work,—special studies in kindergarten work; the study of child nature and methods of training; normal methods of teaching; hygienic cookery; Bible study; kitchen-garden; simple dressmaking; nursing, etc.

SPECIAL ADVANTAGES:

The Haskell Home affords a most valuable opportunity for studying child nature, being also in itself a most excellent field for missionary effort, with children of varied temperaments and heredity, and gathered from many different sources. The Home kindergarten, and the kindergarten, kitchen-garden, and other similar classes in connection with the Chicago Mission, afford the opportunity at once of training to the student, and of missionary work to those who may desire further experience.

The connection of the members of the Mothers' Class with the Sanitarium enables them to profit by many of the advantages afforded by that institution, as they are thus enabled to secure the best talent to be found in the various lines of instruction.

Opportunity is given at the Haskell Home for a limited number of students to meet expenses of board, room, and tuition by work.

REQUIREMENTS FOR ENTRANCE. — The requirements for entrance are the same as for the Nurses' Class.

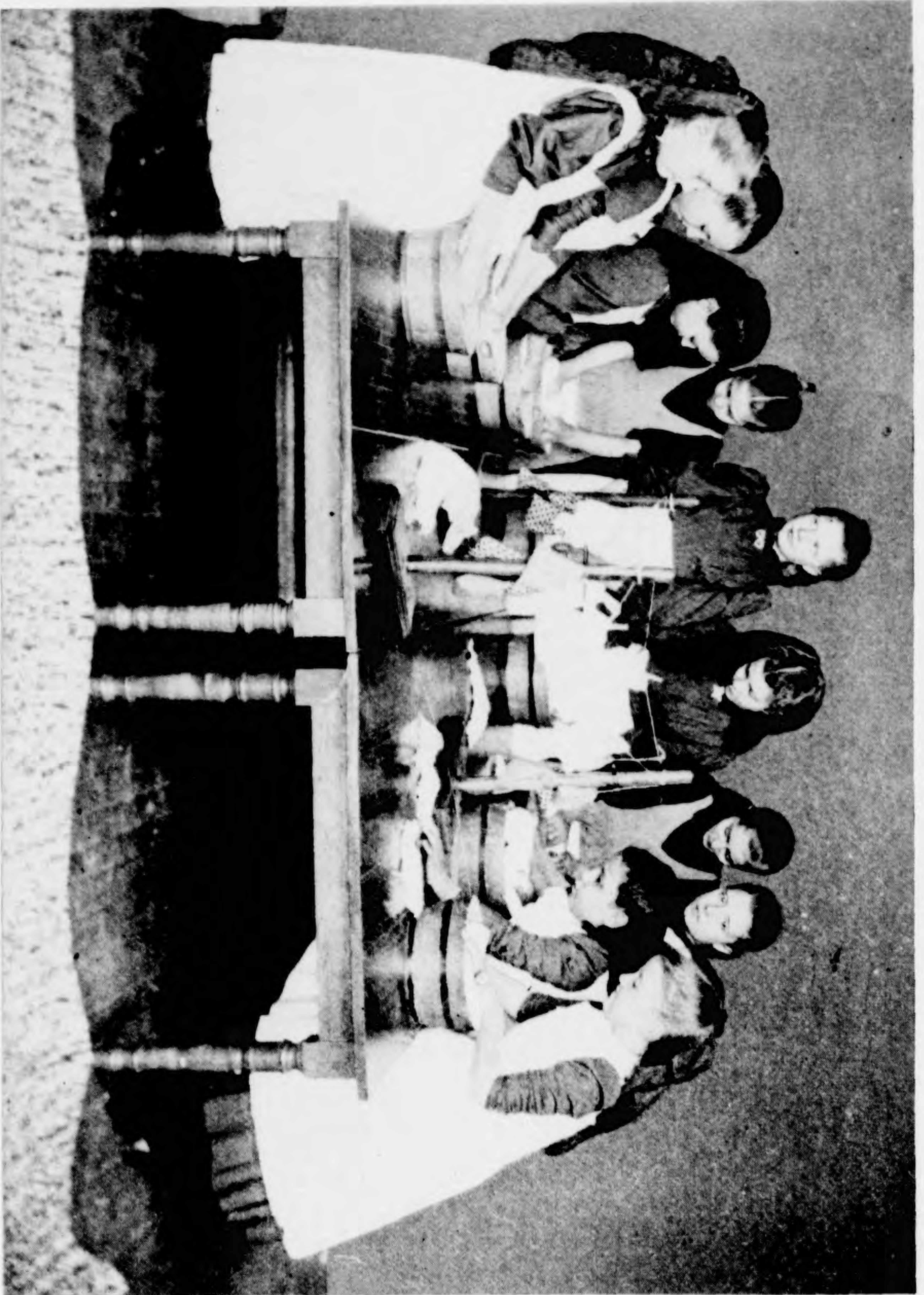
1. Good moral character, with satisfactory recommendations.

2. Good health.

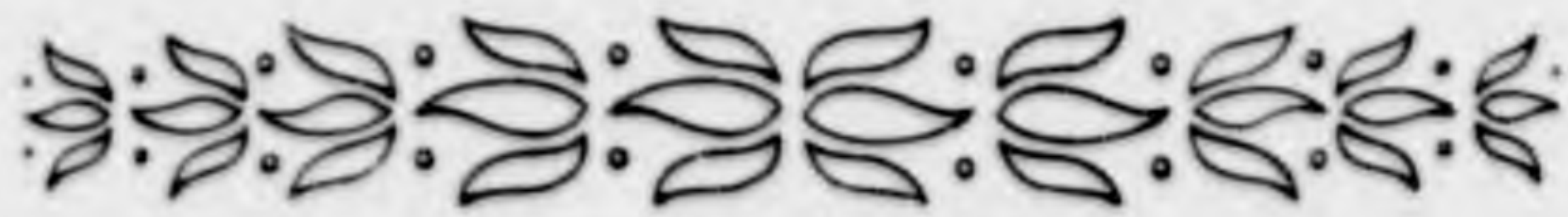
3. It is expected that those who take the course will have sufficient education to do justice to the studies. The more complete the education, the better the work can be appreciated.

TERMS. — The student who works five hours a day through the year is entitled to tuition and to all the privileges of the class, — use of tools, etc. Those who desire to pay in work for board and room can do so by working full time.

The school is under the general supervision of the International Medical Missionary and Benevolent Association.



THE KITCHEN-GARDEN.



THE COOKING-SCHOOL.



THE BATTLE CREEK SANITARIUM SCHOOL OF SCIENTIFIC COOKERY.

INSTRUCTORS.

MRS. E. E. KELLOGG, SUPERINTENDENT;
~~MR. AND MRS. F. O. RAYMOND, ASSISTANTS.~~

Dr. Holman

Mrs. Julia P. Barber

In the summer of 1883, Dr. and Mrs. Kellogg established an experimental kitchen, in which the preparation of food for the table was made a matter of thorough scientific research. The results of this study have been to involve not simply a number of recipes for palatable and attractive dishes, but also scientific combinations of food, in which the different food elements are carefully proportioned as adapted to the needs of the several tissues of the body which they are designed to renew. Flesh foods of all kinds, also condiments, are excluded from this system of cookery.

From the small experimental kitchen the work has increased to mammoth proportions. When the Hospital was built, in 1888, a department was fitted up for this purpose, and in this Mrs. Kellogg continued her work of scientific research and instruction. When the work of the first class had demonstrated beyond a doubt the possibility of training efficient demonstrators of the system, another room was fitted up with tables, gas-stoves, etc., for class practise, and the basement of the Hospital, which until the building of the Nurses' Home had been used as dining-room, kitchen, and store-rooms for the large family of helpers, was, early in 1895, fitted up to meet the increasing demands of the school. The class and lecture-room is furnished with long rows of stationary tables or counters, where a class of thirty-three people can practise at once. The space devoted to each pupil contains, below the table surface, a kneading-board, a drawer containing various small utensils, and below these, a compartment for the larger utensils used in the class practise. On the table surface is a gas cooking-jet for each pupil, with an oven for baking.

Thus equipped with a well-furnished miniature kitchen, the pupil is taken through all the lessons of cookery, bread-making, cooking of grains, vegetables, fruits, desserts, etc., carrying out, under the eye of the teacher, the theoretical instruction given in the lectures.

Every nurse, man and woman, takes the Cooking-School Course as part of the training, and it is considered an opportunity of the greatest practical value.

Another advantage offered by the Cooking-School is the opportunity of assisting in the instruction of beginning classes.



BATTLE CREEK NURSES' TRAINING-SCHOOL CLASS OF '96.



NURSES' TRAINING-SCHOOL CLASS OF '17.

SPECIAL SUMMER COURSE.

Beginning the first week in July and lasting ten weeks.

INSTRUCTORS.

DR. J. H. KELLOGG,
DR. DAVID PAULSON,
DR. W. A. GEORGE,
DR. LAURETTA KRESS,
DR. G. H. HEALD,
MRS. S. M. I. HENRY,
MRS. A. S. STEELE,
W. S. SADLER,
MRS. S. M. BAKER,
ELDER G. C. TENNEY,

ELDER A. T. JONES,
PROFESSOR E. A. SUTHERLAND,
DR. H. F. RAND,
DR. D. H. KRESS,
DR. A. M. WINEGAR,
DR. MARY WILD-PAULSON,
MRS. E. E. KELLOGG,
MRS. E. H. WHITNEY,
MRS. M. S. FOY,
MISS LENNA WHITNEY,

AND OTHERS.

The object of this special course is to give an opportunity for training missionaries expecting to start soon to foreign fields,—ministers' wives, colporteurs, missionary teachers, and others who desire some instruction in the general principles of reform, rescue, and philanthropic work, but who are not prepared to take a sufficiently thorough course of instruction to render them proficient in all the various branches of the work.

The following list of topics and instructors will give an idea of the scope and purpose of the course of instruction:—

ANATOMY AND PHYSIOLOGY (twenty hours).—Dr. H. F. Rand.

A comprehensive view of the structures and functions of the human body, the masterpiece of God's wonderful handiwork, covering the whole ground of elementary anatomy and physiology. Dr. Kellogg's Second Book in Physiology is used as a guide, but the subject will be further illustrated by lectures, charts, manikins, anatomical preparations, models, and studies of living things. Especial attention will be given to the physiology of digestion and other practical subjects.

SANITARY SCIENCE AND PERSONAL HYGIENE (fifteen hours).—Dr. David Paulson and Dr. Abbie M. Winegar.

A brief but thoroughly practical study of house ventilation, Drainage, Climate, Disinfection, and Prevention of Contagious Diseases; Dress, and Personal Habits in their relation to health. The lectures will be illustrated by experiments and object-lessons, and supplemented by opportunities for practical observation by the members of the class. This will be an exceedingly interesting and practical course. A few lessons will be given to men and women separately on special physiology and hygiene.

GOSPEL AND CHRISTIAN HELP WORK (thirty hours).—Mrs. S. M. I. Henry, Dr. J. H. Kellogg, W. S. Sadler, Dr. D. H. Kress, Dr. David Paulson, Mrs. S. M. Baker, Mrs. E. E. Kellogg.

The best methods of Good Samaritan Work "in Christ's lines;" Cottage Meetings; Personal Work; Rescue Work for Men and Women; Cottage Health Talks; Cottage Cooking-Schools; District Visiting; and various other forms of work among the poor and suffering.

RELIEF WORK.—Miss L. J. Steinel and others.

How to find Homes for the Homeless; the establishment of "Life-saving Stations;" Missionary Gardening.

BIBLE TEMPERANCE AND BIBLE HYGIENE (fifteen hours).—Dr. David Paulson and Dr. D. H. Kress.

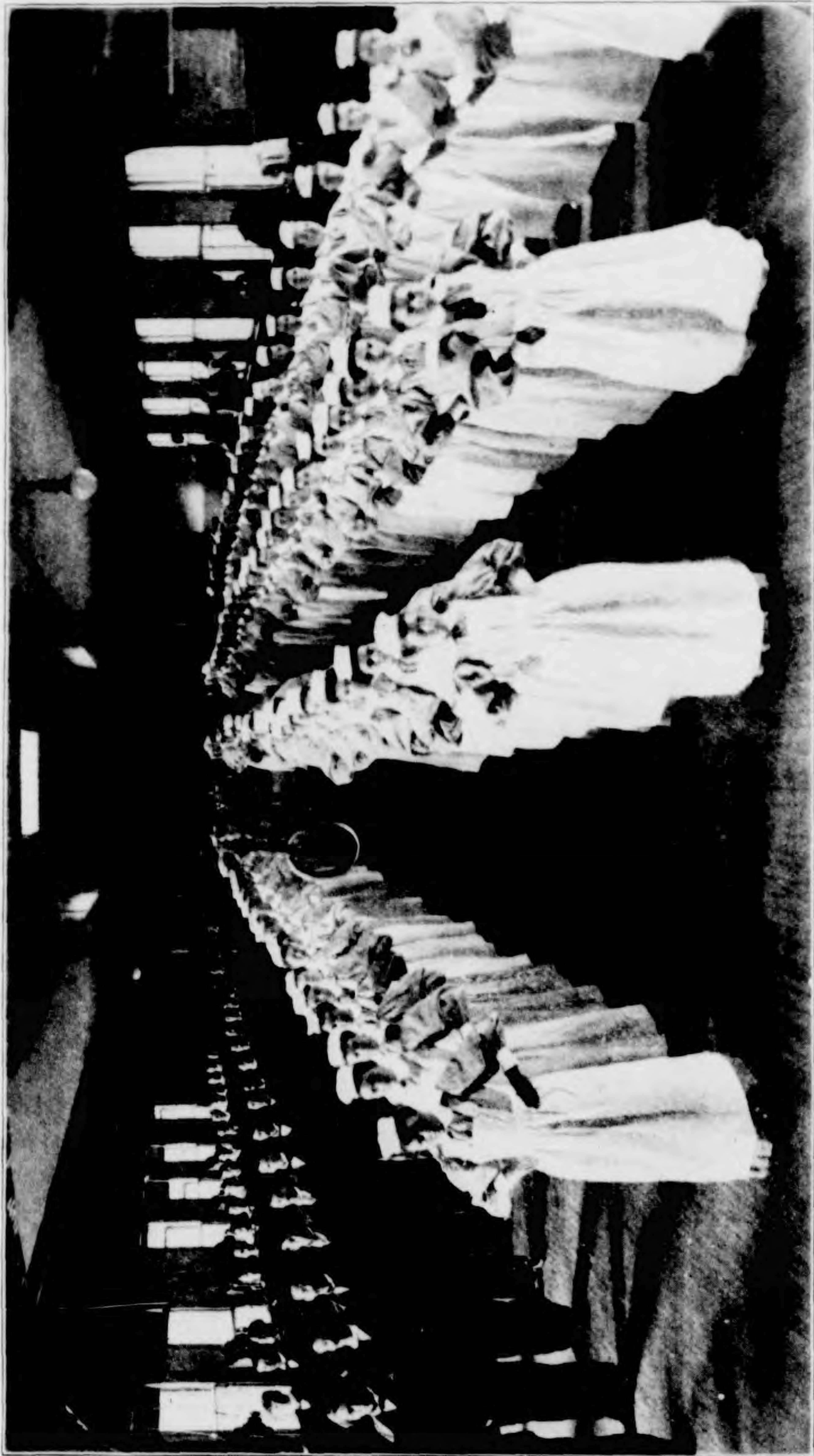
All truth rests on the unshaken basis of the Scriptures, and no reform can be permanently successful unless it rests on this eternal foundation. The Bible is a mine of truth on these subjects. The results of research are limited only by the effort we make to bring out its treasures.

THE BIBLE IN EDUCATION.—Professor E. A. Sutherland.

The Bible is the most valuable of text-books, and contains the fundamental principles of Science, Literature, History, Philosophy, etc.



NURSES' TRAINING-SCHOOL CLASS OF '18.



How to Study and How to Teach the Bible; Effects of Correct Bible Study and Teaching on the Mind, Heart, and Life of Students, etc.

THE PRINCIPLES OF EDUCATION. — Professor E. A. Sutherland, Dr. J. H. Kellogg, and others.

History of Education; Methods; the Power of Habit; How to Form Correct Habits; the Art of Questioning; the Training of the Senses; Effect of Music on the Mind, and its Educational Benefits; Hygiene of the Schoolroom; How to Make General Exercises Interesting to Children; Proper Object of Education.

PRACTICAL TALKS ON HEALTHFUL COOKERY (ten hours). — Mrs. E. E. Kellogg and Dr. Laretta Kress.

Healthful Cookery; Nutritive Values of Foods; Methods of Cookery; Bread, Fermented and Unfermented; Grains and Seeds; Nuts and Fruits; How to Arrange Bills of Fare, etc.

HEALTHFUL DRESS (six hours). — Mrs. E. E. Kellogg, Dr. Laretta Kress, Dr. A. M. Winegar, and others.

The Principles underlying Healthful Dress; Study of Models, illustrated by the Outline Charts; Use of Patterns; Remodeling Clothing; Suggestions for Materials, Combinations of Colors, Adaptation to the Individual, etc.

MOTHERS' WORK (fifteen hours). — Mrs. E. E. Kellogg, Dr. Laretta Kress, Mrs. S. M. I. Henry, and Mrs. E. H. Whitney.

How to Study the Child; How to Interest Children in the Bible; Employment for Children; Character Building; Obedience; Self-Control; Truthfulness; Purity, etc.; Relation between Parents and Children; Sympathy; Right and Wrong Government; Parental Mistakes and Opportunities; Correction of Faults, etc.

KINDERGARTEN LECTURES (five hours). — Mrs. E. E. Kellogg, Miss Mary Woodworth, and others.

The relation of the Kindergarten to Reform; Principles of the Kindergarten System; Kindergarten Gifts; Kindergar-

ten Occupations ; Suggestions for Kindergarten Occupations in the Home ; Kindergarten Songs ; Stories and Games.

KITCHEN-GARDEN (six hours).— Mrs. S. M. Baker.

A series of model lessons, illustrating the various phases of Domestic Work, such as Fire-making and Care of the Stove ; Setting the Table and Care of Table Furnishings ; Washing and Ironing ; Bed-making and Chamber Work ; Sweeping and Dusting ; Kitchen-garden Songs, Games, etc., as adapted to children's classes of various ages.

USES OF WATER (five hours).— Dr. David Paulson.

The effects of water upon the human system are the result of the operation of its physical properties in conjunction with the vital forces. Its effects may be either local or general, according to the mode of application, and according also as the administration is internal or external. Water as a diluent, as well as a tonic ; sedative effects, eliminative effects, derivative effects, etc.

SIMPLE REMEDIES AND HOW TO APPLY THEM (ten hours).— Drs. David Paulson and H. F. Rand, Mrs. M. S. Foy, Mrs. S. M. Baker.

Fomentations ; Compresses ; Packs ; Sweats ; Sponges, etc. ; How to Treat a Cold ; How to Reduce a Fever ; What to Do for a " Bilious Attack," etc.

NURSING AND EMERGENCIES (five hours).— Dr. H. F. Rand, Dr. A. M. Winegar, Mrs. M. S. Foy, Dr. Mary Wild-Paulson.

Care of the Sick and of the Sick-Room ; Preparation and Serving of Meals for Invalids ; How to Lift and Move Patients ; How to Disinfect an Infected Room ; The Nurse's Duty in Contagious Diseases ; What to Do until the Doctor Comes ; Burns, Wounds, Fainting, Drowning, Hemorrhages, and the Various Accidents of Childhood.

GERM DISEASES (four hours).— Dr. G. H. Heald.

Micro-organisms or Germs, their General Characteristics, Harmless or Dangerous ; their Relation to Disease ; Infectious Diseases, How Spread and How Controlled ; Specific Direc-

Object to this picture
for good reasons
J. S. H. P.



PATIENT IN WHEEL-CHAIR.

[35]

tions for Management of Contagious Diseases. Illustrated by the aid of the microscope, etc.

PHYSICAL CULTURE (five hours each week throughout the course).—Miss Lenna Whitney and others.

Theoretical instruction and practical work in Swedish gymnastics will be given in a series of progressive lessons. Also exercises in swimming, club-swinging, dumb-bells, and wands. Especial pains will be taken to aid each member of the class in building up a good physique and in acquiring a dignified and graceful bearing.

MISSIONARY WORK IN FOREIGN LANDS.—Elder G. C. Tenney and others.

Organization and Methods; openings for missionary work in India, Africa, South America, Mexico, South Sea Islands, unoccupied fields, etc.

This subject will be well illustrated by means of stereopticon lectures, and will be highly interesting to all whose hearts are enlisted in missionary work.

MISSIONARY TEACHING IN THE SOUTH.—Mrs. A. S. Steele and others.

Mrs. Steele and others who have had practical experience in work for the colored people in the South will give valuable instruction as to the condition and needs of the people, the openings for work among them, and the methods thus far found successful.

TIMELY STUDIES OF SPECIAL TRUTHS.—Elder A. T. Jones and others.

How to Study the Bible; the Bible as the Foundation of Education.

CONSECRATION MEETINGS.—1 to 1:30 P. M. (daily).

GOSPEL SONG SERVICE.—Professor J. W. Beardslee.

Professor Beardslee, who has had an extensive experience in this line of work and as a teacher of vocal music, will give frequent talks upon this subject during the course, and a short drill every day.



SUPPLEMENTARY COURSES.

A number of supplementary courses will be formed for the benefit of those who wish to fit themselves for work in special missionary lines. To the following, for which arrangements have already been made, others will be added as may be required :—

PRACTICAL MISSIONARY WORK.—In connection with the Chicago Medical Mission, in holding Cottage Meetings, Rescue and Settlement work, and other lines of practical mission work. This course will begin immediately after the close of the school.

PHYSICAL CULTURE.—A special course to prepare teachers for school and other public work in this line; also a course in Corrective Gymnastics for the benefit of those who need such aid.

PRACTICAL COOKERY.—A course for those who desire to prepare themselves to take charge of kitchens in schools or other institutions, at camp-meetings and institutes, or to enter families as missionary cooks.

NATURE STUDY.—For those who expect to devote their time to missionary teaching in the South or elsewhere. This course includes Botany and Elementary Biology. Field Study will constitute one chief feature of the course.

ADVANCED KINDERGARTEN COURSE.—For those who have already done some work in this line, and are prepared to undertake special and advanced studies in the science of Child Culture.

PRACTICAL DRESSMAKING.—A course for those who have sufficient ability and experience in this line to become expert dressmakers. This course will include Designing, Fitting, Pattern Making, and Artistic Dressmaking. Missionary dressmakers are needed.

PRACTICAL FIELD WORK.—Companies will be organized for field missionary work in Battle Creek and neighboring towns during the course.

MISSIONARY CANVASSING. — How to make canvassing work a self-supporting missionary campaign. Cottage, health, and gospel meetings in connection with canvassing, organization of Schools of Health, Physical Culture and Dress Clubs, Cooking-Schools, etc.

PHYSICAL CULTURE.— A thorough course in Swedish gymnastics is the foundation of the work in this department, since this system is recognized as producing that symmetrical development of the body upon which perfect health depends. Work is also given in dumb-bells, clubs, wands, chest-weights, and occasional gymnastic games. Special attention is given to the correct carriage of the body in standing, walking, and sitting.

Individual exercises are given such cases as present special defects, as flat chests, round shoulders, etc.

COURSE IN RATIONAL DRESS REFORM AND DRESSMAKING.

The object of this department is to teach both by precept and example how to clothe the human form fittingly, and in accordance with sanitary and hygienic principles. The authoritative teaching of this department is that the thickness of the clothing should be evenly distributed over the surface of the body, and that its weight should depend from the shoulders; that no portion of the body should be otherwise than loosely and comfortably clad; and that in particular that portion wherein the vital organs are located, should be exempt from all constricting waists or bands of whatever description.

Needs rearing

PREPARATORY COURSE.

In the spring of 1896, a one year's course preparatory to the Nurses' Course was organized. This course embraces the elements of the ordinary English branches of study, and is especially designed for those who desire to enter the Missionary Nurses' Training-School, but lack the necessary education, and are financially unable to meet the expense for board and tuition at an ordinary school.

The instruction includes not only the English branches, but a course in manual training, embracing the elements of carpentry, blacksmithing, tin-working, shoemaking, and agriculture for young men, and the science of cookery for both young men and women. The students are required to work six hours a day for board and instruction. This work consists of labor on the farms owned and managed by the institution, comprising more than five hundred acres of cultivated land, and in connection with the dairy, the health food manufactory, and the canning factory, including domestic and other miscellaneous work about the Sanitarium. An opportunity is thus afforded for a large number of young people who are interested in the medical missionary work, and are willing to work their way while getting the necessary preliminary education.

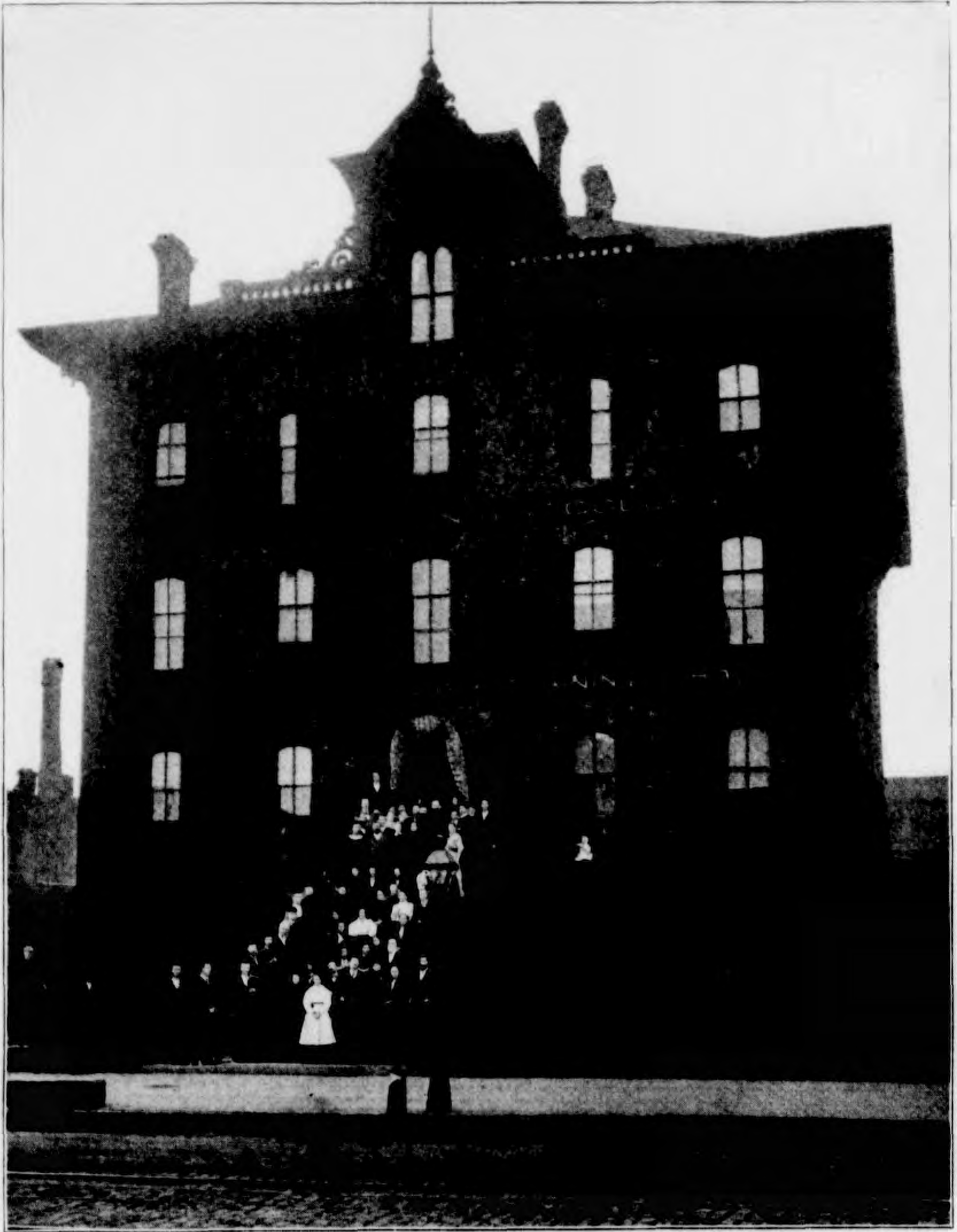
The hours for work and study are so arranged as to afford the students the best opportunity for both. During the year which has elapsed since the organization of this department, some two hundred young men and women of estimable character have enjoyed its advantages, and have made the most creditable advancement under capable and enthusiastic teachers. It is found that the combination of manual labor and study in this manner in no way hinders the intellectual progress of the student, but is, on the contrary, conducive to the best mental development.

Instruction in the ordinary branches of learning is given in the Battle Creek College, which is located just across the

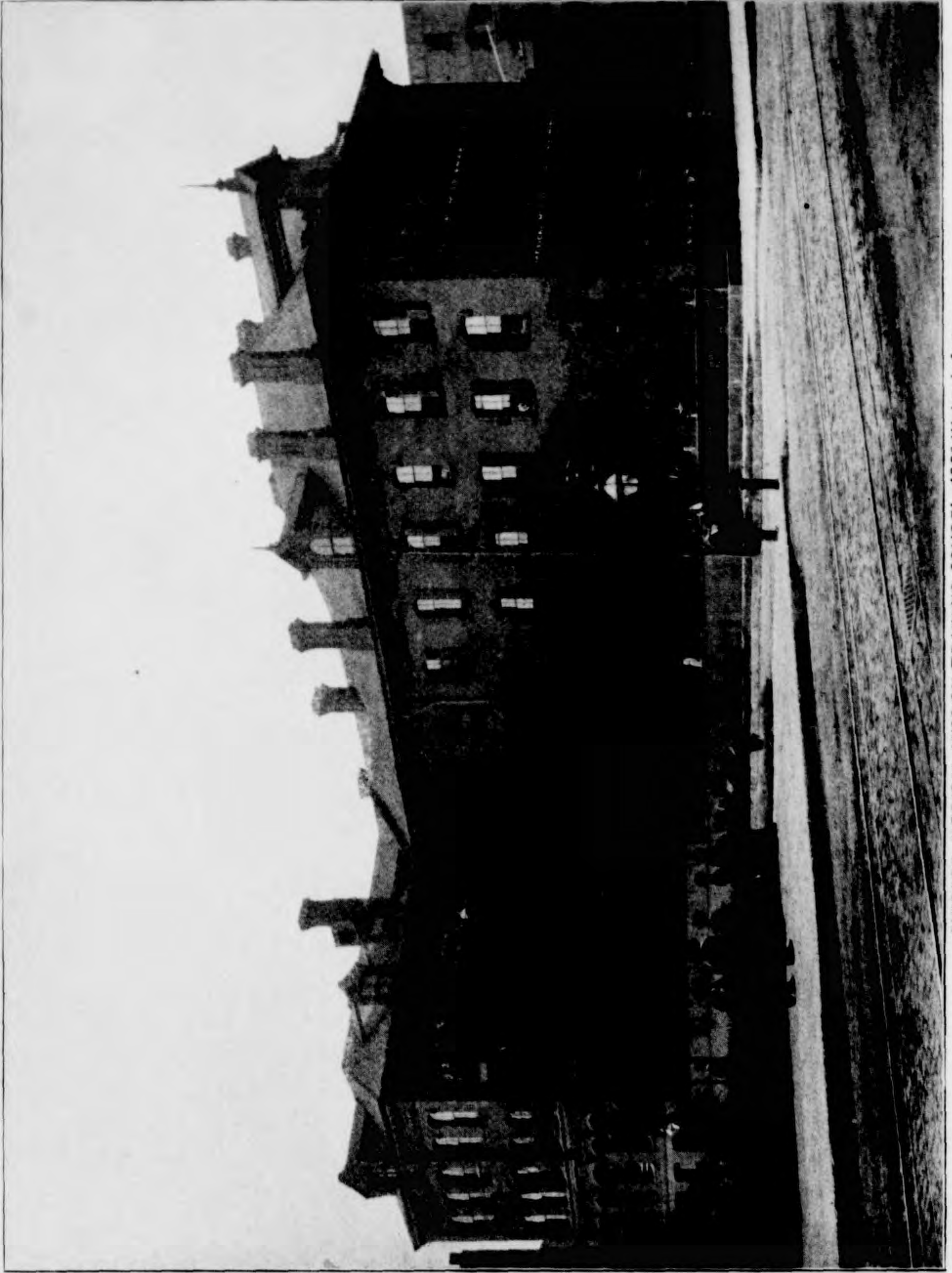
road from the Sanitarium, in connection with the regular course of study in that institution. The methods of instruction employed are in harmony with the most advanced thought in rational education.

MEDICAL MISSIONARY INSTITUTE.

Institutes lasting from four to six weeks are held every fall, and sometimes also at other seasons of the year. The purpose of these institutes is to give workers who are about to leave the school, and to enter upon active work in the field, a special fitting up for this work. The course of study consists largely of a systematic review of the entire course of study and the consideration of special fields which are about to be entered, or the special lines of work which are to be undertaken. These institutes are always occasions of very great interest and profit, and serve to lift those who are about to enter upon other fields of work to a high point of enthusiasm, and to prepare them to begin their work in such a manner as to render it more efficient and successful.



CHICAGO MEDICAL MISSION, 1926 Wabash Avenue. (Front View)



CHICAGO MEDICAL MISSION TRAINING-SCHOOL, 1926 Wabash Ave.

THE CHICAGO MEDICAL MISSIONARY TRAINING-SCHOOL.

INSTRUCTORS.

| | |
|------------------------------|---------------------------|
| J. H. KELLOGG, M. D., | LUTHER WARREN, |
| A. B. OLSEN, B. S., M. D., | W. S. SADLER, |
| E. H. MATHEWSON, M. D., | MRS. S. M. I. HENRY, |
| H. E. BRIGHOUSE, M. D., | MRS. S. M. BAKER, |
| W. B. HOLDEN, M. D., | MISS NELLIE CHURCH, |
| MISS MINA RUMERY, | |

The course of study conducted in this school is intended to be either supplementary or preparatory to any of the other courses which have been previously described. It is also auxiliary to the American Medical Missionary College, the students of which avail themselves of the excellent instruction given in several lines.

BIBLE COURSE.

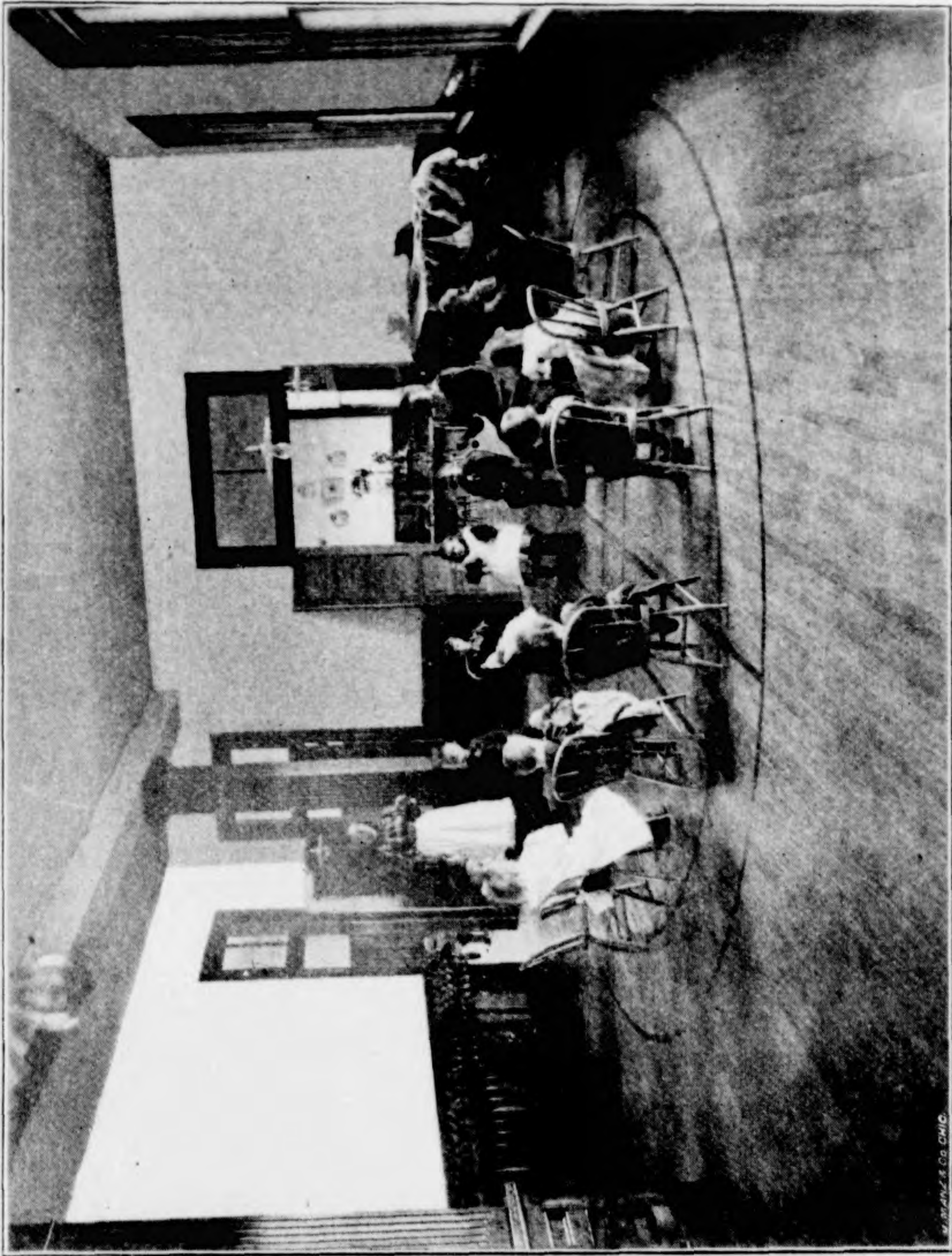
1. CHRISTIAN DOCTRINE (one hundred and eighty hours).

God's Eternal Purpose; The Creation of Man; The Fall—Nature and Consequence; The Redemptive Scheme; God, Christ, the Holy Spirit, Angels, Man, and Satan as Related to the Plan of Salvation; The Power of Conviction, Nature and Source; Repentance; Faith; Regeneration; Prayer; Acceptance; Assurance; The Work and Nature of Jesus Christ; The Work of the Holy Spirit.

2. METHODS OF PERSONAL WORK (one hundred and twenty hours).

Fundamental Principles; The Saving Power of the Gospel; The Keeping Power of Christ; How to Deal with the Backslider; How to Deal with the Infidel; How to Deal with the Skeptic; The Careless and Indifferent Objector; The Faultfinder; The Procrastinator; The Earnest Seeker.

This course consists largely of reports, daily conferences of the students concerning their work, etc.



M. B. B. & CO. CHIC.

IN THE KINDERGARTEN.



3. METHODS OF PUBLIC WORK (sixty hours).

Gospel Meetings; Cottage Meetings; Mission Meetings; Street Meetings; Street and Mission Rescue Work; Boys' Clubs; Children's Meetings.

MUSIC COURSE.

Instruction will be given in notation, or the science of reading music; voice culture, including proper breathing, the proper use of the palate, teeth, tongue, and lips, and tone production. One hour a day will be given to this study.

KINDERGARTEN COURSE.

OUTLINE OF THE COURSE OF STUDY.—1. Kindergarten Occupations and Gifts, forty hours; 2. Froebel's Mother Play, forty hours; 3. General Principles, including Kindergarten Occupations and Gifts; Mother Plays; Programs; Stories; Plays; Punishments; Positive and Negative Training; Origin of Life; Nature Studies; "Busy Work" for the Home, forty hours.

The Bible, Froebel, and other standard works will be used as text-books. Practical application of all these principles will be made in the nursery and kindergarten.

A full Kindergarten Course will include, besides the above work, classes from one or more of the other courses, according to the previous work done by the student; thirty-six weeks' practise in the kindergarten, three hours a day, and four weeks' full time in the nursery; one or more hours a week given to Practical Missionary Work in other lines, according to the number of classes taken.

Special arrangements will be made with students taking the other courses who wish to take a part of the Kindergarten Course, and can give one or more hours a week to practical work.

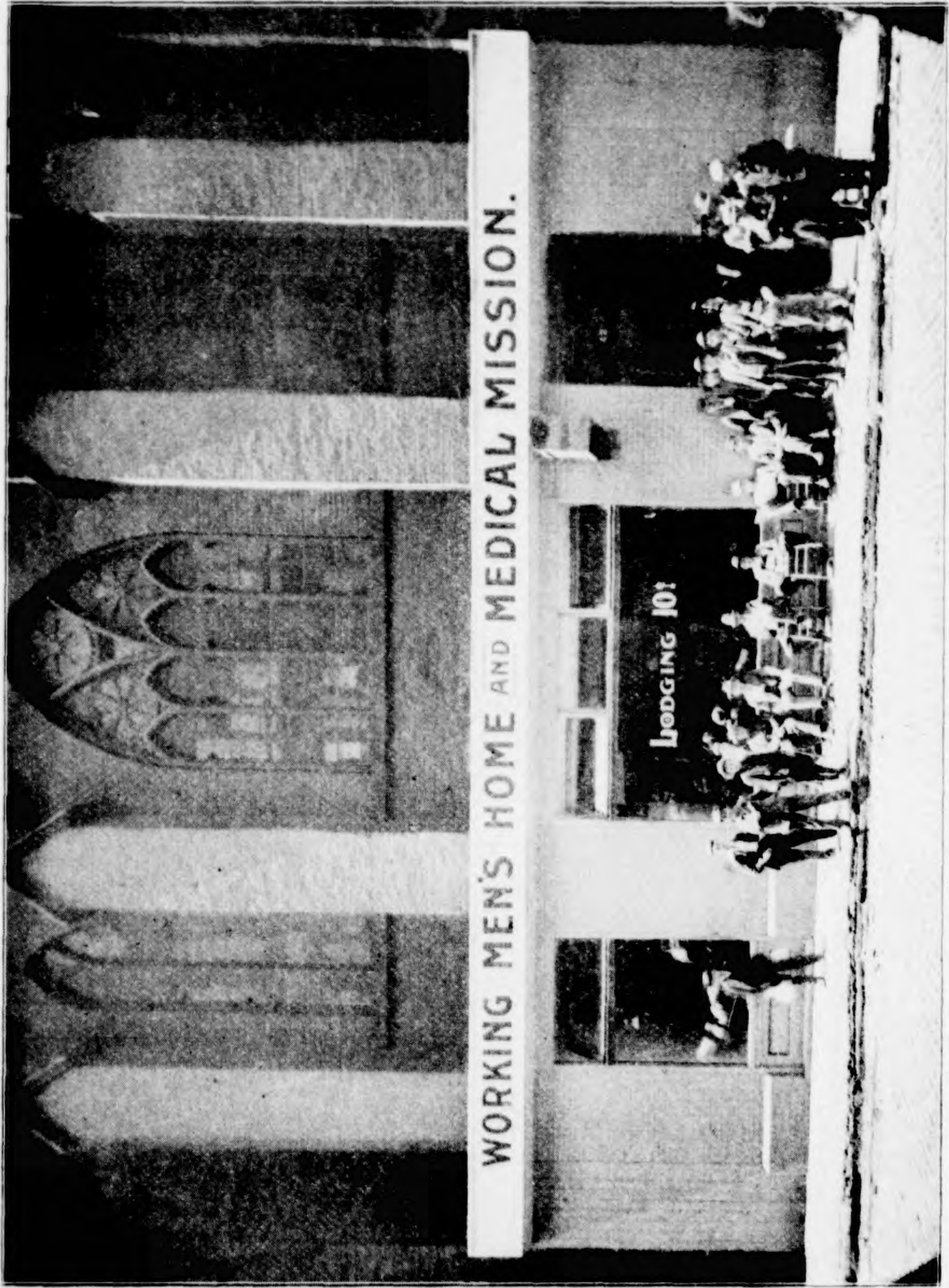
PRACTICAL WORK COURSE.

Students are assigned for work in one or more of the following departments as the faculty deem best for the student or in the interest of the work:—

City and Rescue Missions; Cottage, Health, and Gospel Meetings; Public Gospel Work; Public Health Work; House Visiting; Canvassing; Boys' Clubs; Street Meetings; Street Rescue Work; Assisting in Kindergarten and Nursery; The Choir; Organization and Conducting of Various Lines of Christian Work.



CHICAGO BRANCH OF THE BATTLE CREEK SANITARIUM.



WORKING MEN'S HOME AND MEDICAL MISSION.

lodging 101

THE AMERICAN MEDICAL MISSIONARY COLLEGE.

FACULTY OF THE AMERICAN MEDICAL MISSIONARY COLLEGE.

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|-------------------------------------------|-----------------------------------|
| JOHN H. KELLOGG, M. D. | GEORGE H. HEALD, M. D. |
| WILLIAM H. RILEY, B. S., M. D. | WILLIAM A. GEORGE, M. D. |
| DANIEL H. KRESS , M. D. | CHARLES E. STEWART, M. D. |
| ALFRED B. OLSEN , B. S., M. D. | ABBIE M. WINEGAR, M. D. |
| HOWARD E. RAND , M. D. | LAURETTA KRESS, M. D. |
| W. B. HOLDEN, M. D. | H. E. BRIGHOUSE, M. D. |
| DAVID PAULSON, M. D. | FREDERICK M. ROSSITER, M. D. |

This institution, while separately incorporated, is nevertheless maintained by the Battle Creek Sanitarium, and is conducted in harmony with the principles of that institution. Only those who are preparing themselves for active work in a medical missionary field are received as students. Instruction is free.

The course covers four years of forty weeks each. The entrance examination requires an education equivalent to graduating from a good high school. Only about thirty students can be received annually.

WEEKLY MEETING OF THE GENERAL MISSIONARY COMMITTEE.

Once a week the heads of the departments, with the assistant leaders of the several department meetings, gather in council over the general religious interests of the large Sanitarium family. Here reports are given of the different departments and of the general religious and missionary spirit of the institution. Questions pertaining to the spiritual interests are discussed and measures proposed for the furtherance of these phases of the work. These meetings have been of so encouraging and inspiring a nature that brief reports are regularly sent to missionaries in the field, and are much appreciated by them and by others who are interested in the progress of medical missionary work. These meetings form a further bond by gathering into one the many strands of the work on the spiritual side, as do the faculty and other meetings for counsel on the medical side.

DEPARTMENT MEETINGS. — Twice a week each department of the institution meets with its leader at noon for a half-hour of prayer and council about the work. Some of the general departments — as the Nurses' Training-School — are so large, that they have been subdivided, making an aggregate of sixteen meetings held bi-weekly, most of them from one to half past one o'clock on Tuesdays and Thursdays. Some of these meetings take the form of prayer and social meetings. Sometimes the time is occupied by letters from absent members of the department, as nurses who are in the field, or by interesting reports of work from those present. Or the time may be filled with questions by the individual members concerning their special duties, or by council as to duty or dangers. Sometimes a special need of the hour may be prayer for some subject in which all are united. The department meeting is an important feature of the work of the institution, bringing the students or helpers into close spiritual fellowship, and enabling the directors of the work to come into nearer relation with the individual workers than would otherwise be possible in so large a throng.

CHRISTIAN HELP WORK.— This work is properly a branch of medical missionary work, although the workers are not called missionaries, nor the work distinguished as missionary work. It is called Christian Help work for the reason that, every Christian ought not only to be willing to help every other Christian, but any other human being who needs assistance. Every groan of a suffering human being, every cry of anguish from a bereaved mother's bleeding heart, every sob from the hungry, homeless child, every honest appeal from a poor, forsaken wanderer whom nobody owns, is God's voice saying to Christian men and women, "Here is work for you to do."



Christian Help work forms a very practical feature of the Training-School. It is carried on by the class, assisted by other members of the family who may desire to aid them. A number of bands of volunteers are organized from the new classes formed each year. The work is systematically laid out, and actual work is done among the poor and needy in relieving suffering and in personal gospel work. Meetings of the individual bands with their leaders for conference, councils of the leaders of the bands, and general meetings for the workers furnish opportunity for theoretical training, and are a source of inspiration to the workers.



[52] A VISITING NURSE FROM THE CHICAGO MEDICAL MISSION.

THE MISSIONARY DECLARATION.

All who enter upon any course of study connected with the Battle Creek Sanitarium Medical Missionary Training-School are expected to sign a solemn declaration, as a guarantee of good faith in missionary intentions, and a disclaimer of any purpose to obtain a mere professional training or preparation for life work other than missionary and philanthropic. The only exception made is in the case of the shorter courses, which do not undertake to give a preparation for professional work.

I hereby express my intention and determination to devote my life to medical missionary work, having made the matter a subject of careful consideration and earnest prayer, and believing that it is the will of God that I shall thus do.

I also hereby place myself under the supervision of the International Medical Missionary and Benevolent Association for the purpose of receiving such training and other preparation for the work of the Medical Missionary as may in the judgment of the Executive Board of the Medical Missionary and Benevolent Association, be deemed proper and necessary to fit me to perform successfully such medical missionary work as may be assigned to me, and for direction and supervision in the work when I shall be prepared to enter upon it, at such time and place as Providence may indicate to be duty, and the Board shall advise.

Signed.....

Date.....

A FEW PRACTICAL QUESTIONS ANSWERED.

To save time in correspondence, we herewith present a few practical questions which are constantly being asked, with the answers usually given:—

1. What clothing will be needed?

ANS. — Good, plain, substantial clothing sufficient to last a year. Bring also one bath sheet and two towels. Nurses' uniforms are furnished the first year, and also two pair of shoes.

2. Do you think I would be able to endure the work?

ANS. — The work is taxing, both mentally and physically, but not any more so than active housekeeping or any other vigorous employment. Any young woman who considers herself in good health and who has no actual infirmity or disability of any sort, is able to endure the work. Nevertheless the work is quite too hard for semi-invalids. It may be said, however, that the majority of nurses improve in health while taking the course. In many instances there is a gain in flesh of ten or fifteen pounds, sometimes even twenty to twenty-five pounds.

3. Will I need to bring any money with me? If so, how much?

ANS. — Although board is allowed during the first year, and no tuition is charged, most nurses require a few dollars for the purchasing of stationery, rubbers, and other incidentals.

4. Where will I be expected to work when the course is completed?

ANS. — No definite plans are made for any worker. All are left in God's hands to be directed to such fields as they may be best adapted to. When a call for workers is received from home and foreign fields, the facts are presented to those who have advanced sufficiently far in their training to be prepared to do the work required, and all are asked to make the matter a subject of earnest prayer, seeking God for specific directions. In the majority of cases it is found that some suit-

able person has already been moved upon to make some special preparation for the field in question, and such a one immediately recognizes the voice of God calling him to work in his vineyard. No one is ever urged to enter upon any field or line of work against his convictions of duty. However, none should enter upon any course of study with the idea that when the course is completed, he will be free to start out as an independent missionary, but all are expected to co-operate with the International Medical Missionary Association, or such other missionary bodies as may be recognized by the board of trustees of the association as qualified to direct medical missionaries in their work.

5. What sort of credentials or recommendations are required?

ANS. — The instructors and managers of the several courses of instruction desire only to be assured that the applicant, when admitted to the school or any of its branches, is a Christian man or woman, with an active, genuine religious experience; that he has consecrated his life to the cause of God and humanity; and that he can be relied upon as a person of good judgment, stability of character, and possessed of the qualities of heart and mind necessary for the work upon which he proposes to enter when the course of study is completed. A letter of recommendation from a conference president, the officer of a duly constituted missionary board, or some reliable person known to the managers, is usually required. A personal acquaintance with the student is, however, considered more valuable than any letter of recommendation, and all students, no matter how well recommended, are at first received as probationers, as indicated by the red card which is given to them on entering the class. After the person has been sufficiently long under observation to assure the management of his fitness for the work, the red card is exchanged for a white one, and he becomes a permanent member of the class; but the managers still reserve the right to drop any student from any class at any time when it may have become apparent to his instructors or classmates that he is not qualified to continue the work.

6. Are married persons received as students?

ANS. — In many cases married persons are admirably adapted to some of the courses, but parents with families of young children as a rule cannot be received.

7. Are students allowed to marry during the course of instruction?

ANS. — No.

8. At what ages are students received?

ANS. — This depends upon the course of study to be taken, and also upon the character of the individual. Persons above thirty can seldom make a success of the Missionary Nurses' Training Course. Women of middle age, of good health and active mind, are admirably adapted to the work of the Missionary Mothers' Class.

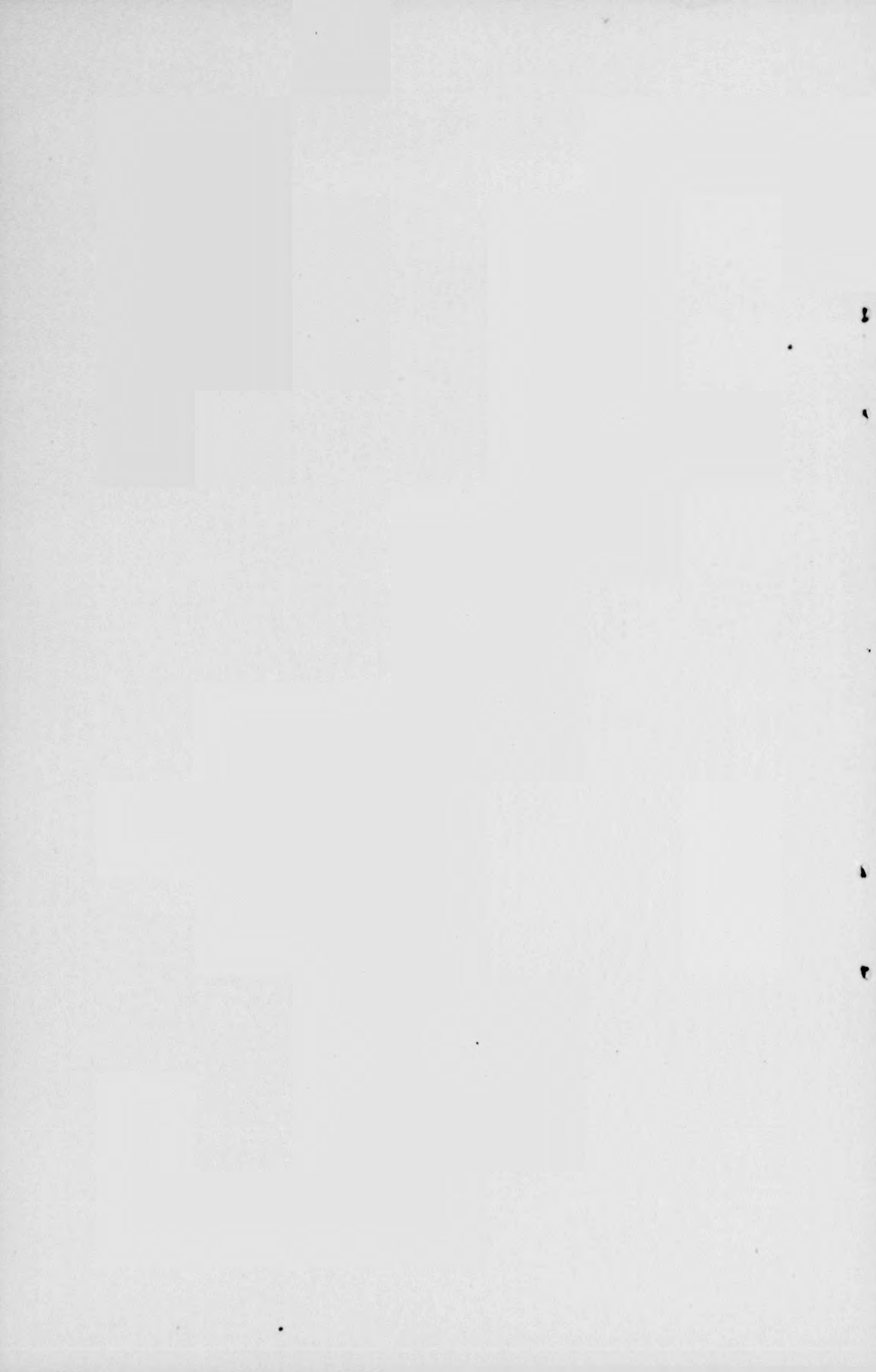
9. After completing the course of study, will I be able to earn enough to support my father and mother and to assist one or more brothers and sisters to obtain an education?

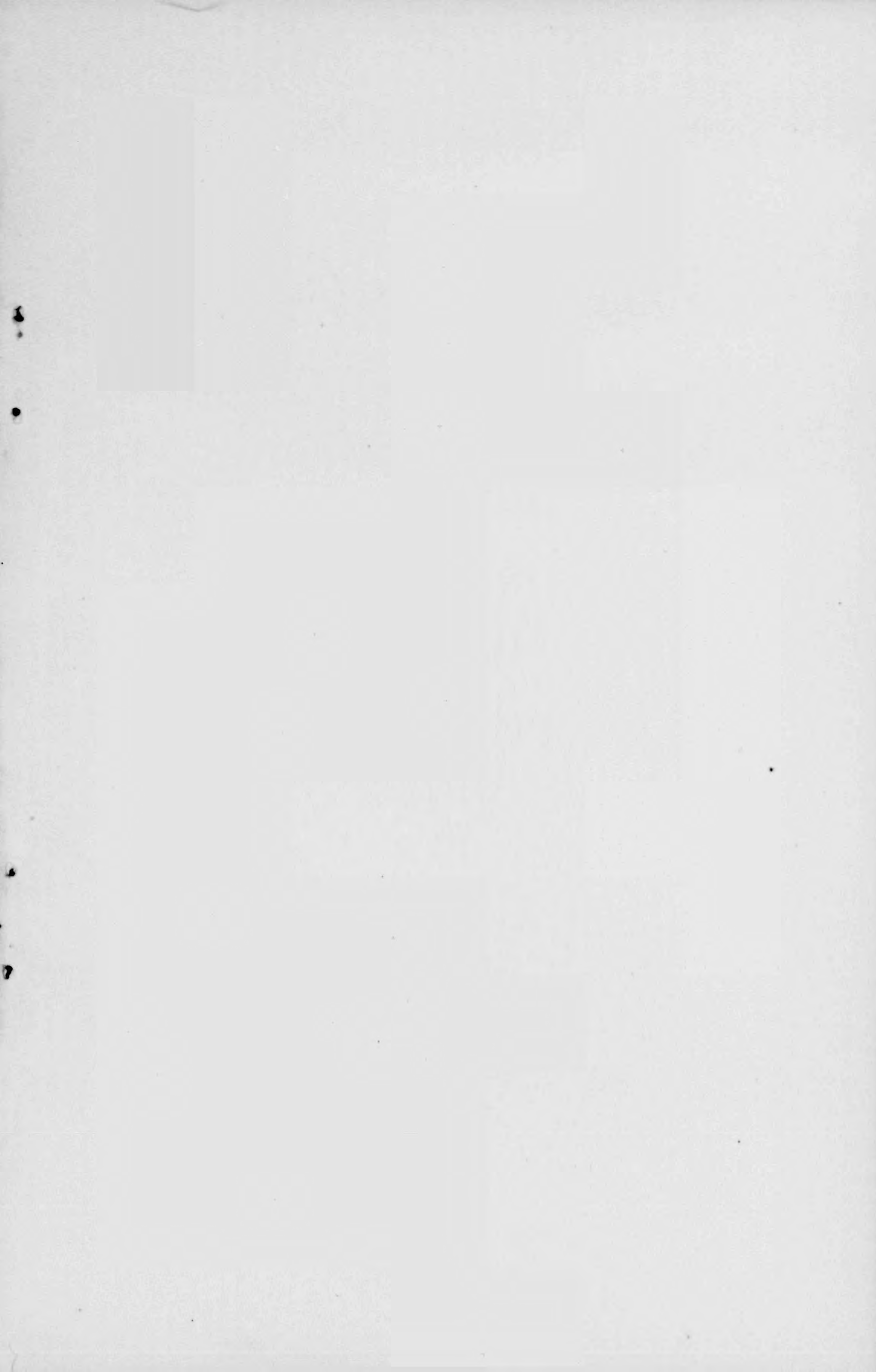
ANS. — Probably not. One who devotes his life to medical missionary work can hardly expect to earn more than his own personal support.

10. Is there room for me?

ANS. — There is always room in some course of instruction or in some branch of this work for any person whom God sends, but no one should think of coming to Battle Creek or Chicago with the expectation of entering any of the courses of study without first writing to ascertain whether or not he can be received, and presenting a brief and clear statement of his qualifications.









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of the
**International Medical Missionary and
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