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HEALTH AND MEDICAL INSTITUTIONS

Exercise and Nerve Force

Dr. Eliot, late President of Harvard

University, said:

"I have always had a fair amount of muscular strength; but the chief value of this strength to my intellectual life has been that muscular exercise calmed my nervous system and enabled me to ~~endure~~ endure nervous strains better than many of my contemporaries, who had but little muscular development. A moderate amount of muscular exercise in the open air, such as one gets in riding, rowing, or sailing, corrects nervous irritability and exhaustion. If one has not the muscles, he cannot get the correction. In short, a moderate muscular development acts as a sort of balance-wheel to the nervous spring which drives intellectual life."

THE EFFECT OF EXERCISE UPON THE BRAIN AND NERVES.

THE effect of exercise upon the brain and nerves is an important and practical matter. Every one knows that after a walk in the open air, or moderate exercise of any kind, the brain is clearer, one can think more clearly, and can accomplish a greater amount of mental work than before. When the student finds himself drowsy, and his brain dull, let him take a run out in the open air, and he will come back fresh for his work; his exercise seems to have cleared away the cobwebs from his brain by giving it a fresh supply of oxygen. Oxygen is the most important of all the foods of the brain, and the brain is the most important of the organs of the body. As the brain becomes stupefied and unable to work when the proper supply of oxygen is cut off, so when a new supply of oxygen is given, the activity of the brain is increased.

Another way in which exercise aids the brain, is by removing tissue wastes. The increased amount of oxygen, received by exercise, not only vitalizes the brain, but burns up the waste substances, which are poisonous. Dr. Ferrier, some years ago, in experimenting upon monkeys, found that beef juice or extract of meat caused paralysis when applied to the brain, so that it was impossible to stimulate the motor centers so as to cause the muscles to contract. This shows that tissue poisons stupefy the brain. Exercise purifies the blood by causing the reception of a larger quantity of oxygen, which burns up the wastes, and so the brain becomes clear and vigorous.

Every one knows that nervousness is relieved by exercise. A feeling of nervous irritability is often relieved by walking in the open air. This condition of the nervous system is often due to the accumulation

of poisons. It may be due to an accumulation of stagnant blood in the brain; and by a withdrawal of this through exercise, the nervousness is relieved.

The condition known as insomnia, or sleeplessness, is produced by poisons; and these impurities of the blood are taken away by the oxygen supplied by exercise. The Bible says that "the sleep of the laboring man is sweet;" and the reason is that exercise purifies the blood and supplies to the brain and nerves plenty of oxygen, so that the irritability which causes sleeplessness is unknown to him.

Another important point to be observed in relation to exercise in reference to the brain and nerves, is the fact that whenever the muscles are exercised, the brain and nerves are also exercised. Whatever brings the muscles into activity, brings the brain and nerves into activity; and as the muscles grow, the brain and nerves grow also. The nerves which supply the muscles connected with the nerve centers increase in size and activity and efficiency as the result of exercise, just as do the muscles themselves. We find, then, that exercise is a means of mental development.

In a more direct way exercise aids mental development by cultivating attention. We have an illustration of this in the little child just learning to write. When he first takes his pen in hand, he writes with his fingers, tongue, mouth, in fact with all the muscles of the body; but as he becomes more and more accustomed to writing, this use of numerous groups of muscles in writing gradually disappears; he is better able to segregate his muscles, and finally uses only the muscles of the hand or arm, instead of moving such a large number. What has made the change?

J. H. Kellogg, M.D.

The child has simply developed his control of the nerve centers so that he is able to concentrate his attention and effort to a single group of muscles. In this way exercise cultivates attention.

This fact indicates the importance of gymnastics, the necessity for such exercises as require skill and training; not such exercises as running, walking, or shoveling, but exercises requiring concentration of the mind, and constant mental activity for their execution. In Swedish gymnastics and calisthenics we have exercises which are useful to the brain as well as to the muscles; because they constitute in themselves a nerve training which is of very great value. The trained gymnast has a control of himself which the untrained man has not. He has control of every group of muscles in his body.

The untrained man is awkward and clumsy because he does not have proper control of his muscles; he may direct a muscle to act, and that muscle may not act, but another muscle may act instead. For example, I often tell such a man to put his hips back. He tries to do as directed, but the shoulders go back instead. Why?— Because he has not trained his muscles to act properly. In the case of the gymnast, his muscles do just what he tells them to do. The average individual has very small command of his muscles. How clumsy most persons are with the left hand. It is only the right hand that is trained to any considerable degree, with most persons. We write with the right hand, and if we have any fine work of any sort, it is done chiefly with the right hand; so the right hand becomes fairly well educated. And so with the rest of the body. The untrained man is ignorant of the power of his body, while the gymnast, as the result of physical training, gets the whole body under control. If one could have the whole body under as full control as you have the right hand, how convenient it would be!

The awkwardness of the untrained man is shown in many other ways, for instance, in jumping. One man jumps with his right foot, while another can jump only with his left foot. If the man who can jump with his right foot should try to jump with his left foot, he would fail, because his left foot has not been trained. Now the left foot and hand should be trained to be dextrous. In proper training, both sides of the body must be brought into active use, and must be equally well trained, so that we shall be ambidextrous. The thoroughly trained person will have the whole body under full control.

There is another way in which exercise is exceedingly helpful as regards brains and nerves: It furnishes an outlet for surplus energy. In every steam

boiler there is an escape-valve or blow-off valve, the purpose of which is to let off the surplus steam. In a similar manner, exercise is an excellent outlet for the surplus energy which may be pent up in the body requiring an exit. If this surplus strength and vigor (especially in the young) is not consumed in some useful way, it is likely to be utilized in some bad way. It is certain to find expression in some way.

Sometimes a small boy is told to sit down in a chair and keep still, as a punishment. But it is next to impossible for him to keep still. He has an amount of pent-up energy furnished by the vital activities of the body, which must be utilized, and the boy would actually become sick if this excess of vital energy were not worked off. When a healthy boy is left to himself, if he has no other occupation, he will turn somersaults when out of doors, chase

the cat, throw stones at the barn, and build a pyramid of stones and tear it down again. He works just for the sake of working, because he feels an irresistible impulse to activity. No young child should be made to sit down and sit still as a punishment; he can't sit still; it is practically impossible. You see the same tendency in young animals,—in the colt, for instance. It is not natural for young animals of any kind to keep still.

Regular, systematic exercise affords an excellent means of working off the surplus energy which is not needed by the internal organs; and it must be worked off, or it will make mischief. This working off of energy affords one of the best possible means of regulating the emotions and propensities; for when this extra amount of energy is consumed, that is, when it is worked off through exercise, it is not left to find expression in harmful ways. So we find that exercise is not only a vital regulator, but one of the very best aids to purity. Man under training "keeps his body under," he keeps his propensities under control; this is one of the essential conditions of good training and development, and for the man under training is by no means so difficult a task as for the sedentary young man. Byron sometimes had lucid intervals in his insanely immoral life, in which by plainness of regimen and a vast amount of vigorous muscular work, he kept his terrible nature under control.

Now a few words with reference to the general effects of exercise. In the first place, exercise promotes general vital activity by the stimulation of the vital processes. The increased amount of oxygen taken into the blood, the increased heart-activity, the increased respiratory activity, the increased activity of these two great vital pumps, the lungs and the heart, set in quicker motion all the vital activities of the body, so that we have increased vital activity of every sort. We see this in all living things. Every living thing exercises; even a tree exercises, it receives a sort of passive exercise, by the aid of the wind; the wind blows and the tree bends to one side, thus loosening its roots a little on the opposite side, and it strikes its roots a little deeper into the earth; then it sways in the opposite direction and the roots of the tree take a firmer hold on the other side. So the strength of the tree is increased by this kind of exercise. If you have seen a tree standing on the mountain-side where a freshet, perhaps, had washed the dirt off from the roots, you have perhaps noticed that the tree under ground is often twice as large as the tree above ground, because it stands on a high point, exposed to the wind, which is constantly swaying it to and fro, so that it was obliged to strike its roots farther into the earth or the crevices of the rocks, in order to hold itself steady. In this way, you see, exercise stimulates the vital activity, even of the tree.

If you examine the wood of the trunk and branches of such a tree, you will find that they are tough and firm and close-grained. The Bible speaks of the cedars of Lebanon. These cedars grow upon the mountain-sides where the winds are strong and blow about them until their fibers become strong, firm, and dense. These cedars were doubtless particularly valuable in consequence of the hardness and firmness of their wood, and its durability.

Now compare such a tree with a tree that grows up in a dense wood. It grows up tall and slim, and its branches are small and spindling; while the tree that stands upon the mountain-side or out in the open field, where the wind strikes it, is thick and strong, and its fibers are dense and firm, and the tree under ground may be even larger than the tree above ground, as I have said, in consequence of the exercise which it receives from the wind.

I have often noticed a man under training, whose former habits had been gross, who had been bad-tempered, whose eyes were dull, and whose skin was tawny, and his step slow; in the course of a few weeks' training, he became a transformed man; his eye became bright, his step elastic, his temper amiable; his skin so white and clear that to use the expression of the English trainers, it was "as white as a woman's." His skin becomes clear and white by means of his exercise, so the expression referred to is used as an indication that the man under training is in good condition. This elasticity of step means a great deal, indicating an increased vitality and activity of the whole body. It is not the skin alone that is clear and clean, but the brain and muscles also are clean. It is not the eye alone that is bright, but every nerve fiber is wide awake and bright. The man is good-natured and even-tempered because the brain is clear and free from irritating substances, which so often make one irritable and sour. We see, then, that the effect of exercise is to take a deep hold of all the faculties of the body, quickening and stimulating them in a marvelous way.

Editor's Easy Chair

WHAT COLLEGES CAN TEACH

BY EDWARD S. MARTIN

A THOUGHTFUL person once said, "Knowledge is power," an assertion that has been much applauded. But what kind of knowledge is at this time the most important? Doctor Conant, the new President of Harvard, has made his first report and it goes in very strong for increase in scholarship: high-grade scholarship pursued by selected aspirants. He wants more fellowships so that good scholars may study more. He applauds the advance in that direction which was made under the guidance of his immediate predecessor in office. That accords with prevailing sentiment for more schools and bigger ones, more years of study in them, free meals, transportation, and text books for students, but as far as possible at the expense of someone else than the parents or even the local taxpayer. If this amount of teaching, carrying, feeding can be acquired in whole or part gratuitously, it becomes one of the most popular devices for saving the country. It gets the children out of the house and does them good, though there are cases where they are taken from homes in which their help is needed. But if our national salvation does lie in the direction of more school and college education, why carp about the cost of it! If in the end it is going to save us the expense of armament, bring us various forms of good government, keep the

banks from breaking, restrain the money-hungers of the grab-it-alls, of course it will be an economy. And after all, the most demanding advocates of increased public education do not at present want more for all the children than well-to-do parents think it expedient even now to provide for some of them.

Education makes for order, but how much? A little learning is a dangerous thing; half knowledge does not reach to the relations of things, and that often makes for disorder. The percentage of revolutionists is high among students. They don't know what they've got, nor the true value of what they want, nor what it will cost to get it. The percentage of well-educated persons in state's prisons in this country is probably small, though the illiterates are probably fewer still. But how much can be taught in colleges; how much can be learned in colleges under instruction? Our country is now being conducted largely under advice of professors. There was a big job to be done and the best-instructed talent was called in. How good it is we do not know yet. The experts do not agree about that. At the top of the whole job is a gentleman of no great renown for scholarship but with a considerable gift for using men. Napoleon had that gift. He knew what he wanted done and employed men who

could do it, and much that was done by men he put to work outlasted his conquests and his personal collapse. The mind that secretes knowledge is not necessarily the mind that stimulates and directs action, but it is, of course, important to have somebody that knows, somebody that has learned what there is to learn on any subject under discussion. But the truth is that nobody knows the whole truth about anything. Ordinary students only know as far as the contemporary mind has reached and often enough not that. The minds that pioneer are seldom academic. Some of the greatest doers have been men who did not know what all informed persons were well aware of, that what they wanted to do was impossible. Probably the vice of the academic mind is to be static, to stand still, fail to get the news, and what it does get to reject as foolish. There are enormous truths about human life and the powers of men that are neglected or rejected at this present time by most of the best scholars—enormous powers that are not used; the mass of humanity is not intelligent enough to receive them or to be trusted with them.

After all, the big job of the scholars is to raise the level of human intelligence. Harvard was founded, as Doctor Conant recalls, "to advance learning and perpetuate it to posterity." That is the true function of universities. Scholars are interesting, more so than the less instructed. Whatever their limitations, whether their beliefs are right or wrong, they talk and think on a higher level than persons less well taught. They are useful critics. The wisdom of the wise has its limitations, but it makes at least for good talk, good reading, good literature, good music.

But what will the high scholars do besides checking disease, fighting insects, and possibly contributing to the regulation of economics, solving the

puzzle of the gold standard, checking other powerful corporations and such matters—how far will they help to save the world? Mainly, one may surmise, by creating an atmosphere in which the cultivated minds may live and move and have their say. The English universities in their courses seem to have had all the faults that institutions of learning can well incur, but for all that they have been nurseries of thought. They gave training to Wesley though no encouragement to the use he made of it. Studies are held to increase the powers of mind. Moses was learned in the lore of the Egyptians. St. Paul seems to have studied to good purpose somewhere; at least he was a competent psychologist. Calvin knew more than his letters; so did Luther. Knowledge may be digested information. Wisdom may be digested and illuminated knowledge. They are all stages of growth in understanding, and that presumably is what enthusiasts for better scholarship wish to see cultivated and produced.

DOCTOR CONANT was quoted as saying at the Harvard Club Dinner in New York in January that the success or failure of the civilization we are building in America to-day depends on the new recruits enlisted by the universities to carry on this never-ending adventure. Therein is evidence of a spirit suitable to the undertaking in which Doctor Conant is enlisted. He does well to think it important.

But is he right? Does the success of our civilization depend on what sort of students the universities enlist? Out of the universities and colleges will come useful men, but the great school of life also produces useful men without intervention of college faculties. The biggest factor in a man is what was born in him. Often the next most important element is his home raising. If he goes to college and acquires what

it interests him to acquire he may get it out of books, teachers, lectures, and academic apparatus, or he may not. Some of the most important things connected with human life the colleges cannot touch at all. In their curricula you get a lot of young people together; they can think about anything they like and inquire, absorb, investigate as they go along in class rooms or not, under supervision or not. The man-to-man in colleges, human intercourse, is vastly important. The noblest study of mankind is man, was in Alexander Pope's day, is now, and probably always will be. It is a course in colleges a little outside of the regular program.

The men who seem to have done the most conspicuous jobs for the civilization we now live in, who made the greatest discoveries or the greatest applications of discoveries, the best writers, the best read poets, were not university men at all—not Edison, not Wright the flying man, not Graham Bell, not Henry Ford, not Kipling, not Mark Twain; Dickens was not an academic product; Thackeray, only slightly; Stevenson, yes, in moderation; Walt Whitman, no, and this, of course, is a mere haphazard roster. But is it not true that entrenched or cloistered knowledge is hostile to innovations, more busy with making exact records of old thoughts than of investigating new ones? That is in the nature of things. Learning in the Middle Ages was kept alive in monasteries secluded from the world. No doubt there is a lot of learning in colleges and to have it there is useful, and helps the discoverers and writers and inventors whose training was not academic. Does everybody nowadays know Mark Twain's story of "The Celebrated Jumping Frog of Calaveras County" who lost a bet of forty dollars for his master because the adversary got access to him and filled him full of quail shot?

Maybe the imaginative persons who have the big ideas and are able to put them across do better in their employment if their minds have not been filled too full of something else. Probably you can fill a mind so full of mental quail shot that it can't jump.

There are things that universities can teach and things that they can't. They can teach chemistry. President Conant is a brilliant example of a university's usefulness in that direction. They teach physics, they teach science of various kinds and probably a good deal of what they teach is so. They can teach history, such as it is; possibly with imagination enough to detect some of the lies, possibly not. No doubt they can give good guidance in mathematics and would not hold back anybody that was qualified to be proficient in that pursuit. They teach languages so you can read them but not so that you can speak them. As for religion, and the things that pertain to it, one would not send a boy or a girl to college to get that. The communication of it is very individual. One would say it is seldom accomplished by organization, which may be true or may not. One would say that it did not lend itself to mass production, but various revivalists, much respected, seem to be evidence to the contrary—Wesley, Whitefield, Moody, Finney, Peter Cartwright—a long list of them.

There is going on now a curious reaching out for spiritual things or things of a spiritual nature. There are spiritualists, a lot of them, who are convinced of a future life and believe they are in communication with persons who have moved over into it. Then related to the invisible world and powers that concern it are the Christian Scientists, the Unity people, the New Thought people, the Buchmanites, and various other active groups, some very large, some earnest in advertisement, all in a way concerned

with powers that may be said to do miracles of one kind or another because the way they do what they do when they do it is not understood. All these groups go in more or less for healing. They are concerned with the power of thought and the projection of that power. Presumably they are all running on the same trail, though probably no two of them would admit it.

Out of all that pursuit we shall probably see large and important returns: increase of faith in some things, better understanding of much that is important; but of all that, how much shall we owe to the colleges? It will come to them because they are in the world and a part of it, but it will hardly be of academic origin.

Doctor Conant wants more money to provide more leisure for more study by more promising scholars. All the universities always want more money and, of course, they can use it in ways that look important. But possession of it is not without its drawbacks. One recalls that great story of Pope Urban and Thomas Aquinas. Thomas came to Rome to visit the Pope who got up for him a gorgeous show. They stood together and watched it go by.

"Thomas," said the Pope, "the Church can no longer say silver and gold have I none."

"No," was the answer, "neither can it say 'Take up thy bed and walk'."

Rich universities are fastened to definite responsibilities that handicap them in spiritual adventures. They can experiment in laboratories, try out anything in a test tube, experiment with any kind of working hypothesis that concerns material elements; but with spiritual adventures they have to be more cautious. Such things are for individuals. St. Francis gave away his money and went barefoot, thinking himself less impeded on that basis.

What is the greatest power-house in the world? Undoubtedly the New

Testament, an imperfect record of the sayings and doings of a man without property; but we owe that record, such as it is, largely to scholarship. Universities have contributed to it. When various experiments in application of spiritual powers that are now proceeding reach a more definite status, the universities may do something which may be helpful about them, but it will be done more, as indeed it is being done already, by the minds which universities gather than by the organizations which gather them.

THE other day (on the 8th of January to be accurate) Doctor McBain, Dean of the Graduate Faculties of Columbia, made an address at the annual university commemoration service in St. Paul's Chapel. According to the reports in the papers, he said scientific discoveries had "unquestionably made vast inroads upon man's traditional beliefs in immortality." He thought immortality was a "wholly unproved fact" and inclined, himself, to believe that it was better that it should be, and that "for thinking man certainty of an afterlife would have graver and perhaps more devastating effects upon us than certainty of extinction."

Maybe he has not happened to read Booth Tarkington's story about the "Smiths of Topeka" who believed in education, prosperity, and clean politics; knew a great deal about chemistry, mechanics, modern jurisprudence, and music, but on one point were curiously provincial, and that was geography. Neither Smith nor his wife had been outside of Kansas or wished to leave it and they brought their children up without knowledge of geography and taught them to avoid mention of travel. If Doctor McBain hasn't had so much quail shot fed into him as to anchor his spirit, he would surely be edified by that story.

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ABDOMINAL RESPIRATION.

THE employment of abdominal respiration by a certain class of voice trainers, vocalists, elocutionists, etc., and by some ignorant teachers of gymnastics, has been productive of no end of mischief and has resulted in an immense amount of suffering, especially in the case of women who have been subjected to this harmful procedure. In abdominal respiration, the respiratory movement is confined to the diaphragm, and lateral action of the chest is suppressed as much as possible. The diaphragm is forced downward to the utmost extent, the lower abdomen being forced outward to a corresponding degree. The effect of this is to cause downward displacement of the liver, stomach, kidneys, colon, and, in women, the pelvic organs also. Such displacement normally occurs during respiration, but the amount of displacement is very slight.

In some experiments which I made upon this subject a number of years ago, I found that in ordinary breathing, the downward displacement of the uterus was only about one tenth of an inch, whereas in abdominal breathing it was increased to fully a half inch, and I have occasionally met cases in which the uterus could be forced downward more than an inch, by strong downward pressure of the diaphragm. These were cases in which the abdominal walls were much relaxed, thus lessening the natural resistance

which the muscular structures of the abdomen oppose to the downward action of the diaphragm.

In normal respiration, any great degree of downward movement of the stomach, liver, kidneys, and other viscera, is prevented by expansion of the trunk at the waist. As the arch of the diaphragm flattens, its circumference extends through the outward elevation of the ribs, and thus the organs which lie just beneath the diaphragm are spread out over a larger area. By this means, any considerable degree of movement in the direction of the longitudinal axis of the body, or descent, is prevented by a movement in the direction of the transverse axis.

My attention was first called to this fact a number of years ago when treating the case of a young woman for curvature of the spine. The case was one of double scoliosis, the lateral deviation of the spine being so extensive that I found it necessary to apply a plaster jacket. There being some special troubles which required attention at the same time, I incidentally observed an extraordinary degree of movement of the perineum simultaneous with respiration. The perineum was depressed fully one half inch with each ordinary respiration, and considerably more when the patient made a forcible inspiration. I have since made observations upon this point in a great number of cases, and in administering gynecological treatment, I have often noticed that by causing a woman to execute strong abdominal respiratory movements, in other words to breathe diaphragmatically, taking pains also to raise the chest during expiration, the uterus may be made to move up and down sometimes to an extraordinary extent. This may almost always be done in cases in which the abdominal muscles are much relaxed.

The uterus and its appendages are suspended in the pelvic cavity by means of lateral ligaments. When these ligaments become relaxed, nothing can prevent the

existed in the scalp: The hair was cut short, the head washed with potash soap, a solution of bichloride of mercury (1-2000) at a temperature of 50° C. (122° F.) was applied to the affected parts by means of several layers of gauze saturated with the solution and covered with oiled silk. The dressing was renewed daily, and was found superior to any other which had been suggested. This method also possesses the great merit that it succeeds without depilation or pulling out of the hair.

Diet in Diabetes Mellitus.—Dr. W. Weintraud, an assistant in Prof. Naunyn's clinic, has recently published the results of a series of painstaking investigations upon tissue changes in diabetes and their relation to diet. His observations may be thus summarized:—

1. The diabetic does not eat more than a healthy person, and does not require more to maintain and even to increase his weight, except when taking a mixed diet, and then the excess is only equal to the amount of sugar discharged through the urine.

2. Even in grave diabetes, sugar may be made to disappear entirely from the urine during total abstinence from food. A diet consisting of 100 grams of albumin and 275 grams of fat, also secures complete disappearance of sugar from the urine.

3. The addition of fat to the dietary does not increase the secretion of sugar, but has the effect to decrease the amount of nitrogenous waste.

4. It is important to lessen the amount of flesh food as much as possible in diabetes. This may be best done by increasing the quantity of fat.

The Inefficiency of Intestinal Antiseptics.—Stern (*Zeit. f. Hygiene*) gives the results of a careful bacteriological study for the purpose of determining the influence of calomel, salol, naphthaline, *b*-naphthol, and camphor as intestinal antiseptics. After the use of *b*-naphthol for twelve days, there was no visible diminution of bacteria present in the feces. Some of the pathogenic bacteria administered with the food were easily recognized in the fecal matters. No difference in effects seemed to be produced, whether the antiseptic was administered before

the meal or afterward. Some of the patients were in usual health; others were suffering from typhoid fever.

[These experiments seem to show very clearly that antiseptic drugs cannot be relied upon as a means of establishing intestinal asepsis. An aseptic diet, consisting of such harmless antiseptics as charcoal, sulphur, and subnitrate of bismuth, are among the best remedies for this purpose; probably the best of all is a strict kumyss diet, the lactic acid having decided germicidal properties, and kumyss, when used to the exclusion of other food, having been shown to have a decided effect in lessening the number of intestinal microbes.]

Electrical Examination of the Eye.—Velhagen has found, by extensive experimentation, that the electrical reaction of the eye is changed in disease of the optic nerve. The examination was made by placing one sponge upon the nape of the neck, while the other was placed over the eye. A galvanic current was used. Children from ten to fifteen years of age observed the first flash at the interruption of the current, when the amount of current employed was 1-20th to 1-13th of a milliamper. In adults, a current of 1-13th to 1-8th of a milliamper was required. In cases of atrophy of the optic nerve, 3-4ths of a milliamper was required to produce the characteristic reaction.

Surgical Treatment of Urinary Retention.—Remy recommends tapping the bladder with a canula just above the pubes in cases in which the retention is caused by an enlarged prostate. A trocar of medium size should be used. A small, soft catheter should be introduced through the canula before it is withdrawn. The canula being then slipped out, the catheter is retained until the swelling of the prostate subsides, so that the bladder can be entered through the urethra and drained through the normal channel.

Ether or Chloroform.—In Germany one death occurs from chloroform anesthesia in 2000 cases; only one in 6000 in ether anesthesia.

descent of these organs along the pelvic canal. It is evident, then, that anything which persistently brings an abnormal degree of strain upon these ligaments, either continuously or intermittently, if sufficient time is not given the ligaments to fully recover after one strain before another is brought to bear upon them, must result in relaxation and stretching of the ligaments, and consequently in displacement of the uterus and its appendages.

The same principle applies with even greater force to the organs which lie at the upper extremity of the abdominal cavity; viz., the liver, kidneys, and stomach. These organs are suspended by membranous bands possessed of scarcely a sufficient degree of strength and firmness to be properly termed ligaments, and when persistently subjected to abnormal strain, their mooring ropes are easily stretched so that they float out in the abdominal cavity, so to speak, to a greater than normal distance from their points of attachment. In this way the stomach and liver become prolapsed, one or both kidneys may become movable, and in time, perhaps, become floating. In a recent case of this sort the writer found it necessary to perform the operation of nephrorraphy to secure the kidneys in position upon both sides.

Any one who has made any considerable number of careful examinations for the purpose of determining the position of the kidneys, must have noted the marked effect of diaphragmatic respiration upon the position of these organs. Normally, the kidneys, even the right kidney, lie up under the ribs out of reach; but in women who have practiced tight lacing, and especially in women with relaxed abdomens who have practiced abdominal respiration, it is almost always possible to feel the kidney very distinctly, and in quite a large proportion of cases (fully one third, I judge, from my own observations) the kidney is freely movable.

In a smaller proportion, say eight per cent or ten per cent, the kidney is floating. In cases of movable kidney, I have often felt the organ move up and down more than two inches with the respiratory movements, when the patient was made to breathe abdominally.

Another consideration is worthy of notice in this connection. The introduction of oxygen into the circulation is not the only purpose of respiration. The respiratory movements are also essential as an aid to the proper circulation of the blood. The respiratory movement is a suction or pumping action which aids the venous circulation throughout the entire body. This pumping action is especially useful, however, as an aid to the hepatic and portal circulations. The blood which passes through the portal circulation encounters the resistance of two sets of capillaries; that is, there is a capillary circulation at each end of the venous trunks which constitute the portal system; consequently there is naturally, in this part of the venous system, a greater tendency to mechanical stagnation than in any other part of the body. This tendency is antagonized by the aid afforded to the circulation by respiration. Stagnation of blood in the portal circulation means passive venous congestion of nearly all the abdominal and pelvic viscera. Inspiration antagonizes this condition in two ways:—

1. By diminishing the pressure about the heart and the large venous trunks which lie within the chest.

2. By increasing the pressure within the abdominal cavity. As the diaphragm descends and the chest walls are lifted outward, there is diminished pressure within the chest cavity.

Donder has shown, and we have frequently confirmed the observation, that the negative pressure of inspiration, as indicated by a manometer connected with one nostril, the other nostril being closed and the mouth also closed, is one

millimeter of mercury, the positive pressure of expiration being three millimeters. Supposing the area of the abdominal cavity to be three square feet (of course this area is very variable in different persons), the amount of negative pressure exerted in the whole abdominal cavity in inspiration would be a little less than four kilograms, or nearly nine pounds,—certainly sufficient pressure to aid materially in the flow of blood toward the heart. The positive pressure of expiration is three times that of inspiration. Doubtless considerable force is exerted by the muscles of inspiration connected with the chest, but the abdominal muscles certainly play an important part, also, in expiration, at least in forcible expiration. In ordinary inspiration, the abdominal walls are stretched; in expiration, the force stored up by the stretching of these muscles is used to expel the breath. During inspiration, the pressure exerted by the abdominal muscles, or the resistance which they oppose to the action of the diaphragm, results in positive pressure within the abdominal cavity simultaneously with the negative pressure of the chest cavity. This happy combination is exactly what is needed to aid the portal circulation. Water may be made to flow with greater rapidity through a single horizontal pipe by lowering one end, but if one end is lowered at the same time that the other end is raised, very much greater effects will be obtained. This is exactly what happens in normal inspiration,—the pressure within the chest is diminished while the pressure within the abdominal cavity is increased.

It thus appears that the more resistance the abdominal muscles oppose to inspiration, the greater must be the effect of the respiratory act in aiding the portal circulation. So-called “abdominal breathing” can be successfully practiced only by relaxing the abdominal muscles and allowing them to stretch to an abnormal degree. The more they are stretched, the

more relaxed they become, hence the less resistance they oppose to the downward pressure of the diaphragm; and the less the intra-abdominal pressure produced, the less assistance is afforded to the portal circulation. It is easy to increase the intra-abdominal pressure during inspiration by holding the muscles of the abdomen tense and allowing expansion at the waist alone. From the many considerations given, this would seem to be the normal type of respiration. Observations upon animals, young children, and normal individuals, show that this is the normal type of respiration; that is, that full breathing, or waist expansion in breathing, is the normal type, rather than expansion at either end of the trunk. Since the expiratory muscles are shown to be an important source of power in expiration, it is evident that the stronger these muscles become, the more force will be stored up in them, and the more assistance will be given to the abdominal circulation in inspiration, even during ordinary automatic respiration. The actual help afforded may be judged by referring again to the figures which we have given. If the diminished pressure within the chest amounts to one millimeter, or four kilograms, for the whole abdominal cavity; and if the positive pressure of expiration, three millimeters, may be attributed in large part, say two millimeters, to the pressure of the abdominal muscles, it is evident that the actual pressure operating upon the portal circulation will be the sum of the negative and positive pressures, or three millimeters, amounting, in the case of an abdominal cavity presenting, say, three square feet of area, to a total pressure of twelve kilograms, or about twenty-six and one half pounds. It is easy to bring an extra amount of force to bear in the aid of the inspiratory effort by contracting the abdominal muscles instead of relaxing them.

The abdominal muscles are to be made strong, not by relaxation but by contrac-

tion. As we have already seen that abdominal respiration requires relaxation of the abdominal muscles in order to secure the required movement of the lower abdomen, it is evident that this mode of respiration must be damaging rather than helpful.

The abdominal muscles may be best developed by trunk exercises, by forcible expiratory efforts, and by such exercises as lying upon the back and raising one or both legs, raising the head, raising the head and the legs simultaneously, raising the trunk from a horizontal to a sitting position, lying with the body supported upon the elbows and toes, and a variety of other exercises which bring the abdominal muscles into vigorous action.

Abdominal respiration is to be condemned. It cultivates a wrong style of breathing; it causes abnormal depression of the viscera, and may lead to serious prolapse of the abdominal and pelvic organs; it relaxes the abdominal muscles instead of developing them; it lessens instead of increasing the favorable influence of inspiration upon the portal circulation; it has, in fact, no advantage as a gymnastic procedure either in developing respiratory power or increasing vocal power. It would be better, in fact, to cultivate chest breathing than abdominal breathing, for chest breathing does not depress the abdominal viscera, and, in fact, strong lifting of the chest at the end of inspiration, is one of the very best means of aiding the restoration of prolapsed viscera to their normal place, and has the double effect of increasing the negative pressure within the chest and the positive pressure within the abdomen, thus not only aiding in lifting the viscera into position, but materially aiding the portal circulation.

ACCORDING to Stokvis, the mortality of European soldiers from hepatitis in India is 1 to 2 per 1000 yearly, while that of the native soldier is only .14 to .4 per 1000.

THE BEGINNING OF STRUCTURAL DISEASE.

IN the treatment of organic or structural diseases, as of the nervous system, the blood-vessels, and various vital organs, the fact is quite generally overlooked that the structural change is a consequence and not an actual disease. The real disease is the morbid process which has resulted in the tissue change. Nothing could be more unphilosophical than the limitation of the therapeutic efforts to such measures as may be supposed to be calculated to affect favorably the morbid structures. A rational mode of treatment must be based upon a recognition of the producing cause of the morbid changes which have taken place.

The researches of Bouchard and other modern investigators, have thrown great light upon this subject, and have placed upon more than probable grounds the theory that the presence in the blood and tissues of various morbid substances of a toxic character, such as uric acid and various leucomaines and ptomaines, originating in the tissues as the result of imperfect oxidation or absorbed from the alimentary canal wherein they are produced by microbic action and morbid digestive processes, constitutes the real morbid entity in a large number of organic or structural maladies, especially those of the nervous system and kidneys.

In the treatment of these affections, it is, then, of the utmost importance that the physician should look carefully after the processes of digestion and respiration. These are the two great means by which the blood is to be purified. The exclusion from the dietary of poisonous substances and of such food substances as readily undergo putrefactive processes in the alimentary canal, and the introduction of an increased quantity of oxygen whereby the poisons resulting from morbid tissue changes may be destroyed by oxidation, constitute the most important measures for combating the onward

march of an organic affection. Remedies of any sort, if aimed directly at the morbid tissue itself, will fail to accomplish anything more than temporary palliation, unless combined with measures which strike at the root of the disease. An ideal mode of treatment will necessarily include both classes of remedies.

Bacteriology and physiological chemistry are opening up for us almost daily, new lines of thought, new methods of treatment, and new possibilities of cure.

PASKOLA.

WE do not often advertise patent medicines even by publishing an analysis of them, but so many inquiries have been made concerning Paskola, that we are tempted to publish the following analysis which was made some time ago by the National Department of Agriculture, of Washington, D. C.:—

“ANALYSIS OF PASKOLA.

“In appearance the liquid is a yellow, viscid fluid, smelling and tasting of sulphur dioxide. The analytical numbers obtained are as follows:—

“Specific gravity at 17.5°	1.4062
Total solids, per cent	78.58
Water, per cent	21.42
Polarization on sugar scale.....	162.40
Reduction as per cent dextrose.....	33.52
Nitrogen, per cent.....	.04
Albuminoids, per cent.....	.25
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“Calculating from the total solids, reduction, and polarization, the following figures are obtained:—

“Dextrine, per cent	40.96
Dextrose, per cent.....	26.84
Maltose, per cent.....	10.78
“Total.....	78.58”

By a recent letter from the manufacturer, we are informed that Paskola now consists of glucose (corn syrup) with one tenth of one per cent of hydrochloric acid (muriatic acid or spirits of sea salt) and

animal ferments. A test of this mixture made in the Laboratory of Hygiene of the Battle Creek Sanitarium, showed that it is utterly devoid of digestive properties.

An equal quantity of New Orleans molasses, which costs at wholesale fifteen cents per gallon, containing about ten drops of hydrochloric acid to the pint, will be fully equal to Paskola as a medicine, and of little higher value as a food.

From these facts it will appear that the price at which this mixture is sold—\$1 for a pint bottle—affords a fair margin of profit for the manufacturer. The cost, besides the bottle, cannot be over three or four cents a bottle, at the outside. It is a matter of amazement that any intelligent person can be wheedled into the idea that such an absurd mixture is curative.

REVIEWS.

THE MALARIAL FEVERS OF BALTIMORE.—By Wm. Sydney Thayer, M. D., and John Hewetson, M. D., assistants in medical clinics of the Johns Hopkins Hospital. The Johns Hopkins Press, Baltimore, Md.

This little work of 215 pages, which has just been issued from the press, contains the best summary of the views held by modern workers along this line of study that has, as yet, appeared in the English language. Its authors have endeavored to bring before the reader in a systematic and comprehensive manner all the known facts in relation to the life history of the malaria plasmodia. They bring to their aid, in the preparation of this work, years of experience with an organism that is well worth a careful study. It is an analysis of 616 cases of malarial fever, with special reference to the relation existing between different types of the hematozoa and different types of fever.

It is an admirable résumé of modern ideas on malarial fever, and contains a valuable table of references to the main works treating of malarial fever since the recognition of its parasitic origin, arranged in chronological order.

At the end of the work are some eighty-seven different drawings, showing the structural details of the different varieties thus far observed in Baltimore. The work is concise and practical, and contains all that it is really necessary to know for a microscopical study of malaria.

RUNNING AS AN EXERCISE.

FOR those who can bear it, running is a very fine exercise, and particularly for brain workers—understand me, not for everybody, but for those who spend most of their time at their desks. Any man under sixty or sixty-five, not weighing more than 150 pounds, and with a sound heart and lungs, may, with reasonable care, practice it safely. The advantages are: (1) That it makes him forget his cares and labors, whatever they are, in order that he may give the closest attention possible to running; (2) one can get a great deal of exercise in a very short time; (3) every part of the body is called into play, and much oxygen taken into the lungs and blood.

The precautions and suggestions for those who adopt it are the following:—

(1.) It should be in the open air, and during the season when the weather is not too hot; (2) The body should be lightly and loosely clothed; (3) The position should be an upright one; (4) In the beginning the runs should be short— not over 200 feet, and only moderately fast; (5) An interval of walking should then follow, and then another run, which

may be a little faster; then another interval of walking. This may continue for half an hour. If the heart does not become strained, one or two of the runs may be fast, so as to call as much effort into the legs as possible. This will be a great relief to the brain and an excellent aid to sleep. Put some will-power into the effort.

The methods of running are important. There are three:—

1. To run as a boy runs, swinging both arms vigorously and raising the body at each step considerably. For exercise alone this is the best way, though it causes the expenditure of more force. The attitude should be upright, the head well back on the shoulders. The knees are well bent at every step, and the foot comes down on the toes and fore part.

2. Running as soldiers are taught to run in the German army, by keeping the knees stiff and throwing the foot forward as far as possible at every step, coming down also on the front of the foot. This method requires some effort, and the results are also

(over week)

A HINDRANCE TO CORRECT WALKING.—Few people know how to walk correctly, and therefore walking is not to the great majority a means of recreation or a mode of travel. One hindrance to correct walking is improper footwear. Most people have neither proper shoes nor proper socks. In consequence of wearing bad shoes from childhood, their feet are distorted. Perhaps not more than one out of four persons uses his toes in walking, and the toes are an important part of the means of locomotion. In walking once with a man of good physique I noticed that he walked entirely from his knees. By this I mean that he put one foot forward, and did not push himself with the toes of his other foot, but leaned forward and pulled the other foot after him. I found that he made no use of his toes, owing to his having worn badly-made shoes from childhood.

At the age of twenty-one I was interested in a pamphlet, "Where the Shoe Pinches." After reading it I procured lasts made on anatomical principles. Their use has prevented the usual deformity of the foot. Some fourteen years ago, and after I began regular walking, I found even these lasts faulty, and had another pair made. As I progressed in the knowledge of walking, I found even the second pair of lasts unsatisfactory. In order to obtain a correct form for my shoes I made plaster casts. In a box large enough to contain both feet I made a partition, and covered the bottom with a layer of putty. Then I put each foot in the putty, thus making an impression. Into the impression I poured plaster-of-Paris. On lasts formed from these models I obtained the best possible shoes.—*Eugene Lamb Richards, in the Century.*

A YEAR'S WALKING.—A Swiss doctor took the trouble to carry with him for an entire year, a pedometer, by means of which he was able to record the exact number of footsteps taken during the year. The total was 9,760,900, or 26,740 per day. Of the total daily number, from 1500 to 2000 were taken in climbing stairs.

SOME POINTS ON WALKING.—In a recent magazine article, J. M. Buckley, LL. D., compares three forms of land touring,—horseback riding, cycling, and walking,—and says he prefers pedestrianism because of independence, the healthfulness of the exercise, the continual perspiration—the most health-giving of all conditions when not produced by artificial heat and when sustained by suitable food and drink. Every part of the body is renewed by such exercise. Dr. Buckley further says: “No part of the world offers greater facilities for such tours than the United States. No one will be harmed whose feet are shod with the preparation of hygiene, and not of fashion. Nothing is better than old-fashioned army brogans. A shoe that gives room for each toe to perform its functions, does not slip at the heel, and has a sole thick but not too thick, and a low heel (with an extra pair always at hand), and large woolen stockings, are all that is needed; the stockings would be better worn inside out, and changed from one foot to the other every two hours. For the same reason the shoes should be changed once a day, until the pedestrian is broken in. The foot strikes the ground on an average of two thousand times in every mile, and if a single horsehair or a fold no larger should press against the foot, the continually repeated pressure would soon cut through the skin. The change of shoes and stockings distributes the pressure.

“For a person wholly unaccustomed, let the walk

of the first day be but six miles; three leisurely taken in the morning, and three in the afternoon. Add one mile per day to each of these exercises for five days, and rest on Sabbath. Begin the next day with five miles in the morning and five in the afternoon, and add one mile to the morning and one to the afternoon walk, up to the next Sabbath. Twenty miles a day will thus be reached, and after that he can do as he pleases.”

BURDETT ON GYMNASIUMS.—Burdett says in the *Ladies' Home Journal*, “If I were a boy again, I would spend a great deal of time in the gymnasium. I am a strong believer in athletic scholarship and gymnastic training. The ventilation in my gymnasium was perfect. The air came in with a free sweep from sunrise to sunset. There was sunshine all the way from heaven in the clearings and grateful shadows under the trees. I don't know so much about gymnasiums hedged in with walls and roof, and ventilated by machinery, but I know they are better than none. Live out-of-doors all you can, my boy. Walk a heap. The open air, the free air, and the sunshine are as good as the exercise—better.”

Miss Millet—“Is it true that you bicycle riders soon get attached to your machines?”

Mr. Wheeler—“It hasn't worked that way with me yet. I can fall off my machine without the least trouble.”—*Indianapolis Journal*.

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HOW TO RIDE A WHEEL.

THE proper position for a bicycle rider is, in the first place, an upright one. He should push nearly straight downward with his legs — not backward, as one must do who leans far forward. His arms should not be rigid and extended to their full length, but a little bent, and the handles can be easily adjusted to bring this about. The reason for the bent or slightly bent arm is evident after a moment's thought. If the arm is stiff, rigid, and extended to its full length, the "pull" which you give the handles on going up hill, or indeed, while running along a level road, is a dead pull. There is no life in it. Each jar to the machine is a jar to your body, your head and neck, and consequently a jar to your whole system. On the other hand, if you ride with your arms a little bent, and acting as a kind of buffer to all jarring influences, they will save you an injurious, though unnoticeable shaking up each time you go out. The only way in which you will notice a change will be after you have become accustomed to the bent arm method. Then you will find you can ride longer without becoming tired.

Another feature of this stiff arm is the position into which the shoulders are thrust. Try it; grow a little tired with a long ride, and then see where your shoulders are. You have gradually come to lean on your arms for rest. Both shoulders have been thrown far back; your head and neck are stretched far forward, and your chest has, so to speak, sagged forward out of its natural position. Keep this up long enough, and you will be a fine-looking specimen.

No; the weight of your body should never come

on the hands and arms, but on your thighs, and thence be transferred to the seat, with the unconscious, springy action of your legs, which in a measure allows some of your weight to come on the pedals. In this position your hands are free to guide your wheel, your body is erect; you do not then get into the habit of swaying from side to side to put your weight first on one side and then on the other; and your whole muscular movement is regular and normal. Try riding without putting either hand on the handles, and sitting erect. If you ride well, you can easily keep your balance, and in an instant you will be in the correct position. Once in this position, place the hands lightly on the handle bars, and you will be in a healthy, a proper situation to gain benefit from your riding.

In riding ten miles, for instance, I should never go the whole distance at one pace. Slow, steady riding has its merits; so has sprinting for short distances. When a good, clear road looms up ahead, have a brush for two or three hundred yards with the boy who is with you. These little races are good things. They quicken your movements, and they keep you from forming bad habits or letting your body sag into set, immovable positions. They also bring the muscles into a different kind of play.

In fact, in bicycle riding, as in about everything else, you should remember that there is a right and a wrong way; that you need not only endurance, but speed, and that changing from one to another, keeping up variety, is one good way of avoiding bad habits.—*Harper's Young People.*



THE BICYCLE FOR INVALID WOMEN.

THE bicycle as a means of physical exercise, fills a place which has never been filled by any other exercise-device or apparatus. It is true, a well-equipped gymnasium affords every appliance that can possibly be required for the development of every muscle or set of muscles in the body; nevertheless, it requires so large an amount of moral courage to work steadily in a gymnasium so many minutes a day, or so many hours a week, week after week, month after month, and year after year, if one would secure the good results obtained by systematic exercises, that a comparatively small number of persons can be induced to avail themselves of this means of physical grace. The permanence of the bicycle as an exercise-machine is largely due to the fact that instead of being a dead, inert thing, like a "horse" or a horizontal bar, it is a thing of life and beauty. It is something that must be managed and controlled; a thing that has just enough disposition to mischief, and just sufficient uncertainty as to what it is going to do next, to render it a perpetual source of interest and a joy forever when one has become thoroughly acquainted with its disposition, and learned how to humor its eccentricities, in other words, has acquired the art of managing this somewhat willful but wonderfully versatile machine. It is this necessity for the exercise of skill, judgment, good sense, and tact in the management of a wheel which renders it so fascinating an exercise. To the same fact must be attributed also some of the most important physiological effects derived from bicycle riding.

This is especially true in relation to the bicycle as a means of exercise for women. The woman who goes out for a half-mile walk as a "constitutional,"

comes back fagged and exhausted, and with a back-ache which persuades her that however beneficial exercise may be to other people, it is not the thing for her. The same woman would return from the exertion of an hour's shopping, so worn out with loitering about the counters of dry-goods stores and milliners' shops, as to feel the need of half a day's rest in bed. In neither instance has the amount of exercise been sufficient to induce any great degree of mental and physical exhaustion. The fault is in the conditions under which the exercise is taken, and especially in the fact that the mental and nerve conditions are not such as are favorable to recuperation. Exercise is something more than mere mechanical movement. This is at least true of healthful or health restoring exercise. Brain, nerves, and muscles co-operate in a most marvelous manner in the muscular movement. Every movement of a voluntary muscle begins in the brain in the shape of a nerve impulse which travels outward toward the muscle along the nerve trunks, and on reaching the muscle, induces a sort of vital explosion, one of the results of which is muscular movement. In the intricate recesses of the tissues, other results, such as heat production, the generation of electricity, the production of various organic poisons, and various other vital chemical and physical changes, accompany the muscular action, and go to make up the sum total of the effects of exercise. Changes also take place in the brain and nerves, as the result of their participation in the physiological processes, of which the muscular movement is only a part, although it is the chief visible result.

In view of this fact, it is evident that, in order that the greatest benefit should be derived from the

exercise, the conditions should be such that the brain and nerves, as well as the muscles, can act in a normal and healthful manner. The man who goes out for a five-mile tramp for health's sake, and during his walk begrudges each moment that he is compelled to spend in such an unenjoyable way, heartily wishing himself back in his office, returns to his desk fatigued in mind and body, rather than invigorated. The woman who painfully drags herself through a half-mile walk over a stone pavement, each step upon the hard stones jarring a sensitive spine, each breath a sigh of relief that the sofa or comfortable easy chair is so much nearer, can truthfully testify that walking is not to her a means of either health or strength.

The bicycle so absorbs the interest of the rider in its manipulation that the backaches, sideaches, home-cares, business worries, everything morbid and everything depressing, is for the moment forgotten. It affords, in this respect, the same sort of oblivion from troubles which the business man too often seeks in the gaming table, the intoxicating cup, or the nerve-benumbing pipe or cigar, and which the fashionable woman finds in the theater and the teapot, but fortunately without any of the evil after-effects inseparably connected with these brain-intoxicating and nerve-obtunding pleasures.

Mounted on wheels which practice has rendered so subservient to the will that they have been almost incorporated into the body, instantly obeying the behests of the will through the medium of the arms, legs, and trunk, almost as implicitly as a hand or a foot; now skimming over a level surface with half the speed of a locomotive, then tugging up a hill, puffing like an engine, the chest swelling with every breath, taking in great lungfuls of life-giving oxygen, the heart bounding vigorously to keep pace with the lungs and muscles; looking out ahead for obstacles in the way; now and then casting a quick glance behind to assure one's self against possible danger in the rear, or to find reason for complacency in the distance which one's companions have been left behind; every instant on the alert; making a wide sweep around a sand bed or a mud-puddle, or deftly turning aside an inch or two for a cobble stone; slowing up for a rough place; bracing one's self to jump a ditch; gracefully or ungracefully bowing, to shoot under an overhanging bough; coasting down a hill-side, or springing off unceremoniously to avoid a disastrous collision,—no place remains for carking care. Aches, pains, backs, limbs, stomachs, nerves, ambitions, misfortunes, jealousies, fears, are all left behind, as the bicycle rolls speedily on, all noise and

jar abolished by the pneumatic tire and the pneumatic cushion. One is forever being transported into a new sphere. He feels a sort of kinship with the birds, and looks down with sympathy and commiseration upon the poor mortals trudging along the wayside on foot or jolting in a carriage. One who has never learned to ride a bicycle has missed a phase of human experience which no one but the bicyclist or the balloonist or parachutist can appreciate.

This abstraction from all morbid and depressing influences and circumstances, and complete absorption in the pure physical delight of rapid movement accompanied by comparatively small exertion, and affording an opportunity for short intervals of rest if desired, without interrupting the progression, is one of the secrets of the great good derived and derivable from bicycle riding. The bicycle is a mind-cure doctor of the first order, and can boast more cures through its influence upon the mind and nerves than can the most famous metaphysical healers or "Christian Scientists."

As an exercise machine, the bicycle holds first rank because of its ability to secure to every part of the body a due proportion of exercise. The largest amount of work, is of course, required of the leg muscles. These are the largest and strongest muscles of the body, and the muscles which are most constantly in active use. The neglect of the proper exercise of the leg muscles is one of the causes of the notorious little health of women in this country.

Walking is constantly prescribed by physicians, as one of the means of curing some of the worst of chronic ailments to which women are so subject. Nevertheless, few women are cured by this means, for the reason that the majority of women find themselves unable to carry out the prescription without in so doing experiencing so much distress and discomfort that the possible good effects of the exercise are thereby quite neutralized, and consequently at least nine out of ten of those who undertake to find a cure by this means, become discouraged and adopt the view that the remedy is worse than the disease. Not so with bicycle riding. By this mode of exercise the legs are relieved of the burden of carrying the body about, and in such a manner that the whole weight of the body must rest in alternation upon each single limb; the weight of the trunk (of the whole body, in fact) is supported upon an easy and comfortable seat, while the limbs execute the slow and easy movements whereby the machine is propelled. At the same time the arm muscles are exercised in co-operating with the legs and trunk in guiding the machine, while the trunk muscles are kept constantly

active in executing balancing movements whereby the equilibrium is maintained. Thus the entire muscular system is brought into efficient but gentle activity without strain upon parts that are weak or sensitive.

Weakness of the muscles of the trunk and abdomen is the foundation cause of a large share of the ailments from which women suffer, such as prolapse of the stomach and bowels, and other internal organs. The bicycle affords a means, *par excellence*, of developing these muscles, and securing an erect and graceful carriage, as well as a correction of the evils resulting from constricting bands, corsets, and heavy skirts.

It is but fair to state that the writer's encomiums upon the bicycle as a means of exercise for women are not based upon theoretical grounds, but upon actual experience. For nearly twenty years I have

been engaged in the practice of medicine, and during that time many thousands of invalid women have been under my care for the treatment of disorders peculiar to their sex, and I have endeavored to bring to bear upon the treatment of these cases the appropriate means and methods presented by all the principal systems of physical training employed in this country, in England, France, Germany, and Sweden, including the famous Swedish gymnastics; and while I continue to make constant use of calisthenics, gymnastic apparatus, Swedish gymnastics, etc., I do not hesitate to say that I have seen more immediate and remarkable curative results from bicycle riding than from any other system, or from any combination of systems of exercise. I cannot better emphasize the truth of what I have said upon this subject, than by citing a few actual cases, which will be presented next month.

(To be continued.)

BETTER THAN ANOTHER PARLOR.

BY HELEN L. MANNING.

"WHAT is your plan for keeping up physical culture after you leave the Sanitarium?" I asked of a sensible lady in middle life, who had been spending some months in an effort to regain her health.

"Well, I'll tell you," she replied. "We are just about to build an addition to our house, and my plan before coming here was to furnish the first-floor rooms as double parlors. Not that I needed new parlors particularly, for I have a very pretty one now, and I knew my husband would oppose it; but I was determined to have my way. Since I have become awakened on the subject of physical culture, and realize its importance to every relation in life, I am going home to carry out an entirely different scheme. Instead of double parlors, I am going to have the two rooms thrown into one, and fitted up as a home gymnasium. I know it will be a great benefit to me, but I care more for it on account of my six children. I shall encourage them to invite their schoolmates to join with them whenever they please, and I will see what can be done in this way to build up strong bodies and at the same time keep my children contented at home. I will endeavor to be young with them, instead of being the sickly, self-centered invalid that I have been for the past two years."

"What mechanical aids will you introduce, or do you think that free gymnastics are sufficient?"

"If I felt competent to teach free gymnastics properly, perhaps they, with marching, would be suf-

ficient. As it is, I shall have wooden dumb bells, Indian clubs, and wands,—they cost very little,—and besides these, I'll get a few of the most useful wall machines. By the way, we have an old piano which will serve admirably to furnish march music, and one of my daughters plays accurately. The whole expense of fitting up the gymnasium will not be near what I should have squandered on furnishings for parlors, which I really did not need, except to rival my neighbors."

"Surely," I said in reply, "if you succeed in being young with your children, in giving them symmetrical physical culture, and at the same time cementing their hearts to you and to their home in bonds of closest sympathy and mutual interest, it will be worth more than all the new parlors in the world. I wish you every success, and hope that your neighbors will observe and then strive to emulate your example."

Are there not all over the land, thousands and thousands of stuffy, darkened, unventilated, and little-used parlors which could, with profit to the physical and moral nature of every member of these home circles, be turned into gymnasiums and play rooms? The "company" parlor is never enjoyed by the guests who with due awe and solemnity are occasionally taken over its threshold; it is a great expense and a constant care; the furniture goes out of fashion or becomes moth-eaten; and after all,

what real satisfaction and comfort does it afford to any one? In contrast to this, a home gymnasium need not be expensive, and certainly will pay big dividends on the investment, in home comfort and enjoyment, in keeping the children safe and contented at home, and last but not least, in assuring a strong physical development and equipment for the

burdens and responsibilities of life. If this were done, the family doctor would find his occupation largely gone, and the melancholy dyspeptic and nervous invalid would be unheard of. Then out with the somber, stately, useless parlor, and in with the sunshiny, well-ventilated, useful home gymnasium!

A SENSIBLE CRITICISM.—The Venus de Medici has so long been pointed at as a type of feminine physical beauty, that it seems almost sacrilege to call in question the correctness of the judgment of those artists who have so long and so eloquently expatiated upon the æsthetic beauties of this ancient marble statue, which was exhumed at Tivoli on the site of Hadrian's villa, a little more than two hundred years ago. But, according to a recent writer, there have, within late years, "been skeptics daring enough to class this with the Apollo Belvedere as a sample of ancient art that has been 'monstrously overestimated,' and now comes no less an authority than Holman Hunt to assure us that the Venus de Medici, to use a popular phrase, 'won't do.' A little anecdote attaching to this expression of opinion is quoted by the *London Daily News*: Some years ago, at the house of Sir Richard Owen, the great naturalist, Mr. Hunt, met that professor of sanitary science, the late Sir Edwin Chadwick, who began a conversation thus:—

"As a Commissioner of Health I must profess myself altogether opposed to the artistic theory of beauty. There is the Venus de Medici, which you artists regard as the perfect type of the female form. I should require that a typical statue with such pretensions should bear evidence of perfect power of life, with steady prospect of health, and signs of mental vigor; but she has neither. Her chest is narrow, indicating unrobust lungs; her limbs are without evidence of due training of the muscles; her shoulders are not well braced up, and her cranium, and her face, too, are deficient in all traits of intellect. She would be a miserable mistress of a house and a contemptible mother.' But the listener assured the sage critic that he had made a most artistic criticism of the statue, and that his auditor would join in every word as to his standard of requirements.

"Mr. Hunt was aware, he said, that he was talking heresy to the mass of persons who accepted the traditional jargon of the cognoscenti on trust, but in his opinion 'the work belongs to a decadence of Roman virtue and vitality, and its merit lies alone in

the rendering of a voluptuous being without mind or soul.' If no authorities of equal weight will stand forth in defence of this marble lady, it is to be feared that the famous Venus de Medici will soon be ranked among imposters. The strange part of the matter is that it has taken 213 years to find her out."

We entirely agree with the above criticism. Although we have frequently referred to the waist of the Venus de Medici as a model for modern women, we have never been able to recommend the statue as in any other respect a model to be imitated by the women of the present age. The Venus de Milo is a very different type, and evidently intended to represent a very different character.

G.H. p. 72 (Posture)

BICYCLE RIDING.

THE rapidity with which the bicycle has won its way into popularity, even in this country of bad roads, is quite unparalleled in the history of any other previous innovation in methods of travel or locomotion.

Bicycle riding is doubtless made by some a dissipation, but that it is one of the most healthful forms of physical exercise will not be disputed by any one who has any practical knowledge of the art. There is something exhilarating and enticing in the ease with which one glides along over a road of reasonable smoothness, which leads one to muscular exertion to an extent that would be quite impossible in ordinary walking, or almost any other form of exercise not accompanied with the excitements of a game, such as lawn tennis or football. The machine constitutes a sort of companion to the individual, and relieves the hour of exercise of the unbearable tedium attached to the simple constitutional walk taken for health's sake.

If you possess the amount of moral stamina necessary to take, regularly and systematically, each day, the requisite amount of exercise in the form of walking, or set exercises to be executed in the chamber or in a gymnasium, such a mode of exercising may be maintained with reasonable regularity for a few weeks, or even months, but the monotony of the task becomes unendurable, and one ceases to appreciate the benefit from the exercise which was at first easily recognizable. Mounted upon a good bicycle, however, especially one of the latest pattern, suited for ordinary rides by means of the pneumatic tire, one heartily enjoys a ride of six or eight, or possibly a dozen miles or more, even after a hard day's work ;

he comes back exhilarant, with pure blood, cleaner tissues, and a clearer brain, in consequence of the greatly increased activity of the lungs and skin, and prepared for a few hours' evening work if necessary, or for the soundest possible sleep, and through it, rest, the most complete recuperation and preparation for another day of effort.

One great advantage in bicycle riding as a means of exercise, of which we do not recall having seen mention, is the physiological relation between the movements of the legs and the activities of the lungs and heart. Violent effort of all kinds results in excitement of the lungs and heart. The excessive amount of blood brought to these organs during violent exercise, is one of the causes which give rise to the hurried respiration, rapid pulse, and often urgent and unpleasant demands for air.

In making a violent effort, there is always a disposition to hold the breath during the height of the effort, thus affording opportunity for an additional increase in the blood and tissues of the poisons which nature is endeavoring to hasten out of the body through the increased activity of the heart and lungs.

This fixation of the muscles and chest, technically known as "strain" or "effort," is especially marked when the arms and shoulders are chiefly involved in the exercise performed. The close relation of the bloodvessels of the arms to the heart and chest, together with the fixation of the chest muscles above referred to, tends greatly to increase the effect of the exercise of the arms and shoulders, in causing disturbance of the action of the heart and lungs, in other words, in producing quickened pulse and shortness of breath.

Movements of the legs, on the contrary, while producing greatly quickened heart activity and labored breathing when executed with great force and rapidity, cause this influence in a lesser degree than do similar movements of the arms.

A further point, which is of the greatest importance, is this: It has long been known that slow movements of the legs have the contrary effect, viz., a quieting influence upon the movements of the heart and lungs. This is due to the fact that the legs are so remote from the lungs and heart that the increased amount of blood brought into the muscles as the result of movement, relieves the pulmonary congestion; and at the same time, such movements, owing to the fact that the muscles of the legs are attached to the bones of the pelvis and not to those of the chest, leave the lungs and heart perfectly free to act; while movements of the arms, when of any considerable degree of violence, hamper the movements of the lungs and heart, owing to two important facts; viz.,—

1. That the large muscles of the upper arm are connected with the chest, and require fixation of the chest walls in efforts in which their full power is exerted.
2. That when the breath is held, the compression of the air within the chest cavity reacts upon the heart, compressing it, and thus seriously interfering with the natural course of the circulating blood.

This influence of slow leg movements in quieting the heart and lungs when unduly excited, is constantly employed in the admirable system of exercises known as Swedish gymnastics, in both educational and medical forms. The daily program of exercises in Swedish educational gymnastics, is purposely so arranged that the movements of the legs follow those of the upper extremities, especially movements calculated to excite violent activity of the heart and lungs; and in Swedish medical gymnastics, the slow leg movements are often depended upon as a means of quieting an irritable or excited heart, and relieving the congestion and other functional embarrassments of the lungs.

Except when riding very rapidly, the movements of the legs in bicycle riding are slow and regular, and do not require a sufficient amount of effort to necessitate holding the breath, especially when the rider has become sufficiently accustomed to the exercise to be able to dispense very largely with the use of the arms in controlling the machine, so that, although the heart and lungs are now and then thrown into violent activity by short spurts from a ride up a steep grade or through a section of sandy

road, the violent activity is quickly quieted by the slow leg movements which follow while riding over a down-grade, or slowly rolling on a smooth surface. It is this fact which accounts for the observation that a person in riding a bicycle may put forth an amount of effort which would leave him completely exhausted if the outlay of force had been expended from the muscles of the arms and shoulders, and yet finds himself fresh and ready for a considerable additional amount of exercise, if desired or required.

Another conspicuous advantage gained in bicycle riding, is the exercise in balancing, which is necessitated by this form of exercise. The beginner recognizes at once the little control which he possesses over his balancing muscles. He may understand perfectly well the theory of bicycle riding, and yet not be able to keep his seat upon the saddle more than half a minute, because of his inability to command instantly and automatically the muscular activities necessary for the constant readjustment of the balance involved in maintaining a perpendicular position upon so narrow a base as that afforded by a bicycle wheel. This ability can only be acquired by actual practice. The muscles may be strong and willing and ready for instantaneous action, but the nerve centers which command them are quite incompetent to execute the necessary orders, until after they have been trained by practice.

No bicycle rider can fail to remember the great fatigue, and even exhaustion, which followed his first attempts at bicycle riding. This exhaustion was not by any means wholly due to the muscular effort made, as the same amount of effort might have been expended in some other way without experiencing a tenth part of the exhaustion realized. The chief cause of the extraordinary fatigue which accompanies the first efforts at bicycle riding is the unaccustomed labor required of the nervous system in the efforts to preserve the balance in an unaccustomed position and under unusual circumstances.

The amount of effort required when standing upon the feet, although considerable, is very small compared with that demanded for balancing upon a wheel. The unconscious ease with which the balancing is performed after a person has become accustomed to riding is wholly the result of training, and is an evidence of the advantage of bicycle riding as a means of training or educating the nerve centers.

Difficult exercises, that is, those requiring the execution of the balancing movements, are always far more exhausting than those which require nothing more than an expenditure of muscular energy. A person tires much more quickly in walking upon a

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narrow surface than in walking upon a broad, level path. The difference is simply in the amount of work required of the nerve centers. This is one of the great advantages of bicycle riding, especially for sedentary persons, as it sets in operation a portion of the brain and central nerve system which is not ordinarily employed in business or intellectual work, and thus draws away the surplus blood from the overworked and congested brain areas, and affords relief and an opportunity for quick recuperation. So that, altogether, we consider bicycle riding one of the most healthful of exercises, and one to be most highly commended, especially to business and professional men, and all whose habits are sedentary.

LUNG GYMNASTICS.

CONSUMPTION begins with weak lungs. A hard cold, a pleurisy, a pneumonia, an attack of influenza or la grippe, leaves the lungs in a weak condition, unable to defend themselves against the microbes which cause consumption. These germs find a foothold, and thus the disease begins. Many persons, through lack of active muscular exercise, never develop proper lung vigor. A person who easily gets out of breath in going upstairs, or who cannot, without great inconvenience, run a few rods to catch a train or a street-car, has weak lungs, and ought to give the matter of lung development immediate attention. All persons who have suffered from pneumonia, pleurisy, or any other serious lung affection, should also give special attention to lung gymnastics. A person who has consumption in its incipient stages may find in lung gymnastics, perseveringly employed, a cure for this disease. Lung gymnastics afford, in fact, the most efficient of all means of combating this dread malady, and they are also of great value in diseases of the heart, stomach, liver, and in congestion of the brain.

How to Exercise the Lungs.—There are many ways of bringing the lungs into active play, as ordinary exercise, gymnastics, etc.; but the most efficient means of exercising the lungs is by use of the expiration tube, a recently devised instrument, a cut of which is herewith shown. The expiration tube consists of a hard rubber instrument through which the breath is expelled, the instrument being held in the mouth for the purpose. It is so arranged that the outlet for the breath can be regulated at will, and

thus adapted to various conditions. The effect of its use is to expand the lungs, to increase the depth of respiration, and to strengthen the respiratory muscles. It is not destructible by use, and is of a convenient size to be carried in the pocket, so that it may be used several times a day. Its use does not interfere with any other occupation in which the person may be engaged at the time, except such as involve the use of the voice.

Both the expiratory and inspiratory muscles of respiration may be strengthened by using the expiration tube in the following manner: While lying upon the back and using the expiration tube in the usual manner, place a bag of shot weighing three or four pounds, a book of equal weight, or any similar object, upon the abdomen just below the pit of the stomach. In drawing in the air it will be necessary to lift this weight at each breath, and thus the inspiratory muscles will be strengthened, while the expiratory muscles are strengthened by breathing out through the expiration tube. This exercise should be taken for ten or fifteen minutes three or four times a day, and will have the effect of rapidly increasing the breathing capacity. In using the exhalation tube, care should be taken to practice full and deep respirations, expanding well the lower part of the chest. Care should also be taken to inhale through the nose instead of the mouth.



MOVEMENTS IN WALKING AND RUNNING.

THE movements in walking and running are commonly executed with so great rapidity that it is by no means easy to study their nature, and the various attitudes which the body assumes during the movements. It is apparent that during such movements as walking and running, the body is in a state of constant change, progression forward being a constant falling forward, and the body constantly recov-



FIG. 1.

ering itself by the alternate forward placing of the feet. The eminent physiologist, Marey, some years ago perfected a means of studying the movements of progression by the aid of photography. In an interesting work published by that author the present year ("Le Mouvement"), all the different forms of locomotion, as well as many other exercises, are explained and ingeniously illustrated by the reproduction of the wonderful photographs which M. Marey has prepared with so much skill.

Fig. 1 represents the movement of walking at a



FIG. 2.

somewhat rapid pace. In Fig. 2 are to be seen the movements executed by a professional runner. The outline in Fig. 3 is copied from an ancient Grecian vase. Fig. 4 is a representation of the movements of the wings of a heron in flight. It is interesting to notice the changing expressions of the muscles in the different attitudes assumed in walking and running, which are characteristic of the muscular movements of the face which accompany various mental states. Another interesting fact worthy of note is that the photographic representation of runners proves the acuteness of the observation of the ancient Greek artists, who had better ideas upon this subject than modern artists.



FIG. 3.

HOW TO LEARN TO SWIM.

THE old method of teaching a boy to swim, was to throw him into water deep enough to drown him, making it, with him, a case of "sink or swim."

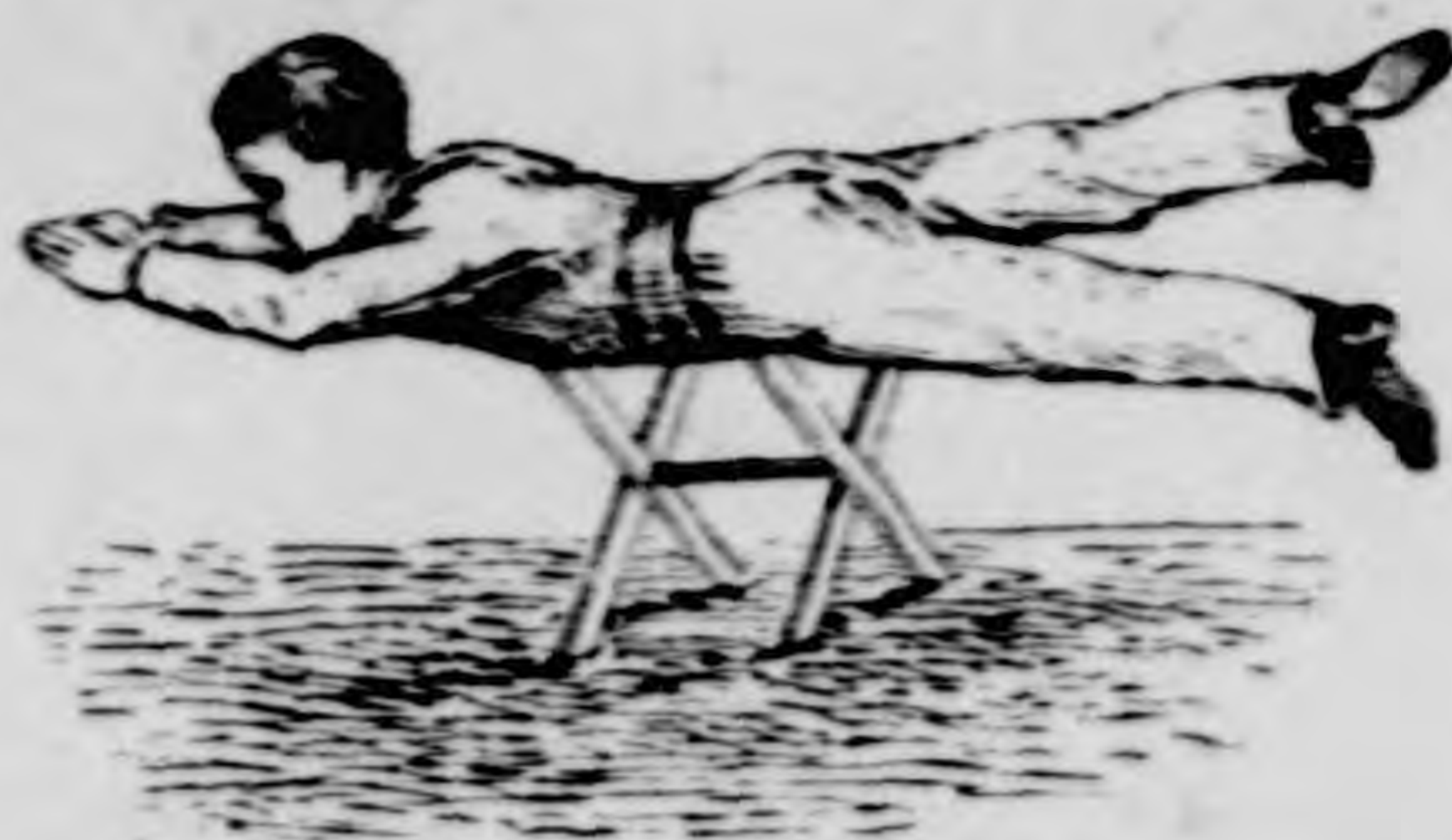


FIG. 1. FIRST POSITION IN SWIMMING.

The modern method, however, is more humane. The following is the method commonly employed in teaching swimming in the modern swimming-schools:—

The Movements.— There are three movements for the arms and two for the legs, the movements for the arms starting with the position for the arms shown in Fig. 1. At the first movement the arms are carried outward at the sides to the position shown in Fig. 2, the palms facing backward. At



FIG. 2. SECOND POSITION.

the second movement, the arms are brought from the position shown in Fig. 2 to that shown in Fig. 3. At the third movement the arms are thrust directly forward to the position shown in Fig. 4. The time

occupied in movements 2 and 3 together is the same as that of movement 1 alone.

The two movements of the legs are as follows:



FIG. 3. THIRD POSITION.

During the first movement of the arms the legs remain straight out, as in Fig. 4. During the second movement of the arms, by which they are brought to the position shown in Fig. 3, the knees are flexed and the legs drawn up. For strong swimming, the knees are drawn well up under the body, a position which cannot be assumed except in the water, or with the body suspended by a belt. The second movement of the legs is executed with the third movement of the arms, the legs being thrust down-



FIG. 4. CHANGING FROM FIRST TO SECOND POSITION.

ward and outward, assuming, at the end of the movement, the position shown in Fig. 1.

By the aid of a teacher these movements may be easily acquired by the following method: The pupil

being placed in water not higher than his shoulders, seizes one end of a stick, the other end of which is held by his teacher who stands in a boat or upon a pier. The first thing the pupil must do, is to acquire the ability to balance himself in the water. He is afraid he is going to turn over upon his side or his back; he feels sure that his head is going under. The moment he tries to raise his feet from the bottom and bring them near the surface of the water, he is almost overpowered with the impression that his head is going to the bottom. A firm hold upon the stick enables him to maintain his position, and by degrees he learns to flex the back in such a manner as to keep the head above water and the heels near the surface.

As will be readily seen by reference to the accompanying figures, the position assumed in swimming requires a strong curvature of the spine and backward flexion of the neck. For this reason, swimming is a most excellent exercise for round-shouldered persons, and persons inclined to posterior curvature of the spine.

Within a month or two, the pupil, having acquired his balance in the water, and gotten the idea of the position to be assumed, takes his first lesson in leg movements in swimming. In swimming, the arm movements and leg movements are executed together, with the exception that the first arm movement is made without simultaneous movement of the legs, the two movements of the legs being executed only with the second and third arm movements. In order to establish the proper rhythmical movement, the teacher counts for these combined movements, "One — two — three, one — two — three, one — two — three," the time given to "two" and "three" being each one half that given to "one." In counting for the leg movements, only "two" and "three" are counted, a pause of equal time being substituted for "one." After practicing the leg movements for a few moments, the pupil is supported in the water by means of a belt passed around his body in such a position as to balance him in the water. The belt is attached to a rope supported at the end of a stout pole, one end of which is grasped by the teacher, who thus supports the pupil in the water very much as he might a large fish attached by his back to a hook and line suspended at the end of a long pole. The pupil is now made to execute the arm movements, keeping time to the count, "One — two — three, one — two — three," the movements being made in the order above described. After practicing the arm movements for a little time, the arm and leg movements are com-

bined, remembering that the leg movements are made only with the second and third arm movements, the legs resting in the position shown in Fig. 4 during the first movement of the arms.

After the pupil has acquired a little confidence and has learned to combine the movements fairly well, he is provided with a swimming-belt and cast loose into the water to navigate himself. In a short time, if he has given good attention to his instruction, he will be able to move about in the water with ease and confidence. Then the floating power of the belt may be gradually decreased, either by loosening the number of corks, or if an inflated rubber belt is used, by letting out, from time to time, a little air.

It is well for pupils to practice the above-described movements by resting the center of the body upon a small raised platform or a camp-chair, as shown in the accompanying cuts. By this means the muscles employed in swimming may be developed, and the ability to coordinate the proper movements may be increased so that much more rapid progress will be made while the pupil is in the water.

Swimming is one of the most useful and healthful of all exercises. It brings all the muscles into active play. It develops especially those muscles which are requisite to erectness of figure and fine and graceful carriage; besides, the contact with the cool water is a powerful tonic, promoting surface circulation. Every boy ought to learn to swim, — and every girl also, for that matter. Swimming is not only a useful accomplishment and means of healthful exercise, but in certain emergencies it becomes indispensable to the saving of life. Hundreds of lives might be saved every year, if only every person were taught to swim. The ability to sustain one's self in the water, even for a few minutes, would often turn the scale between living and dying.

The person who cannot swim, who is unaccustomed to water, and in mortal terror of drowning almost at the sight of a body of water, or at any rate, at the slightest danger of being plunged into the aqueous element, is certain to sink like a stone if thrown into the water, in consequence of the irregular and senseless movements which he is sure to execute the moment he feels himself sinking into the water. In the effort to keep himself entirely out of the water he is certain to give to the body just the momentum it requires to send it beneath the surface. Having no self-possession, gasping every instant for breath, he soon fills his lungs with water, and sinks to the bottom.

Lessons in swimming should constitute a part of the regular course of education in our public schools, and sometimes teachers could easily arrange to take classes of boys and girls separately to some suitable place, and by surrounding the exercise with proper precautions, it might be made not only interesting but exceedingly healthful. There is not one boy, and probably not one girl, in a hundred who would not be delighted with the opportunity thus afforded them of engaging in a natural and healthful exercise. The next two or three months will afford abundant opportunities for swimming lessons and exercise, and we earnestly exhort all our readers to improve the opportunity. The few suggestions we have made, if carefully followed, will, we believe, afford most satisfactory results.

SWIMMING.—During the summer season in the temperate zones, and at all seasons in the tropical regions, where a body of clear water is accessible, swimming may be usefully employed as one of the most healthful and advantageous forms of exercise. Swimming brings into activity all the muscles of the body as thoroughly as can any gymnastic movement. It encourages lung development, and the circumstances under which the exercise is taken insure perfect freedom of activity for every organ.

Swimming is to be commended, especially for young women, as a means by which they may antagonize the evil consequences of the wearing of stays and tight skirt bands by their mothers and grandmothers. Any young woman who is a good swimmer and practices the art, will soon find the restrictions of the corset and tight bands utterly unbearable, and will break away from the fetters of fashionable dress, regardless of consequences, which, however, need be no other than improvement in good looks, in grace of carriage, dignity of bearing, and general good health.

Although swimming is little practiced by women in this country, it is by no means a novel exercise with the women of many other lands. The women of the Sandwich Islands are as much at home in the water as are their sons and husbands,—in fact seem to be almost as much at ease in the water as on land. The same is true with women of nearly all savage tribes who live adjacent to bodies of water. And plenty of good swimmers may be found among the women of some civilized lands, and even among the most aristocratic circles; for example, according to *The Princess*: “Numerous lady members of European royal families are good swimmers. The ladies of the Austrian royal house are all fond of aquatic pursuits. The Empress of Austria used to be a fine swimmer. The Queen of Spain is equally fond of the water. She bathes every morning, and is a swimmer of much skill and courage,—greatly to the astonishment of the Spanish ladies. The habits of the Queen of Spain are very simple and regular. Years ago it was customary for her to rise at seven in the summer and eight in the winter; now she generally stays in bed until nine, having cocoa and toast before getting up. Breakfast proper is not quite punctual now, but in summer it is still often partaken of out of doors. This meal, as a rule, as far as the queen is concerned, consists of eggs, thin bread and butter, and tea; but occasionally porridge is substituted. One Indian attendant and one servant wait at the table. During breakfast the arrangements for the day are made.”

	Church News	
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The Frankford Society, Frankford, Philadelphia, carried through an unusually successful entertainment on April 20th under the direction of the "Harmony Circle." Miss Jeanette T. Broomell of the Philadelphia Society, and a great favorite in Frankford as elsewhere, again demonstrated her superior skill in the delineation of child character. Her readings included negro dialect stories as well as child poems and stories. One of her numbers, a monologue, was "The Unexpected Guest." Of special interest was the violin music of Mr. Henry W. Schmidt, who is the choir-master and violin soloist of the Society. His solo numbers and one violin obligato were intensely enjoyed. Mr. Schmidt, who is one of the newer members of the Frankford Society, has recently been elected a member of the Philadelphia Orchestra which, under the brilliant conductor, Mr. Leopold Stokowski, is now of world note. Heretofore Mr. Schmidt has been "concertmeister" of the Frankford Orchestra. The program also included vocal solos by Mrs. Emilie M. Wilgus, whose singing is always greatly enjoyed. The Frankford Society was greatly strengthened by the influences of the Easter season. The series of evening services, already of exceptional success, is being continued, with intensive instruction in the fundamental doctrines of the New Church. The Pastor, Rev. John W. Stockwell, has officiated at a number of baptisms recently not only within but entirely outside the strict limits of his parish. Three adults have just been added to the membership of the Society.

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The Philadelphia Society, at Twenty-second and Chestnut Streets, held its spring meeting on Monday evening, April 26th. Despite the inclement weather, the attendance was encouraging. The most interesting item of business was the favorable vote upon admission into membership in the Society of thirty-one candidates, whose names were presented by the Pastor of the Society. Such a proportionate increase of membership is most gratifying and it is a fitting fruitage of the pastoral activities of Mr. Harvey, whose industrious services for the large parish are deeply appreciated. One feature of the meeting was a presentation in detail of the program of the forthcoming Convention in New York, by a member of the Program Committee, Rev. Paul Sperry of Washington. The President of the Philadelphia Society, Mr. Gideon Boericke, presided at the meeting.

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The Boston Young People's Association held its annual meeting on Thursday, April 15th. After a tasty supper served by the collation committee, at 6:30, the business was taken up. The officers elected for the coming year are Mr. Franklin H. Blackmer, President; Mr. Elliot P. Rexford, Vice-President; Miss Dorothy W. Randall, Recording Secretary; Miss Edith Woelfle, Corresponding Secretary; and Mr. Laurence R. Atwood, Treasurer. The Association voted to send as delegates to the forthcoming annual Conference in New York, Miss Elizabeth Randall, Miss Sylvia Bateman, Mr. Donald Hatheway and Mr. Elliot Rexford. A very interesting letter was read to the meeting, coming from the Young People's League in Lausanne, Switzerland. An interesting feature contained in the letter was the suggestion of the formation of an International League of New-Church Young People. The matter was referred to the American New-Church League with the suggestion that it be considered at the forthcoming Conference. The business meeting was followed by the presentation of tableaux under the direction of Miss

Lilybell Bates, illustrating "Seven Ages of Women" and representing a number of well-known statues.

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Encouraging word comes from Los Angeles concerning the beginning of work on the construction of the new Parish House which will be used temporarily for religious services as well as social activities. The larger proportion of funds for the immediate work in hand has been subscribed and many interested friends are helping to make up the balance. The average attendance at services is now over sixty, with a Sunday-school attendance of about thirty; an average of fourteen attend the Reading Circle. It is understood that the Church is in the best financial condition in its history, although its only source of income is voluntary contributions. The Society is hoping for a visit from the President of the Convention next fall when the dedication of the new parish house is to take place. This will be a very complete building when finished. On the lower floor will be a large Sunday-school room, Pastor's study, library and reading room, large assembly hall with stage which will be used as the sanctuary until the main church auditorium is built. At the rear of the building there is to be a beautiful pergola, a lawn and a large garden, where out-of-door meetings of the various guilds and other social events can be held during the greater part of the year, so mild is the southern California climate. The building is located on a new lot in an exceptional neighborhood. The building was begun in March and it is hoped that a part of it will be ready for occupancy in June. It is a source of exceptional gratification that the active Pastor of the Society, Rev. John R. Hunter, will be able to attend the forthcoming Convention in New York.

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The First New-Church Society in St. Louis, under the leadership of its Pastor, Rev. George E. Morgan, has been enabled to carry through with exceptional success a series of public lectures, in addition to those provided through the National Lecture Bureau of the Convention. On April 13th Rev. Thomas A. King of Lakewood, Ohio, lectured on the Second Coming of the Lord, the Judgment and the End of the World. It was a missionary lecture and appealed forcibly to the large number of strangers present. The attendance exceeded previous lectures. The evening following the lecture was given over to a program of questions and answers, which indicated a considerable measure of interest and also served to arouse further interest and inquiry.

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The Brockton (Mass.) Society is now holding its regular services in the Pythian Temple, pending the alterations on the church which is being moved from its location on Main Street, to a near-by location facing Crescent Street, opposite the City Post Office. When the work is completed the whole church property will be better adapted to church uses, especially the social and institutional features which depend upon the Sunday-school room and parlors. At a recent missionary meeting in the Brockton New Church one of the eight-year-old Sunday-school boys was present. Following the meeting he told his aunt that he was going to be a missionary and going to Africa and the Philippines. Friends in the Brockton Society are greatly distressed by the sudden illness of Mr. Capon Howard, one of its most devoted and useful members. He is making gradual and steady progress toward recovery. He is father-in-law of both Rev. Harold R. Gustafson of the Urbana Society, and Rev. Gould J. Brown of the Minneapolis Society. A reorganization of the Young People's League in Brockton has been effected, involving introduction into the active work and responsibility of a number of the young people just of age for adult work and interest.

The "follow-up" correspondence of the Board of Missions has brought to notice a considerable number of new readers who show inclination toward active membership in the New-Church organization. Consideration is being given to the possibility of their identification with Societies in their general neighborhood, or with the Washington Society, on account of its location in the National Church at the Capital. Any readers of the MESSENGER who may be interested in such membership are requested to communicate with the Secretary of the Board of Missions, 1437 Q Street, Washington, D. C. A plan for confirmation *in absentia* is under advisement.

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The *Courier-Gazette*, of April 3, published at Rockland, Maine, has on its first page, under the heading "Chat on Books" very creditable reviews of three New-Church books, Trobridge's "Life of Swedenborg," Mr. Smyth's "Religion of Life," and Bigelow's "Bible Lost and Found." A note is added indicating that the three books may be found in the Rockland Public Library. This kind of most valuable publicity is being secured in various places by the activities of the Committee on Extension of the Board of Missions. The Committee is enabled to do much active work toward getting New-Church books into various libraries. Upon request of a Californian a set of Potts's Concordance was recently sent to the Divinity School of the Pacific, an Episcopal Theological School. In acknowledgment the Librarian says: "By direction of Bishop William F. Nichols, D. D., I wish to acknowledge the receipt of six volumes of the Concordance of Swedenborg's works. The School is very grateful for the kind gift, which is highly appreciated." At another time Trobridge's "Life of Swedenborg" and Worcester's "Life of Swedenborg" were placed in the same school, and a set of the "Spiritual Diary" is to be donated as soon as the Volume I is available, it being now out of print.

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Word has been received by cable of the acceptance by Rev. Adolph L. Goerwitz of Zurich, Switzerland, of the Convention's invitation to attend its sessions in New York in June. Mr. Goerwitz has served for years as Pastor in Zurich and has had general supervision of New-Church work in Germany, Austria and Italy. He will be one of the speakers at the special missionary gathering to be held on Convention Sunday evening, June 6th, in New York.

✦ ✦

A large number of New-Church families from Saskatchewan, Canada, have removed to Donna, Texas, in the Rio Grande Valley. They will be joined there by Rev. John Zacharias, a graduate of the New-Church Theological School, whose pastoral services will be of great value in the new field. The families have recently been visited by Rev. George Gordon Pulsford of San Antonio, Texas. The population of the Rio Grande Valley is essentially cosmopolitan, people from all parts are flocking there, and they are broad-minded and energetic. It is the aim of the New-Church families to be of dominant influence in the religious life of the community. Donna has about 2000 people and a contributory territory of another 2000.

✦ ✦

Rev. George G. Pulsford has secured sailing for June 30, when he starts for the Philippine Islands as the first accredited New-Church missionary to that region. He is to be one of the speakers at the mission rally at Convention and he will present the dramatic picture of the Philippine opening for the dissemination of New-Church principles. Mr. Pulsford will preach in Philadelphia on May 23rd and in Washington on May 30th, going thence to New York. Following the Convention and before sailing from the Pacific Coast he will address various New-Church

Societies in the middle and far West, acquainting the members with the great fertility of the Philippines for New-Church propaganda.

✦ ✦

Various circumstances are combining to point to the likelihood of a strong New-Church movement in the new republic of Czecho-Slovakia. There is already a large nucleus of New-Church people there, organized under a capable leader. By dramatic coincidence the first contribution made in this country to the work in the new republic, through the Board of Missions comes from a stranger who has been reading Swedenborg only two years, and the contribution is of such generosity as to carry the entire work for several months. The New-Church Society in Prague has petitioned the General Convention for the ordination of its chosen leader.

✦ ✦

A recent purchaser of Swedenborg responds finely to inquiry as follows: "You desire to know what I think of the books 'The Arcana Coelestia,' and 'Heaven and Hell.' Now I am convinced that they are nothing else than the pure truth and I have thanked our Lord God that I have received both books. I have the books also in English. I sent \$5.10 to the ——— today for books. I am indeed a poor man, but during the coming summer I will present the library here with twenty or more books. I will do as much for the New Church as I possibly can. Submissively."

✦ ✦

A correspondent in Dutch Guiana, South America, writes encouragingly: "The Dutchmen are much taken up with our heavenly doctrines in Swedenborg's writings. It is no use for me to trouble myself with the English speaking people as it is a hard job to bring them to this new doctrine of truth and life." A new reader in this country writes: "Swedenborg's works are superior to anything that I have read; without them my life would be like a bird in a cage. I am always happy when I sit down to study, and, reaching out my hand, get hold of Swedenborg." Still another writes: "I have read all four books. They were my first introduction to Swedenborgianism. I was deeply impressed with all of it, i. e., as far as I could understand. Much of it was too deep for me. I shall read them again and understand perhaps more of it as I go along." Another testifies: "Having seen Swedenborg's writings recommended in my readings, I purposed to procure some of them when I had the chance. And seeing an advertisement of same in *Lealie's Weekly*, I sent for them and have not yet finished reading the fourth volume. It gives me pleasure to think that the Society is interested in anyone who reads its books, and I can say that I believe everything to be so as he states, being certain that he could only have written them by divine ordinance and inspiration, to the purpose to reveal these things."

P. S.

England

The Lancashire and Cheshire New-Church Union held its spring session on Saturday, April 10th, on the premises of the Blackburn Society when the chair was taken at 3 o'clock by Mr. A. C. Lindley of Manchester. After the preliminary remarks of the chairman the subject of mission work was discussed, especially in connection with the Blackpool Sands work in July and August, and a committee was appointed to carry on the work during the summer months. The work of the Union's arrangements for the administration of the Sacrament of the Holy Supper was reported on and it was decided to continue to arrange for the administration to Societies without resident ministers. The draft of the new Sustentation Fund to come before the Conference in June next was then

before the meeting and a considerable amount of time was given to its consideration. It is evident from the tone of the discussion that the scheme is considered by the great majority to be essential and that in some modified form it will pass through the next Conference. That there are grave objections to anything in the nature of interference with the freedom of the Ministers and the Societies is perfectly evident, but that can be got over, and neither is it necessary, for the working of a good scheme. The meeting was a very prolonged one but did good work.



Passing of a Devoted Mother in Israel

Mrs. Emma Henderson Gould passed into the other life April 12th, from her home in Toledo, Ohio, at the age of seventy-two years. She was the daughter of Alexander Henderson, the founder of the original New-Church Society in Toledo, and had lived all her life in that city. Her life work was the upbuilding of her beloved New Church, and no sacrifice was too great for her to make for it. Her home was always a center for its activities and her joyous service to its use a constant inspiration to the struggling few who carried on the early work of the Church in Toledo.

She was married in 1871 to William Gould, who, with her six children and fourteen grandchildren, all members of the Church, survives her.

Suffering much physical disability the last years of her life, she looked forward with longing to her happy journey, bidding her family not to try and keep her longer from "going home." So in the hearts of her many friends will grow the seeds of loving kindness planted by the inspiration of her unselfish devotion to the Church.

There Are Many Such Readers

It is always of interest to New-Church people to hear of the delight of strangers coming for the first time into contact with New-Church teachings. The following is an extract from a private letter:

"I have been told that you are a disciple of Swedenborg. Am I correct? I am greatly interested in his teachings.

I really have quite a library of his writings. I have never found anything that has given me so much genuine pleasure as the perusal of Swedenborg's religious philosophy and interpretation of the Scriptures. I am traveling alone, as I have never had the pleasure of conversing with anyone who knew anything about this great savant's teachings, neither have I ever attended a church service. Accidentally one of his books fell into my possession and I became interested."

The Brookline, Mass., papers give encouraging reports of the work of the Church in that place. Mr. Roeder's two lectures on the Future Life and the Bible are described as forceful, masterly and convincing, and were well received. The Ladies' Aid recently spent a pleasant day with Mrs. George C. Berry at her home on Centre Street, making articles for a sale to be held at the home of Mrs. Sewall, wife of the late Arthur Sewall, remembered as the Democratic candidate for Vice-President, and uncle to the Misses Cutler of Chestnut Place, for the benefit of the New-Church Society in Bath, Maine, which recently suffered a very severe loss in the collapse of the roof of their beautiful church building.

An announcement of unusual interest to New-Church people, especially to Chicagoans, is that of the marriage of Miss Elizabeth Cluff, daughter of Mrs. E. L. Billingslea, and granddaughter of Rev. Lewis Pyle Mercer, of beloved memory, to Mr. Alexander Bremner Peck, son of Mr. and Mrs. William Peck of Minneapolis. The ceremony was performed by Rev. W. B. Murray at the Kenwood Church on Saturday, April tenth, at eight-thirty p. m. The bride was attended by a matron of honor, Mrs. Peter Henderson of New York, and by her sister, Miss Lucy Cluff as maid of honor. Little Cornelia Billingslea and Jacqueline Messer were flower girls, carrying fresh orange blossoms from the Vanderlip conservatory. The ushers were Capt. Charles Steinhoff, Mr. Eric Woellager, Mr. James Matthews, Lieut. Carleton Smith, Mr. Lewis M. Billingslea, Mr. Harry Barton Bogg Jr. and Mr. Arvid L. Anderson. A reception followed at the residence, 4539 Ellis Ave. Mr. and Mrs. Peck will live for a time in Des Moines, Iowa. This formal announcement does scant justice to the impressiveness of the simple, sincere, New-Church service, the lovely coloring of the bridal party, and the atmosphere of friendliness in the crowded church. Her charming disposition, unusual musical gifts and loyal services have endeared this "daughter of the Church" to many whose unspoken good wishes will follow her to her new home.

Mr. C. W. Barron has written another book on Finance—this time on Peace Finance. During the war, and since it ended, Mr. Barron has made several trips to Europe, and always interested himself in a close study of the bearing of finance on the conditions and changes effected by the great upheaval. Whatever Mr. Barron writes on this subject is interesting and full of information. The title of the book is "A World Remaking, or Peace Finance," published by Harper & Brothers. It is "an estimate of international reconstruction." There is a sweet personal touch in the dedication which we feel like quoting, not only because it is unusual in a work on this subject, but because it shows that it is not impossible for a mind intent upon complex and harrassing things to be raised at times into a more genial and attractive atmosphere. The author says: "I dedicate this book to my youngest grandchild, Mary Endicott. It is the only compensation I can make to her for her grandpa's long absences from home, and is with the hope that she may long continue the earthly link in the still inspiring influences of her mother and her grandmother, my former traveling companions in Europe."

Current Literature

Approaches Towards Church Unity

Edited by Newman Smyth and Williston Walker. Yale University Press, New Haven.

This book is a particularly careful review and analysis of the history of the Christian Church as an organization, with respect to the question of unity, from the time of the Apostles to the present hour. It is in itself a rather remarkable demonstration of the closeness of the approach to unity at the present time, by maintaining a continuity of harmony of attitude toward the fundamental questions discussed although it consists of a collection of papers by two other clergymen besides the two editors, namely, The Rt. Rev. Bishop C. H. Brent, and Dr. Raymond Calkins,—and very gracefully altogether it weaves itself into one treatise.

The opening chapter is an effort to trace the development of church offices and orders through the admittedly misty period of the first two centuries; but such evidence as there is is shown to clearly indicate the essential simplicity of organization at the beginning, and the *gradual* extension of the powers of leaders, as for example, Bishops, and the centralization of power; and this seems to have been the result of the growing experience in a need of unity. Thus church form and discipline cannot be considered a matter of revelation cognate with the Church itself, but a matter of expediency evolving out of the struggle with definite problems.

And although almost from the beginning the matter of unity has been a Christian problem, the authors hold that *biologically* the differences existing between the various bodies of the one universal Church of Christ, which is His mystical Body, "are capable of assimilation." Their idea is the big one, namely, that whatever unity is to be brought about is to be accomplished through the principle of "comprehension" and not by "compromise" or "tolerance." No one *part* of the Church can claim to be the whole Church. Protestantism must recognize the right and "necessity of institutionalism, of rites and sacraments as being neither dead forms nor illogical excrescences upon a religion otherwise wholly spiritual, but as being themselves spirit and life, the natural and normal media of the Word-made-Flesh." And "the Catholicism of the future certainly cannot afford to disregard the truths of the Protestant witness, and must to a certain extent reinterpret and revalue (without abandoning) its institutionalism in the light of them. It will recognize the right of all Christian communities animated by the spirit of Christ to be included in that one communion of Saints which is the blessed Body of Christ's faithful people; it will recognize the validity of any Protestant pastor as a true and godly minister of the Lord, although it might be difficult or impossible to recognize him apart from episcopal ordination as in the Catholic sense and for Catholics a qualified minister of the Sacraments. . . ."

History is appealed to to show that this question has been more than once definitely before the Roman and Anglican bodies, and that proposals to attain to this harmony have looked to this very expediency of having the Protestant clergy acquiesce in a reconsecration by Roman Bishops so long as they did not thereby denounce their previous ministry by any acknowledgment or understanding that it had been invalid. Wladislav IV, king of Poland, in the middle of the seventeenth century, called together representatives of Catholic, Lutheran, and Reformed in an endeavor to bring about reconciliation. His conception and purpose and appeal were a model for any age; but "after

three months of discussion without reaching agreement the conference was dissolved by the King's order. Each part entrenched in its own convictions still, they separated "mutually saying friendly farewell." Then in the same century Spinola, a Spaniard by birth, eventually becoming Bishop of Neustadt, launched a campaign to bring about a new unity. He found a kindred spirit in the Lutheran Molanus. Molanus and Bossuet and Leibnitz entered upon a correspondence on this great subject which involved kings and popes and learned men and women of the day, in an active interest in the project. But when nothing came of it all, but just discussion, Leibnitz wrote, "I believe an overture from the heart is necessary to advance these good designs."

Then about this time John Dury devoted himself to the task of binding together the divided parts of the Church of the Reformation. He, too, looked upon "charity" as the key that would open into the hidden chamber of the glorious unity. He "elaborated a plan for a conference on unity which anticipated by over two centuries and a half our plans for a proposed World Conference on Faith and Order," writes Dr. Smyth.

The efforts of our own day are set forth in an Appendix. The Lambeth Conference of Anglican Bishops in 1888 and again in 1908, took broad steps in this direction. In the latter they declared, "We must consequently desire not compromise, but comprehension, not uniformity but unity," and they recommended that "meetings of ministers and laymen of different Christian bodies be held at different centers to promote a cordial mutual understanding." The Congregationalists were the first to take steps to co-operate in such effort. Others followed almost at once; and now almost all the Nonconformist churches are working to the same commendable end. A joint Committee of Anglican and Nonconformist delegates issued this, in the course of a more extended statement, "Thus the visible unity of the Body of Christ is not adequately expressed in the co-operation of the Christian Churches for moral influence and social service, though such co-operation might with great advantage be carried much further than it is at present; it could only be fully realized through community of worship, faith, and order, including common participation in the Lord's Supper. This would be quite compatible with a rich diversity of life and worship."

We now have taking place the "Interchurch World Movement,"—united in: 1, Study of the World Field; 2, A Budget; 3, An Appeal; 4, Program of Work. And we have coming: The World Conference on Faith and Order.

"When it is the case," says Swedenborg, "that love to the Lord and charity towards the neighbor, that is, the good of life, are made essentials with all and with each individual then Churches, how many soever they be, make one, and each is then one in the kingdom of the Lord." (A. 2982.) The religious world (as well as the world of social problems) is moving with great rapidity. It will be well if we prove able to discern its meaning.

EVERETT K. BRAY.

To a Young Man Who Contemplates New Work and Location

Whatever field of work in which you may be led,

The leading motive that should all the actions bend
Should be, what kind of record shall I leave when dead,
To enter on that inner life that has no end.

The gain of worldly things should have a second place

In thought and deed; the first is use where'er you be;
And strife for worldly things may be a sinful chase,
And leave the soul like flood-wood washed up by the sea.

Washington, D. C.

ALFRED FRENCH.

The Church Calendar.

MAY 13, MAY 16—ASCENSION DAY OR THE SUNDAY AFTER ASCENSION.

Introit Hymn 49: "All hail the power of Jesus' Name."
 Selection 31: "The earth is the Lord's."
 Proper Psalms: 8, 21, 24, sung, with Doxology after each.
 Anthem: "Hallelujah, for the Lord God omnipotent reigneth."
 Lesson I: Exodus xv.
 Responsive Service XIV. The Ascension.
 Lesson II: Luke xxiv, 36-53.
 Benedictus, B. of W., p. 6, or festival setting.
 Hymns: 186: "Jesus Christ is risen today." 197: "Who is this that comes in glory?"

Births

WEZEREK—In Chicago, April 9, 1920, to Mr. and Mrs. Richard Wezerek, a son, the second son and fourth child.

Marriages

CHERAULT-ROTHAERMEL.—At the residence of the officiating minister, Rev. Clarence Lathbury, April 12th, 1920, Samuel Chevault and Gretta Georgenia Rothaermel, both of Cleveland.

Obituary

WEBBER.—In Oakland, California, March 15th, 1920, Alpha A. Webber, aged 84 years. Another of the worthy seniors of the O'Farrell Street Society has answered the call of the heavenly messenger.

Mr. Webber was born in Brattleboro, Vermont, August 5, 1835. He came to California in company with a sister in the year 1866 and from the first he was eminently successful in his business undertakings. He possessed a gracious personality which elicited respectful and interested attention.

In 1868 he was united in marriage with Miss Amelia G. Swain. This union was blessed with seven children of whom three are now living, namely, Mrs. Mabel W. Swain, lately of Honolulu, and Charles and Harry Webber of Byron, California.

The family life of Mr. and Mrs. Webber was ideal. Mr. Webber was justly proud of his children and more than proud of his wife. He was often heard to remark that in all their wedded life of fifty years they had never once had an altercation. In the growing weakness of advancing years she was to him an unflinching strength that found reflection in his sunny atmosphere.

Mr. Webber became a reader of New-Church writings in the year 1878 after the death of two children in quick succession. About this time he made the acquaintance of Rev. Joseph Worcester, who aided him in his search for light. He became an ardent supporter of the Church and a good missionary worker. He was an easy speaker and could acceptably take the minister's place in the

pulpit on short notice. At one time in the absence of a minister he conducted services in the O'Farrell St. Church for about one year. He spoke from the heart and enlisted the affections of his hearers. He was a welcome speaker in New-Church gatherings where his gentle words manifested his love of the Lord and the Church.

The resurrection service was attended by a large circle of friends within and without the Church. Rev. Thomas French, Jr., officiating.

Special Notices

SECRETARY'S CALL FOR ADVANCE REPORTS TO CONVENTION

NOTICE TO ASSOCIATIONS, SOCIETIES, OFFICERS, AUXILIARY BODIES, BUREAUS, COMMITTEES, ETC.

Pursuant to Article VII, Section 1, of the By-Laws of the Convention, the Secretary hereby requests that all reports of Associations, Societies, General Pastors, unattached Ministers, and the following officers, auxiliary bodies, and committees of the Convention, be sent to him at the address below so as to reach him on or before May 5th, in order that they may be presented to the Convention in print:

- President.
- Treasurer (and Auditors).
- Managers, Corporation, and Treasurer of the Theological School.
- Board of Home and Foreign Missions and Treasurer.
- Board of Publication.
- Committee on Publication of Swedenborg's Manuscripts.
- Trustees of the Ingerich Publication Fund (and Auditors).
- Trustees of the Rotch Legacy.
- Trustee of the Rice Legacy.
- Trustees of the Building Fund.
- Trustees of the Swedenborg Memorial Fund.
- Trustees of the National Church.
- Trustees of the Pension Fund.
- Trustees of the Orphan Fund.

At the recent meeting of the Program Committee in New York it was decided that, in the interests of as useful a Convention as possible, earnest request should be made of other committees, etc., to submit their reports in time to be included in the printed reports as distributed to ministers and others before Convention, and as subsequently presented for consideration on the floor of Convention itself. Reports from the following are therefore urgently requested, the same to reach the address below on or before May 5th:

- Augmentation Fund Committee.
- Lecture and Publicity Bureau.
- Social Service Commission.
- Committee on Library and Documents.
- Evidence Society.
- Committee on Education.
- NEW-CHURCH MESSENGER.
- National Alliance of New-Church Women.
- Sunday-School Association.
- League.
- Forum.
- Delaware County Church.
- Committee on Conservation of Church Property.
- German Synod.
- Sex Education League.

It is requested that all reports be typewritten; but if that is impossible, they should be written plainly, and upon only one side of the paper.

In order that the "Advance Reports" as printed may reach as many as possible of the delegates before Convention, and also in order to facilitate the work of the Committee on Credentials, the undersigned hereby requests the secretaries of the various Associations and Societies composing Convention (see 1919 Convention Journal, pp. 178-180) to send him their lists of delegates, with addresses as soon as possible. It is intended to send copies of the "Advance Reports" to all such addresses as are at hand ten days before Convention, as well as to the ministers and officers of Convention.

B. A. WHITTEMORE,
Recording Secretary.

134 Bowdoin St., Boston, Mass.

THE GENERAL CONVENTION

The Ninety-ninth Annual Session of the General Convention of the New Jerusalem of the United States of America will be held in the New York Church, 114 East 35th Street, between Park and Lexington Avenues, June 5-8, beginning Saturday morning at 10 o'clock.

JULIAN K. SMYTH,
President.

B. A. WHITTEMORE,
Recording Secretary.

J. WOODRUFF SAUL,
Assistant Secretary.

NOTICE

To the Members of the New-Church Board of Publication:

Notice is hereby given that the annual meeting of the members of The New-Church Board of Publication will be held on Wednesday, May 12, 1920, at 3 P. M., at its office, No. 3 West 29th St., New York City, for the election of five directors to serve terms of four years and the transaction of such other business as may properly come before such meeting.

Dated, April 21, 1920.

ADOLPH ROEDER, Secretary.

Immediately before the meeting of the corporate body there will be a meeting of the Directors to adopt the annual report, and after the annual meeting of the members, the annual meeting of the Board of Directors will be held for the purpose of electing officers for the ensuing year, for the consideration of the acts and transactions of the Board of Directors, and for any and all lawful business that may be deemed advisable by the directors present thereat.

ADOLPH ROEDER, Secretary.

NOTICE

The annual meeting of The American Swedenborg Printing and Publishing Society will be held in Room 707, No. 3 West 29th Street, New York City, on Tuesday, May 11th, 1920, at 4:00 p. m., for the election of four members of the Board of Managers and for such other business as may come before it.

WALTER B. SAFFORD, Secretary.

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The A. F. Catechism IV

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- A. From \$10,000 up—the amount constantly increasing with our growth and our financial ability to extend our field. High cost of living necessarily increases our expense.
- Q. Is this amount available from the interest on the Permanent Fund?
- A. By no means. A large deficit always remains to be met by fluctuating contributions to the Annual Sustaining Fund.
- Q. How can this unstable and embarrassing situation be relieved?
- A. By building the Permanent Fund as fast as possible from its present figure of \$200,000 to the goal of \$1,000,000 which we set for ourselves eight years ago.
- Q. Have I done my share in this?
- A. ?

What Is My Share?

- A. Such amount as you decide *each year*, on prayerful consideration is all you can afford to give for this vital work of the Church you love. Try to get the habit of *regularly* sending *something* however small to

James R. Carter, Treas. Augmentation Fund, 246 Devonshire St., Boston, Mass.

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A MONTHLY BULLETIN of the ARCANA CLASS

An organization for the Study of Swedenborg's Arcana Coelestia, in which is contained an Exposition of the Internal Sense of the Word.

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CHICAGO, WEDNESDAY, MAY 5, 1920

Whole No. 3382

“Comrades, Carry On”

A FIVE years ago, that was the rallying cry of the Britishers in France as they tenaciously held their lines and stemmed the tide of the on-rushing foe. It is the equivalent of the Scripture exhortations: “Be thou strong and very courageous . . . Be of good cheer . . . He that endureth unto the end, the same shall be saved!” Perseverance in a righteous cause, endurance unto the victorious end: that was the thought that gave them more than human strength, that enabled them, though wounded with a thousand wounds, to stand steadfast in adversity. Though their backs were aching and their feet heavy as lead, though they were wearied to death, yet did they hearten one another with this clarion call, “Carry on, comrades! Carry on!”

Today, on both sides of the Atlantic, there is crying need for the same spirit of “Carry on!” and for display of that enduring unto the end, which our Lord declares will lead to salvation. We, too, are wearied unto death with wars and rumors of wars, with strife in almost every branch of human activity. The heart of humanity is longing for national and international peace—for the effects of righteousness, namely, “quietness and confidence for ever” in our civil and industrial life. But there is a long way to go before that happy state is reached. We have not yet sounded the depths of the Saviour’s words, “He that endureth unto the end.” Our honored Allies and our own valiant youth on the roads and fields of France had to learn what it meant to “carry on.” And now it is our turn here to endure, to stand fast, to show our fortitude and perseverance in a time of change and uncertainty. They did that as heavy-laden soldiers. It is for the men and women of the Church to do it now as uniformless civilians, keeping the faith of God.

The function of the Church is to comfort wounded souls with pleasant words, with spiritual oil and wine, but not all the time. Surely the Divine Word makes it plain enough that genuine spiritual living does not consist of plush-cushioned ease and comfortable security from all hardship. The average regenerate life consists rather in meeting opposition. It means clashes with evil, burden-bearing, and steady endurance under unfavorable circumstances.

Are you ever sick and tired of the conflict—of social, political, and industrial strife? Does the world rush by unheeding, and your work seem to be unavailing? Are you personally, enduring bodily pain or the deeper anguish of the struggle with your own inherited impulses to do evil? Are you ever wearied unto death by the heart-breaking selfishness of someone whom you would gladly love and serve? Then, O my brother or sister in the Church, remember that you have comrades in the great spiritual army of the living God. Catch the spirit of the rallying cry: “Carry on, my soul, carry on!”

CHAUNCEY GILES HUBBELL.

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Editorial Notes

With the secretary's call for advanced reports to Convention, to be sent in by May 5th, it is important that the various bodies should respond promptly, and with full information as to their activities, that the reports may be submitted in printed form for distribution before Convention meets. Such action helps to facilitate the work of Convention by enabling members to come to the meetings with a better idea of the state of the Church, of its needs, and of the opportunities of progress in its various departments of service. In making out reports, special attention should be given to statistics. In the Table of Members, etc., as published in last year's Convention Journal, three Associations and seven Societies reported the membership of the previous year. It is desirable for the present standing to be tabulated, that there may be a better estimating of the prospect as immediately affecting us, helping to correct any weakness and giving encouragement when any special advance is observable. Recently various periodicals have published very full information setting forth the numerical status of the different organized bodies representing the Christian Church in this country. There does not seem to be any special uniformity in the returns as given. *The Christian Herald* for April 10th credits the Churches of the New Jerusalem connected with the General Convention with a communicant roll of 8,500, which is a very large increase over the membership figures as given in the Journal. Certainly we ought to be advancing outwardly, as an indication of inward growth. Large decreases in membership are reported as marking a number of the leading Protestant bodies. It is the very time for us to be most active, to bring the clear light of the Lord as now revealed before the attention of the people at large, that its illuminating, quickening, regenerating power may be felt. As our duty in this way comes home to us, we shall feel it incumbent to make the best official showing in our returns, that by the realizing of co-operation and its strengthening power we may go forward more bravely in our evangelistic efforts to win mankind to the service of the One Only Lord.

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The forty-seventh annual report of The Swedenborg Publishing Association, Minneapolis, Minn., has been recently issued in tasteful form by its Board of Managers, and under the title of "Mystery? or Understanding?" there is an interesting introduction in three parts, the first urging a sym-

thetic study of the child mind instead of ignorantly employing methods detrimental to proper training. Next comes a short historical sketch, showing how racial antagonisms may be softened by reflecting upon what is just and due. Lastly interest in the Bible is shown to deepen, and its supreme helpfulness to be acknowledged, as it is meditated upon with a view to "the spiritual growth and life of the human race and of each individual composing the race." Then follows a statement of the activities of the Association, which not only sustains a reading room and free loan-library, but contributes books to loan libraries in different parts of the country where the help that can thus be rendered is welcomed. Several thousand copies of Mrs. M. Kathryn Spiers' "The Mystery of Words," and Helen Keller's Message printed as an illuminated folder, have had considerable circulation, and have brought words of deep appreciation from readers. But owing to financial drawbacks, connected with war conditions, it has been impossible to publish any new books during the year, though it is hoped that with increased support in the future the way may open to publish the manuscripts of several that have been submitted. Book sales for the twelve months ending December 31st have amounted to \$659.68, an increase of more than one hundred dollars over those of the previous year. In an accompanying circular, notice is given of a slight raise in prices made necessary by the cost of production. The use of this institution in its laudable endeavor to give the genuine understanding of the Word to lead in the way of righteousness calls for hearty support, and with a growing demand for its literature we wish for it a full measure of deserved prosperity.

+ +

That there is a Great Love at the heart of the universe, "a Supreme Being, a thinking, feeling, striving Being, with a capacity for loving as well as an attractiveness for being loved," finding expression in the production of conditions that are orderly and beneficent and making for the universal welfare, forms the theme of an article on "World-Love," contributed by Sir Francis Younghusband to the January number of *The Hibbert Journal*. The subject is presented with a wealth of illustration drawn from observing the processes of nature, and from human experience, such as to confirm very fully the watchful care of a Providence that is momentarily guiding events and leading to a good end. Thus he says:

"If we investigate the constitution of the world we are astonished at the order and regularity which prevail. At the foundation we do not find chance and caprice. The deeper we delve, the more evidence of orderliness do we find. The world is made up of countless myriads of ultra-microscopic electrons, and these electrons are active beyond conception. They move with the speed of light, and their activity never ceases for one fraction of a second. Yet this tremendous and unceasing activity does not result in chaos. They hold themselves together in an ordered whole. And through the whole there runs a tendency, or what might be better described as an insistent impulse, towards organization and system. The units tend to combine and interact upon one another, and by their combination and interaction to form units of higher and higher complexity—and units which owing to this complexity, possess qualities which the component entities by themselves did not possess. All this order and regularity and tendency to organization and system is something good. It gives us confidence in the world, and makes us feel we can depend on it."

Very touchingly does the writer describe the

prevalence of love as an active agent in relation to each individual life. He recognizes the evil, the vindictiveness, the barbarity that abound, but claims that all this is counterbalanced by a finer degree of sympathy and kindness which act as a restorative to stimulate and quicken a passion for the attainment of the best, making "the joy of divine adventure" of supreme moment and concern. The picture is well portrayed:

"How did one come into the world at all? From the ecstasy of love which has come welling up through all the ages and brought his parents together. Love was the origin of his birth. In his first moments he was surrounded by that most beautiful thing in life, a mother's love as her child is born. The tenderest love from father, from nurse, from brothers and sisters, from friends, was lavished on him in his infancy. . . . Even if it be the case that in the world he finds hostility and perhaps animosity, and that he has to battle his way through opposition, neglect, and indifference, does he not also find to a far finer degree and a still greater extent the devoted love of friends and a staunchness and loyalty which bow him with humility and silence every complaint? . . . And when his dying moments come, will he not once more find the same tender love surrounding him that wrapped him at his birth—the same but greatly extended? . . . As a man leaves the world the gentlest peace falls on him. . . . In the same ecstasy of love in which he was born into the world he is borne out of it again."

How safe we should feel with such evidence of the Lord's all-sustaining presence! With the universality of His reign so well assured, how needful to adjust ourselves to His laws that, as Eva Martin puts it in the very next article in the *Journal*, where she shows the close intimacy of "Stars and Flowers," the earth may "rise from the low estate to which she has fallen, until her great benign spirit is so expressed through her children that eventually she may shine with spiritual light even as now she shines with the reflected light of the sun!" Well does all this comport with what the writings of the New Church proclaim:

"All heaven is founded in love, yea, all nature; for in nature nothing ever exists in which there is any union and conjunction, whether it be animate or inanimate, that does not derive its origin from love. . . . Hence love, or the image of love, is implanted in all things and in everything." (Arcana, no. 1055.)

The Lord's love for us and our reciprocal love for Him is the eternal covenant fixed and sure, and which as manifested in our voluntary action each to each, will bloom with perennial glory and beauty and blessing. And "of the increase of His government and peace there shall be no end." (Isa. ix. 7.)

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In a recent Note we spoke of the heroism of sickness, quoting from *The Homiletic Review*. The amenities of sickness are well presented in *The New Christian Minister* for February 26th, where we are told:

"A vital characteristic of the coming new order will be a genuine kindness and care of each for all and all for each. . . . The ideal life is not one of brute aggressiveness or untamed animal vitality,—it is a thing of quiet gentleness, of sweet thoughtfulness, of ministry and sacrifice, of truth-absorbing humility. A right attitude towards sickness, either in oneself or others, brings out all these qualities. . . . Then we are made to confess the vanity of our pride and the worm-like power of our self-conceit. . . . But the benefit of this great agency is not to the sick one alone: family and friends likewise truly profit. Qualities of character are called forth in them which otherwise would have lain like dormant seed forever unfruitful. There is a quieter tone in the house, a more determined disposition to forget self, qualities spontaneously manifested which are fundamental in truly angelic character. . . ."

Sickness has still a deeper implication: it brings strikingly to view the love and the restorative power of God. Had we not seen the untiring care and watchfulness of the mother over her child we had never known that the Divine Love never sleeps; had we not seen the sacrifice of family and friends to effect the sick one's recovery we had never known the solicitude of the Divine Father for our health and life. For all these things are of God. It is His Love that never sleeps, His Voice that soothes, His Hand that comforts, and His Power that restores."

Sickness may have an ameliorating tendency in showing the futility of plans derived from a fancied sense of our own sufficiency. Opportunity is given for reflection when one is laid aside from active life. Mutual sympathy and mutual aid direct the thoughts into a more healthy channel, more open to the Lord's inflowing life, and the reaction is felt in improved physical conditions. True, "no one is reformed in a state of bodily disease" (Divine Providence, No. 142), but sicknesses and diseases help to "subdue and break up the life of one's sensuous pleasures and lusts, and to elevate the thoughts to interior and pious things." (Arcana, No. 762.) Impressions of great value are given for after use when a free state of life returns. Whether in this life or the next, the Lord turns all such impressions welcomed from Him, to a salutary account, for He seeks by ends of good, whatever the appearance of the means, to do the best that is possible for every one. The suffering is followed by the glory where His love prevails. (See Luke xxiv. 26.)

+ +

The Swedenborg Student for March provides its readers with the first of an interesting series of articles on "Is Genesis Divine?" showing how the spiritual meaning of this part of the Word is expressed in the letter, the purpose of which is to unfold the process by which the heavenly life on earth may be acquired. The intention is to reprint each article in pamphlet form of eight pages for use as a tract. Miss Serena K. Dandridge, Shepherdstown, W. Va., who is undertaking their publication, will be glad to receive orders early. Her previous efforts in this way have been attended with marked success, as shown by the fact that Rev. Frank Sewall's "Beyond," supplemented by Helen Keller's "Message of Comfort," is already in the twenty-eighth thousand. Miss Dandridge is doing pioneer work for the Church which is deserving of every encouragement. The explanations in *The Swedenborg Student* are of great value.

G. L. A.

	The Sermon	
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Doing Evil in the Sight of the Lord

BY THE REV. FRANK A. GUSTAFSON

And the children of Israel did evil again in the sight of the Lord. (Judges, iii. 12.)

As commonly understood spiritual life means but to lay aside certain specific external habits of speech and conduct, ceasing indulgence in certain specific acts held to be more or less immoral, refraining from the practice of certain specific iniquities held to be prejudicial to society as a whole, and effort to school, train and discipline oneself in certain amiabilities of temper and intercourse, certain qualities of moral character, as truthfulness, square-

dealing, dependability, cleanliness in speech and habit, orderliness in manner of living, loyalty to friends and to the institution called the Church.

Far be it from me to disparage these things as wholesome evidences even of spiritual character and Christian living. Surely, we must see that it is contrary to all Christian discipline to use profane oaths, to lie or steal or commit adultery, to covet the possessions of another, or to make oneself miserable and discontented because of unwarrantable jealousies. That ought to go without saying. But, honestly, is all this, good as it is in itself and much to be desired by all, worthy of recognition as evidences of Christian character? Think you not that any man worldly wise, indued with a sense of self-respect, considering his own advantage and prestige, even his own peace of mind, think you not that he would hesitate to school himself thus, and that without any consideration whatsoever of spiritual character or religious principle in the matter?

It is true that these qualities, severally and specifically, are not without worth as elements of moral character and conduct. Men of this stamp are fine men to meet and know, association with them is a great privilege, they make good citizens, kind neighbors, pleasant associates and loyal friends. Yet we must never permit ourselves to lose sight of the fact that moral culture is not spiritual culture, that moral rectitude is not heavenly righteousness, amiability of temper and integrity in outward intercourse and relation are not necessarily evidences of soul-growth in those virtues which are from God the Lord. We must never confuse these two things—moral culture and spiritual life. However excellent as matters of culture and self-discipline, however desirable as elements of personal relation, moral erudition and rectitude must never be confounded with that erudition and rectitude which is the result and evidence of spiritual life and quality. Although they may appear to be the same thing so far as outward manifestations are concerned, as matters of real quality they are not the same because of the governing motive and precept within.

In its spiritual sense the text and its context enables us to perceive this fact clearly. "The children of Israel did evil again in the sight of the Lord." And that thing of falling into evil again and again is so pronounced in this history of Israel in the Word that we are called upon to take note of its remarkable significance in our own personal experiences with the philosophy of religion and the experiment of spiritual living.

You know that the Word is not only the epitome of the Divine Wisdom, but that it is also the synopsis of all human experience in that great transformation of character which makes a man the child of God. Then we have this ever to bear in mind that in reading the Word we are actually soul-reading, soul-searching, entering upon soul-discovery, revelation of oneself to oneself.

Israel is the grand representative of all that is salvable in men through religious experience—all the elements of spiritual character. The experiences they are said to have undergone are representative experiences detailing the varying states and experiences of those who enter upon and complete Christian regeneration.

Then this doing evil again and again in the sight of the Lord must have a powerful and profound

personal meaning to all such. Why, it is the very secret of our eternal progress in grace and favor with God. For one grows in favor with God, in power of righteous purpose, in strength of character, in heavenly quality of mind and life only as he has cause to realize again and again that in spite of his vaunted and valued virtue he is doing evil in the sight of the Lord.

An astonishing statement, you say. Truly, but then all the truth is of astonishing quality when first made known—but this thing is true none the less. This doing evil in the sight of the Lord is not what it might be assumed to mean at first thought. It does not mean indulging in gross evils and iniquities, stealing another man's purse, running off with another man's wife, or slaying an enemy in cold blood. Not at all. But it is true that while regeneration is a constant and continued advance from good to good, from a lower good to a higher good, from a lesser to a nobler, from a more exterior to a more interior, it is just as truly an advance from one evil to another, from a lesser to a greater, from a more superficial to a more covert, from one more external to one more internal. Not the practice of it. No, never! but the discovery of it, the identification of it, the recognition of it in the very things which have been the pride and joy of the soul, and from it the positive definition and discrimination between apparent goods which masquerade as genuine good and these genuine goods themselves.

No man ever sees very far in this process of soul-searching ere he discovers the startling fact that much of the virtue upon which he has prided himself and upon which he has lavished much care and culture is but another form of specious good, fraudulent, hypocritical, but another form of evil masquerading as good—verily, the devil in sheep's clothing, the Moabite strengthening himself against Israel.

It is here that we find the real point of the text and the context. Israel had fallen from grace and done evil again in the sight of the Lord, had been delivered from the hand and power of the Mesopotamians, but had again given way to their evil propensities and now had fallen under the hard hand of the King of Moab.

To be in the hands of Mesopotamia is to be so concerned with acquiring knowledge and intelligence in spiritual things as to lose sight of the ends of that knowledge in doing that truth as it is made known to the mind and thought. It is to persuade oneself that to know the truth is the desired end. It is to be under the seduction of the subtle fallacy that since knowledge has this excellence and appreciation and furnishes us with such gratification and the light in the acquirement of it, it actually modifies the life because it has been acquired. But as a matter of fact it does nothing of the kind. It becomes merely a matter of knowledge, a thing one knows, but absolutely fruitless because it is not permitted to bear fruit in the works rightly identified with it.

Deliverance from the hand of Mesopotamia is our appreciation of that fact, appreciation of the fact that doctrine can have no vital purpose and will avail nothing in actual character until it is permitted to bear fruit in the doing.

It is a strange thing, but a true one, that in our personal experience we no sooner fall out of one

evil than we fall into another even more grievous. Released from the hand of Mesopotamia we fall under the hand of the king of Moab—abandoning the evil of faith alone and its persuasions we go to the other extreme and concentrate upon works making our religion to mean doing good, only to find that in the end we have acquired, not spiritual character, but merely another form of natural goodness, the virtue is still fraudulent, the good fallacious, the growth and culture a misconception, the good life a miscarriage, because the whole emphasis has been placed on external things and the internal motive and purpose left wholly untouched.

Even when we think that we aim at spiritual character we often find that what we have actually accomplished in the way of spiritual works is merely an amiability of temper and a poise of mind—not a spiritual God but mere moral integrity. The whole result has been but a betterment of our outward condition of thought, speech, and conduct, but the inner motive and character has not been touched at all.

Then what a blessed thing it is for us can we but again awaken to the realization of the fact that we have once more done evil in the sight of the Lord—if his truth can enter more deeply into the mind, can penetrate more interiorly, make even greater self-revelation that we can find ourselves in bondage to our evils, in bondage to this fat, sleek, smug king of Moab—our self-righteousness.

And happy for us if perchance, we know this Ehud, the Benjamite, this left-handed man of the Scripture, who has the courage to penetrate the secret chamber of this iniquitous principle and plunge his dagger deep into its interior life—happy, indeed, if we actually know that truth of doctrine which enables us to truly discriminate between genuine good and spurious good; that exploring the heart and mind with an actual message from God the Lord, to our soul, puts an end to the evil of our self-satisfaction and self-adulation, gives us freedom from it that we may make renewed effort to live as He directs, shunning all evil as sin, doing good because good is from Him, and so accomplishing works genuinely good and permanent marks of character in us because they are from Him.

Readings from the Writings

How Love Rejoices

Love consists in this, that what is one's own may be another's. To feel his joy as joy in one-self, is love; but to feel one's own joy in another, and not his joy in one's self, is not to love; for this is to love self, but the other is to love the neighbor. (Divine Love and Wisdom, n.47.)

This seems an especially memorable saying in a beautiful number on love.

The characteristics of love were never more concisely put. It desires others on which to spend itself. It would be at one with them. And it seeks a response freely given.

To love self is not the nature of love, but to love others, and to be conjoined with them by love. It is also the nature of love to be loved by others, for thus conjunction is effected.

All the pleasurable movement of real love is true to these characteristics.

The essence of all love consists in conjunction, so also does its life, which is called enjoyment, pleasantness, delight, sweetness, blessedness, happiness, and felicity.

In the way love rejoices, therefore, we have a revelation of its genuineness or falsity.

Love consists in this, that what is one's own may be another's; and to feel *his* joy as joy in one's self, is to love; but to feel one's own joy in another, but not his joy in one's self, is not to love; for this is to love self, but the other is to love the neighbor.

In true love one gets outside of one's self. The other's joy is shared. His interests, his enthusiasms, are not just tolerated, and conceded, and listened to, they are entered into with insight and sympathy. We take them over into ourselves, for the moment, perhaps, but with the whole soul. "The soul of Jonathan was knit with the soul of David, and Jonathan loved him as his own soul." "Jonathan Saul's son delighted much in David."

In *Lear* is the tragedy of the love which fails to get outside self. Did the aged king rejoice in anything but his imperious self, mirrored in his daughters' flattery? Cordelia's pleasure in an honest affection he could not feel.

These two kinds of love are diametrically opposite to each other. Both indeed conjoin, and it does not appear that to love one's own, that is, one's self in another, disjoins, when yet it so disjoins that in the degree in which any one has loved another thus, he afterwards hates him. For that conjunction is successively dissolved of itself, and then the love becomes hatred in a like degree.

Was it not exactly this that Shakespeare's genius revealed?

The father who delights in "place" finds his love slackening for a son who has no desire for it; a friend who likes to tell of his successes is chilled by the other's joy in *his* successes; is the growing disunity anything but self-love's inability really to rejoice with another?

Each feels only his own joy, in himself, or in others who will feel it with him! Was it this mind which, piped unto in strains of the heavenly kingdom, yet could not dance? Was it this mind which set itself in opposition at last to the Lord, and showed its hatred for Him? But He, He must have enjoyed the joy of those at the wedding in Cana, He shared the pleasant anticipations of the mothers who brought their children for Him to touch. Later He spoke that His joy might remain in us, and our joy be the full joy of a genuine love.

WILLIAM F. WUNSCH.

Contributed

Duties: Urbana University

The Church has never done its full duty to the Urbana schools. A few noble, capable men have in the past given their all, of time, and strength of mind and body and means to keep them from going under, believing that it was part of the trust con-

vided to the Church of the New Jerusalem in the United States of America, and that the need for it would grow, rather than decrease. The time has come to show how we can fulfil our trust and do the work the Lord has given us to do.

Many years ago, some devoted men saw the future need, and so chartered their gift that it could be saved for the use of the Church, when it should be most needed. Surely the time is now. If the Churches cannot save our country from the rule of evil and selfish blindness, the civilizations that we are so boastful of, will be surely diminished, and in a great measure it will be the fault of the New Church that has been entrusted with the truth but somewhat failed to keep the lights burning around the "Ark of the Lord."

There is no question but that a large, well endowed college under the direction of the New Church is needed just where the beginning was made, and that there should be ample, beautiful buildings, thoroughly equipped, comfortable, healthful dormitories well managed, all under the direction and ministration of the Church. The heads of the departments all being thoroughly New Churchmen, and fine scholars, it would not be necessary that all the under teachers should have already come into the Church; that would naturally come about with the heads of the college devoted, consecrated apostles of the Lord's New Church.

The influence of such a Church centre, would penetrate through all the west, the south and the north. It is time for a big Church reformation, it will take brave, wise men, filled with loving-kindness. There are such men, and when the Church has put in order, and readiness the place for them, with an endowment large enough to pay living salaries, the men and women and students will be ready also. You cannot draw students unless your buildings, faculty and equipment are ready for them. Success brings success.

Let our hearts and hands open at once; let us waste no more time, but get at once to work. There is money enough, to fulfil our trust. The first small subscription has already been sent to Urbana.

Let every section of our country have its small committee, and raise now the million for the Lord's New-Church revival! Let us do now the work that is at hand.

T. S.

What We Learn From the Parables

The fifteenth chapter of Luke presents three parables, which tell respectively of the faithful shepherd, the careful woman, and the good father. When we keep the central idea of these parables in view we observe how these stories are crowned with success and culminate in joy. They speak to us of the greatness of the love that will not let us go. We learn from them to know the character of the Lord's surpassing love.

These are followed immediately by the parable of the rich man and his steward, generally known as the parable of the "unjust steward." (Luke xvi. 1-8.) We see in this the leniency of the Lord's dealings with men. So tender is He that we are inclined to blame Him. The steward, without a doubt, is unjust, and we are amazed that he is commended. But we need to ask ourselves in the words of the Psalm: "If Thou, O Lord, shouldst mark iniquity, O Lord, who should stand?" Just as the

conduct of the steward is realized by everyone to be unjust, so the course pursued by the rich man, his lord, impresses us as being wise. This parable falls in line, therefore, with those in the fifteenth chapter, as setting before us the wise master, one who is wise in dealing with an unjust servant. The Lord's dealings with us are wise. He makes all allowances. He seeks for what He can commend, and is slow to condemn; slower possibly than we ever conceive Him to be.

From the parable of the rich man and Lazarus we learn most distinctly which are the things that really count. (Luke xvi. 13-31.) Our happiness in the end depends upon our choosing the things that are of lasting worth. The rich man's good things and Lazarus' evil things were for a time only, and they therefore count as nothing against the things of the eternal world. The story of this parable has its continuance in the Spiritual world, for it is in the Spiritual world that the values of things are made apparent.

LEWIS SLIGHT.

Slow Growth

Of all the trees of the wood those of the slowest growth, the oaks and cedars with their hardy beauty, withstand the untoward elements longest; while the poplar and the birch with their attractive beauty wither and decay soonest. The oak and the cedar take root on the rugged hillside, while the other two must nestle in the protected valley. And so may it not be with our isolated brother and our slightly interested neighbor, perhaps providentially removed from any organized church center. Your isolation may be an asset worth while and might become one of your greatest blessings.

Elaborate organization is a step which should result from an assured condition. This seems to be the order of life, and thus has it worked along the slow, step-by-step growth of the New Church. The condition within establishes and maintains conditions without a man. Yet at the same time it is true that a favorable environment reacts favorably but its value is only secondary. One of the greatest delusions affecting life's problems is the feeling that outside circumstances must first be attended to in order that we may become rightly established. Are we not, as our fathers were, often tempted to live by faith alone? This would seem to be a hard indictment against New-Church people. Yet there is an insistent temptation in the fact that we are the possessors of the very truths of life and so can hardly go far astray.

The mills of God grind very slow, but absolutely sure. For "one jot or one tittle shall in no wise pass from the law till all be fulfilled."

Thus I conclude that all the seemingly hard, disappointing and disturbing struggles in this life are just the conditions we require to bring us unto our best state.

T. H. W.

Is prayer merely subjective, only changing our attitude toward God without changing Him? It changes Him because it changes us. It cannot increase His love, but it can and does change what His love is able to do for us. "He did not many mighty works there, because of their unbelief." To change our attitude and become more receptive enables God to do more. He will not force His blessings upon us, for that would destroy our individuality. "Prayer changes the relation of God to the soul, as opening the window of a hot room changes the atmosphere within and without."—Theodore F. Seward.

A Novel Presenting a Spiritual Interpretation of Life*

Adeline Knapp made a sojourn in the Philippines, and published in 1902 a descriptive work. She made a sojourn in Arizona, and wrote a novel of dramatic power and spiritual interpretation of life. She paid a tribute at the Massachusetts New-Church Woman's Alliance, to the Lyon Street Church, San Francisco, and the Rev. Joseph Worcester; and she hastened back for his closing blessing just before her death in 1909. She told me of her love of life; but she made the supreme sacrifice willingly at last.

She knew the mining region of Arizona which presented a good deal to shock the fine-grained person in its wild and sometimes lawless camp life emphasized by profanity, gambling, and quick revenge with the pistol. But if the habits of this region were rightly touched there would appear just as suddenly a big generosity warm from the heart. This is powerfully illustrated in Bret Harte's "Luck of the Roaring Camp." Could this element be made more than evanescent? When early manhood came into contact with evil, cherished the growing doubt, and harbored revenge in the heart, how could God bring out the sweet elements of childhood—hidden and carefully guarded—and make these elements instrumental for salvation, as declared in Swedenborg's "Arcana," no. 5135?

This is the problem handled by Miss Knapp in her book, "A Well in the Desert." Gabriel Gard, the central figure of Miss Knapp's story, had lived in the atmosphere of camp life, had been betrayed in a business transaction by a trusted friend, and again betrayed by his lawyer of defense. Forced to flee to the desert, he carried with him a heart full of bitter gall. The very fauna, and flora, and contour of Arizona at its worst were startlingly symbolic of his state of mind. The Gila monster—a huge lizard with venomous teeth—lurked in the sand; the scream of the wild cat, the howl of the coyote, the screech of the owl, remind us of Bible imagery over wicked Babylon inhabited by "doleful creatures" of the desert (Isa. xiii. 21). The place where Gard lived was unproductive, recalling the region as we approach the Dead Sea, where we see bushes—all thorns and no verdure. The dreary and forbidding barrenness of the Arizona levels was gashed by yawning ravines; the cinder cones indicated extinct volcanoes. With the mercury reaching 130°, the ground was "smitten and withered like grass," as the Psalmist describes the human heart (cii. 4).

Gard was entirely alone in the desert. There were long days of hatred, and long days of despair. Then began the dawning of a better period. During his Robinson Crusoe life he gradually learned to fashion utensils in clay. Upon them he put inscriptions which came to be "a sort of commentary, seen by no eyes save his own, of his moods, and their longing for expression."

"He put them down upon whatever served, for the mere comfort of seeing them . . . lines from half-remembered poems and hymns; familiar Bible verses that his mother had taught him. They came back to him bit by bit, in his solitude. And one and all his soul found them camps by the way on its long journey up from despair."

There were other boyish memories: "the white church at 'The Centre' where he had gone to Sunday-school; the little shed chamber with its creaking stairs that his mother had climbed, how many cold nights! to see if he were warmly covered. She was gone from earth now, but the old boyhood places were left, and he yearned for them all, with yearning unspeakable. There were a few small

pretty creatures which filled all this grim place where he now lived with an ineffable grace. . . . 'To think of it,' the man murmured, 'the little, little things, so fearless up here in this—this—secret—place—of—the—Most—High!'"

He stopped in vague surprise at his own speech. He had not meant to say that, but from some neglected recess of his boyhood's memory the words had sprung, vital with meaning.

Reaction followed, with a sense of the bitterness of his desolation. Then the ache of his spirit's yearning drew his clenched hands up toward the blue vault.

"I wish," he breathed, his heart pounding, his brain awl with a sudden vision of the infinite wonder of things, "I wish that—if there is such a thing as God in the world I might come to know it."

Gard needed something outside of himself upon which to expend the childhood's love reawakening in his heart. And God sent a stray burro that very night to his hearthstone. "The creature had been wounded by a crucifixion-thorn; Gard drew out the cruel spike and soothed the hurt with a poultice of prickly pear. Later in the night he was awakened. His grateful little patient was licking his hands." Greeting her colloquially, "he slipped an arm over the rough little neck and the two watched the fire till dawn."

He would grant all except the relinquishment of his vengeance. The battle ground of his soul fairly trembled under the conflict. One day there rose "an agonized wail as his spirit recognized the inexorableness of this demand upon its powers—the forgiveness of his enemies."

"I've got to! I've got to! If I'd sensed it," he said in a voice tense with his soul's pain, "if I'd sensed that that is what comes of knowing there's a God, I guess I wouldn't have dared wish that."

"Viciously he had torn and kneaded the clay which formed the utensil in his hands; slowly he now engraved on it THE CUP OF FORGIVENESS; peacefully he thrust it forward for its final perfecting in the fire."

"We'll see how it comes out," he muttered, grimly, but already the hope grew in his heart that the clay would stand the test (pp. 61-63).

The victory came. "He had learned the futility of hate in the nights when he watched the great stars wheel by, marking the march of the year."

"There's nothing in it! there's nothing in it!" he finally said to himself. "It ain't a man's job to be staking out claims on hell for another fellow." (pp. 73, 74.)

Gard went back to civilization and to his friends, and he turned to the life of humanity so much larger than his own little needs. His own affairs desperately needed readjusting, but he strove to reinstate justice in the affairs of Mrs. Hallard, an old neighbor. God seemed real and near. The twenty-third Psalm, taught by his mother in infancy, was engraved on his mind; and now, the verse came surging in his brain: "Surely goodness and mercy shall follow me all the days of my life." Then the problem of Divine Providence presented itself—a growing sense of the breadth of God's designs.

"If you've ever noticed it," Gard said, "there's a kind of reasonableness in the way things happen, even when they look black. They happen out of each other; and there's Something managing them, no matter how it looks, sometimes. I've found that out."

"I'd like to help in the managin'," Mrs. Hallard said, grimly.

"You couldn't." Gard shook his head thoughtfully. "You couldn't see the whole scheme. And we don't need to want to. Whoever's doing it is making up a whole piece out of 'em. That's this world we're in. It's our

*From a forthcoming book by Ednah C. Silver entitled, "Sketches of the New Church in America," on a background of Civic and Social Life. Massachusetts New-Church Union. McGrath-Sherrill Press, Boston.

world. We belong in it; and there ain't anything in it for us to be afraid of but just ourselves." (p. 214.)

In this novel, the spiritual evolution of Gabriel Gard is the story within the story. The dominant instrumentality for this end is the power of the Good Book: the reviving of infantile Bible memories which proved a "well in the desert" to the arid soul. "When I got out of the big desert," Gard says, "I found God there, same's I'd believed when I was a boy back on the prairie."

EDNAH C. SILVER.

Communications

Human Science and the Human Mind

EDITOR OF THE NEW-CHURCH MESSENGER:—The wonderful things of so-called science now being unfolded to man appear as unbelievable tales when the scientific investigator first announces them.

Millions of people refused to believe in the wonders of the Morse electric telegraph, the Field ocean cable, the Bell telephone, or the Edison phonograph until they had become common utilities.

Yet, the revelations of science the past hundred years are but a fraction of the wonderful things revealed to a credulous and unbelieving world 150 years ago. None of the wonders of the telegraph or the telephone or the phonograph approaches the revelation of Emanuel Swedenborg as to the wonders of the human mind.

What a measure of reformation and regeneration might come in the individual life if the world came fully to the recognition of the truth of Swedenborg's revelation concerning man's book of life—that everything from early childhood that a man does, speaks, hears or even thinks, down to the minutest detail is indelibly graven in his book of life, his interior or spiritual mind and can be called forth without limit of time or space.

How many men would cherish evil thoughts or hatred if they knew that every minute not only the state of their mind but all the affections and thoughts in minutest detail were being automatically recorded, never to be erased?

It is such a wonderful revelation that it must be rejected in its first announcement. It is to the ordinary mind unbelievable, although it solves a thousand problems of creation.

If one wishes to believe in the possibilities of Swedenborg's revelation in this respect and must have a base more subtle than the telegraph, the telephone or the phonograph upon which to rest his mind, he might study the wonders of the telegraph.

Most people are familiar with the phonograph-graphophone invention by which the human voice vibrates a thin metallic disc from which a needle perforates a revolving cylinder of wax according to the light or heavy, or slow or fast vibrations of the voice of the speaker. It is all very simple when once understood. More than forty years ago, Thomas A. Edison in his laboratory showed me how he justified the remark to him: "I believe you could make a machine by which a man could talk a hole through a board." He had attached to a ratchet wheel a disc similar to the phonograph disc with the needle resting against the rim of the wheel. When he spoke against this disc, its vibrations pushed the needle against the ratchet wheel which turned with lightning rapidity. "There," said Edison, "you have only to connect the gimlet with this wheel and the human voice may then literally talk a hole through a board."

Now there may be substituted for the wax cylinder which has often to be changed a spool of four miles of

fine piano wire good for a half hour's conversation record and so adjusted in a magnetic field that the vibrations or words of the human voice are magnetized upon this wire. The speaker may be in another room, or another building, or a mile away with an English hand telephone connecting the mouthpiece and the ear-piece and the regulating machine in front of him occupying but a few inches. He turns the current on or off at will as he desires to speak and make record, and the voice over the telephone wire is recorded on this piano wire as it is rewound from one spool to another passing through this magnetic field. The record can be corrected or erased at will, but what is wonderful, and this is the point concerning which I am writing, the record can be read and transcribed many times over; can be stored away in small compass and brought forth at will.

These are scientific, one might almost say mechanical, facts. Yet who can understand them? But the knowledge of them may assist one to understand the boundless possibilities of the record in man's book of life as Emanuel Swedenborg revealed it 150 years ago, and Swedenborg was the great scientist as well as the great revelator.

It would appear that modern science is but laying the foundation from which the human mind may be projected into the higher field of revelation concerning the mind or spirit of man.

C. W. BARRON.

The Magician

There's a wonderful magician, outrivalling those of old,
His power far excelling all in verse or story told.

His works are mysteries, yet he seeks no secret tower or den,
But ever dwells among us, and sways the hearts of men.

He dispels both cold and darkness, making clouded, stormy day
As fair and beautiful as summer sunlight's brightest ray.

The menial task he touches, and, Midas-like, behold!
His touch transforms the sordid brass, and makes it finest gold.

With rich and poor, with young and old, he works in every clime;
Knows neither change, nor weariness, nor aught of Father Time.

The miracles of old were wrought by his life-giving power,
His mysteries supernal ever,—past or present hour.

He gilds the stately mansion, and makes the humble home
As fair and bright with beauty, as it were the proudest dome.

He feeds the hungry, clothes the outcast, lifts the fallen one;
Where'er there's human suffering, his wondrous work is done.

He gathers little children, with none to love or care,
Into his strong and sheltering arms, his tenderness to share.

O the magic of his power! He stirs the cold and selfish heart
To thoughts and deeds of kindness by his hidden, mystic art.

His wonder-motto only this: the old, the "Golden Rule";
Naught else we need, he tells us, to perfect us in life's school.

Would'st know this great magician, with his world-inspiring aim,
His miracles and mysteries see? *Love is his blessed name.*

SARAH MARTYN WRIGHT.

Lynn Neighborhood House.

**“The most remarkable discovery in
Health Clothing that ever
has been made.”**

—John Harvey Kellogg

Dr. Kellogg, of the Battle Creek Sanitarium—undoubtedly the greatest health institute in the world—has been an almost life-long experimenter along the lines of health living. He has been teaching the value of light as a life stimulant, and said in a letter to us recently, “I have been calling attention to the importance of light as a therapeutic agent for the last fifty years.”

He recommended, in many instances, the wearing of white clothing as much as possible, in order that the light rays may more readily reach the body.

Having previously tested the passage of light through woolens by covering boxes of seeds with

different colored woolen cloths and placing them in the sunlight to grow, Dr. Kellogg suggested that we send several samples of Hand-Woven Homespun, that he might put them to the same test. We sent him a number of pieces, and the reproductions on the following pages show clearly the unbelievable results of Dr. Kellogg's experiments with seeds grown under ordinary woolen cloth and under Biltmore Hand-Woven Homespun. These results seem to establish the fact that light rays pass through Biltmore Hand-Woven Homespun and to prove that persons wearing clothing made of it are not shutting out the light from their light-starved bodies.

A little later he made the trip by automobile from Battle Creek to Asheville to show us what he had discovered, and to see more fully our processes of the manufacture of Biltmore Hand -Woven Homespun.

The pictures following these pages are made directly from his photographs, and will show more clearly than we can express the story of Health-Clothing represented in Biltmore Hand -Woven Homespun. When we asked Dr. Kellogg his explanation of this marvelous discovery, he stated that he believed it was partly or largely due to the old-fashioned, plainly twisted homespun thread, which, when woven, left a more open cloth through which light and air may pass, and partly to the purity of absolutely new wool without dilution, fine wool filling, cotton or any added thing. It is simply the very best grade of old-fashioned sheep's wool, and the grade of wool our grandfathers and grandmothers wore in the days when people were healthy.

He remarked that, on the other hand, Biltmore Hand-Woven Homespun, while possessing a character of weave that admitted light to the body, seemed to be

the warmest wool clothing he had ever used. We have found this to be a fact, and many times have had letters from customers who have worn suits of Biltmore Hand-Woven Homespun at sea and told us how comfortable they had been, although on some occasions they had been wet by spray and allowed their clothes to dry on them.

We cannot honestly claim that we have discovered or invented any marvelous thing, for it is not a new thing to make hand-woven homespun. That was done for thousands of years, and by our ancestors up to only a few generations ago.

It is a new thing, though, to go back to it as we did twenty-five years ago, and begin to weave homespun of absolutely pure, clear wool by hand as it was done in olden times.

Mother Nature does not change her sheep—their wool is always good. It was given to keep humanity clothed and warm, and the less its character is changed the better clothing it makes.

We handle our wool with the greatest possible care: it is dyed by hand, and watched every minute to prevent over-heating and over-treatment in the dyes.

We do everything we can by hand, and produce as nearly the old honest type of strictly handwoven homespun that can be made on a commercial basis.

That so great a friend of humanity as Dr. Kellogg should have discovered that we are putting

health into our Homespun, in addition to all the other qualities we strive to weave into it, is news that we wish to spread to the world for the benefits our fellow beings may receive, more than for the added popularity it may give our product.

Hamilton, Ohio
Dec. 10, 1925

I want to tell you, also, at this time how much I think of Biltmore Homespuns. My tailor just delivered my suit from material I recently purchased from you. To say that I am 100 per cent satisfied is the best way I can express myself.

E. S. R—

Milford, Conn., Jan. 25, 1926

I am still wearing the blue-gray mixture I purchased about eighteen months ago, and have come to feel that my wardrobe is decidedly incomplete without at least one Biltmore Homespun suit.

Mrs. S— would like two and one half yards like the material you sent me. You may send this at once.

K. B. S—

Pompton Lakes, N. J.
January 25, 1926

I am unable to decide which material I want and am going to take advantage of your kind offer to send two pieces. I shall make a prompt selection and return the ones I decide against. I want material for both a coat and dress. The last material I had from you has worn marvelously. I am more than delighted with it.

Mrs. C. T. C—

New York, N. Y., Jan. 6, 1926

Will you please send me samples of the lightest weight homespun in gray? I have had the greatest comfort in the three I have had, and, as I cannot either wear them out or deface them, I am passing them along.

Miss H. S—

Worcester, Mass.
December 9, 1925

Some years ago I bought a gray handwoven suit pattern from you and had quite forgotten about your address. I think it was about ten years ago, and as I slipped the coat on last night at home it occurred to me that it had worn pretty well. Will you kindly send me a swatch including several shades of gray?

E. J. S—

St. Louis, Mo., Aug. 6, 1925

This will be the third suit I have had of your homespun cloth. It is more satisfactory in every respect than any cloth I have ever worn. I had the first suit made in 1915, and the second in 1920. The last suit is not yet worn out and looks well. I enclose your bill and my check for \$33.25.

C. F—

Jacksonville, Fla., Jan., 1926

I bought a suiting from you about two years ago. It gave me great wear and satisfaction. I lived then in Los Angeles. Please send me some samples, dark gray and brown for myself, and samples of other colors and designs for the better half.

T. J. S—

Wauwatosa, Wis., Jan., 1926

Your goods are wonderful. My navy blue suit, which is well along on its fourth winter, looks as well as it did at the first. And the gray (light weight), which I had made up in a tailored ensemble last spring, is still a beautiful outfit.

Mrs. S. J. B—

Kansas City, Mo., Nov., 1925

Again I am giving my husband, for Christmas, material for a suit out of your splendid homespuns. It is a gift most unique, practical and artistic. Please send samples of your medium weight homespun in dark blue and other shades.

Mrs. J. O'N. B—

Boston, Mass., Feb. 28, 1925

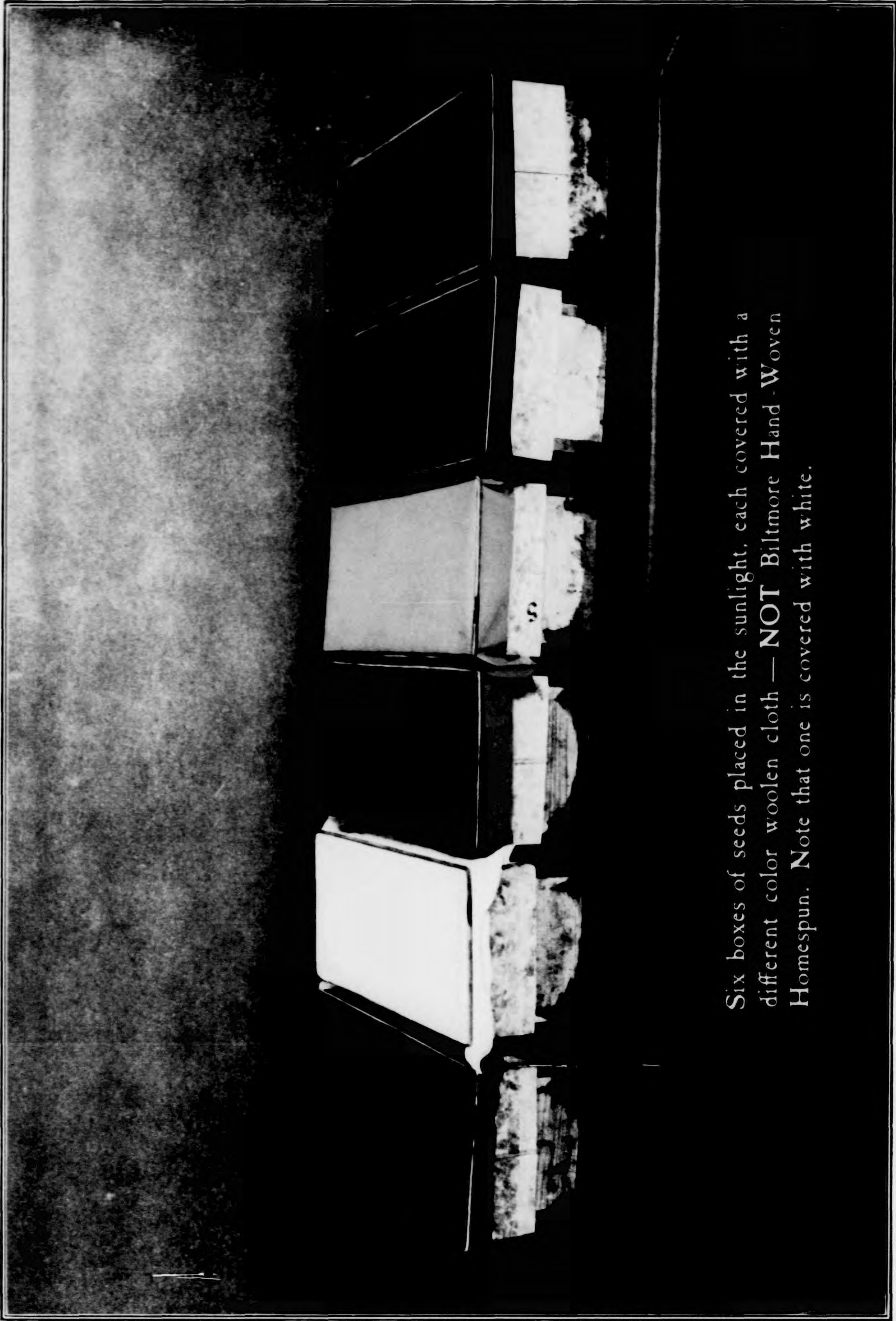
Please find enclosed my personal check for \$24.50, for which please send me seven yards like enclosed sample. This is Dr. T—'s third suit from your shop, and we have found everything you have stated in your advertising to be absolutely true. We have found the colors do not fade a particle, and, above all, it does not pull or sag even when it has been worn in the roughest weather. We would be only too glad to give you our names as references.

Mrs. P. T—

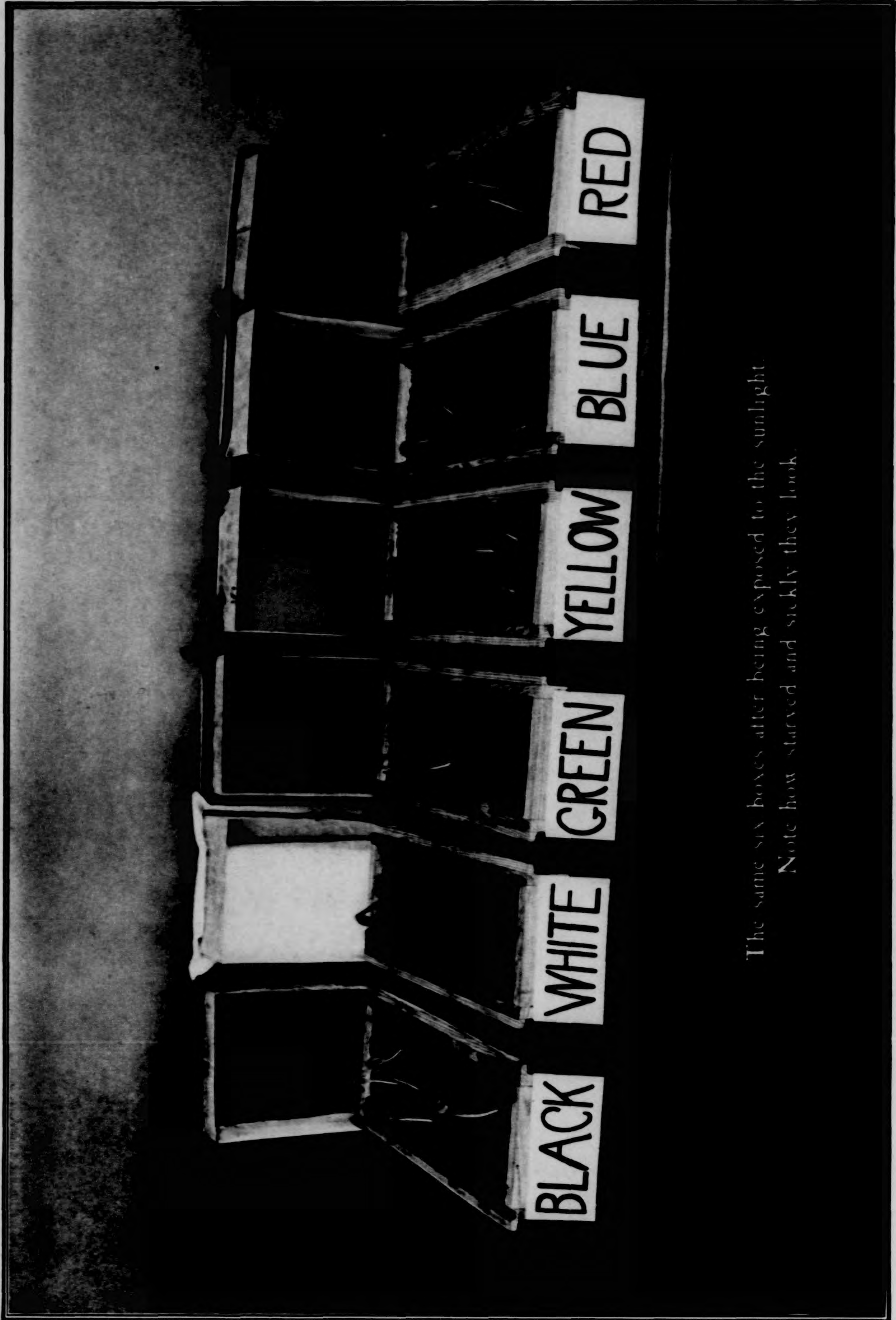
Venice, Calif., Sept. 25, 1925

Wish you would send me some more samples, including No. 602, the one I bought of you in February. You thought it too heavy—but it attracts more attention than any suit in this city. I had the coat made skeleton lining and it is not heavy at all. Every place I wore it, those I was talking to hardly paid any attention and nearly always wound up by asking, "Where did you get that suit?" I like it better than any other suit I ever owned. Thanking you for your courteous treatment, I am,

J. G. F—



Six boxes of seeds placed in the sunlight, each covered with a different color woolen cloth — NOT Biltmore Hand - Woven Homespun. Note that one is covered with white.



The same six boxes after being exposed to the sunlight.
Note how starved and sickly they look.



Six boxes of seeds placed in the sunlight. Five of them covered with Biltmore Hand Woven Homespuns. One was not covered at all, simply exposed to the sun as in any planting.



The same six boxes. Note the growth of the two which were covered with the darkest colored Baltimore Hand Woven Homespun. The cloth over the box next to the one not covered had 90 per cent black wool in the mixture.

Biltmore Handwoven Cloths were originated in a little industrial school on the famous Biltmore Estate in the mountains of North Carolina, over twenty-five years ago.

The school was established by Mrs. George W. Vanderbilt, and her idea was to teach the boys and girls hand weaving, hand carving, needlecraft and arts that were useful.

The mountain people had been weavers for generations—their methods were crude; they carded (combed) and spun their wool entirely by hand; they had the simplest form of hand looms; they threw the shuttle with one hand and caught it with the other. They dyed their cloth in the few colors that could be obtained from local roots and herbs—yellow hickory bark, black walnut root and the like. With all their processes so limited, their work was slow, and they could only produce a few yards a day.

Mrs. Vanderbilt saw the difficulties under which they worked, and with the help of two very capable community workers began to find ways of improving these conditions.

Improvements were placed on the looms by the boys in the wood-carving shop. Shuttles were made to throw with a cord, which increased the speed of their work. Carding and spinning machines were purchased and proper dyeing methods adopted.

Then the school began to take in the crude wool, wash it, dye it by hand in fast dyes, card and spin it, and make it into warps. The warps were sent to the homes in the mountains, where the hand weaving was done. The cloth would come back to the school, where it would be scoured and finished, finally going out on tenter-hook fences in the sun to dry and shrink. Then, as tourists would visit the school, the cloth would be sold for the weavers and the money turned over to them.

Thus was the interesting beginning of what in twenty-five years has become the largest hand-weaving industry in the world.

The school grew, but the demand for these hand-woven cloths grew faster. It grew to be too much of an industry to be conducted as a school.

The village on the border of the Biltmore Estate grew to be a part of the little city of Asheville. Good public schools came. The boys and girls grew up. One became a sculptor. Another won the gold medal for hand carving at an Exposition, and Biltmore Hand-Woven Homespuns were awarded a gold medal. We hold two gold and one silver medals.

The demand continued to grow. No effort had been made to sell on any kind of a commercial basis, but tourists who had visited the school and bought suits of cloth would continually re-order by mail, and their friends would hear of it and write for cloth, until the demand became greater than the supply.

It was very clear to Mrs. Vanderbilt that work of such merit should not be held back for lack of room to grow, so, early in 1917 when she was giving her entire time to war work, Mrs. Vanderbilt regretfully sold the equipment of the industry and the hand looms to F. L. Seely, who built and operates Grove Park Inn, the finest Resort Hotel in the world. Larger, old-fashioned shop buildings were built at the Inn, only a little distance from the old home of the Industrial School, and in a short time the weavers and workers were established in their new home. Better facilities were added; more and better looms were built; better dyes became available, and today it is more than twice as big as any hand-weaving industry in the entire world.

Biltmore Homespuns are not rough and shaggy—they are rugged and strong, but are as beautiful and refined as only hand work can make them. They are made in every color and shade—every mixture and blend one could imagine—but, unlike any other woolen cloth on the market, every color is absolutely guaranteed and any piece of Biltmore Homespun is returnable if not damaged

or cut. There are light weaves for summer, "Regular" weaves for fall and winter, and overcoat weaves.

The clean, white wool is dyed by hand, with the very finest imported alizarine and vegetable dyes. No aniline is used under any circumstances. The blues are as clear as the sky. The blacks and the grays are pure and clean; not greenish or brownish, but just what they should be.

The cloth is woven entirely by hand. We have been doing it the same way for over twenty-five years and have never woven a yard of cloth except on looms we have built by hand in our own wood shops.

The weaving is all done by native men. The water we use is from mountain springs on the slopes of Mt. Mitchell, 7000 feet altitude, the highest mountain east of the Rockies. Great woolen manufacturers from New England have told us that we could never accomplish the wonderful results we do with our dyes except for the purity of this water. After the bleedings of the various colors of wool are spun and woven, we thoroughly dry clean it in redistilled gasoline. Then we scour it in hot Ivory soapuds for two hours, finally hanging it on tenter-hooks all day in the sun.

There isn't anything known that would produce a better woolen cloth than we produce in Biltmore Homespuns. We use the very best wool grown in the entire world. We use only the wool from full-grown sheep, because lamb's wool will shrink almost as long as there is any of it left. We use the finest dyes, the purest water, Ivory Soap, and we do not even use our own waste wool. We sell that to other woolen manufacturers.

One of the most frequent criticisms we receive is that our cloth wears too long. Usually, though, we are given the very pleasing information that it keeps its fine appearance and keeps its shape better than any other woolen cloth. These are the qualities we strive with all our might to weave into Biltmore Homespuns. We do not make it merely with the idea of a quick sale, but we weave into it all the long life and beauty we know how to produce, and we are sure from the thousands of customers who write us year after year that our policy of making the cloth too good has been responsible for the fact that we have friends in practically every city and town in the United States and every country in the world.

We weave four weights:

"Regular," which is a very substantial, closely woven cloth, quite hard twist, and weighs about 7½ to 8 ounces to the yard, 28 to 30 inches wide.

"Light Weight," is made of precisely the same yarn, but has 300 less threads to the same width and weighs about 6 ounces to the yard. It simply is woven more loosely and is an ideal weight for ladies' suits.

"Overcoat" is made by drawing three threads together and making practically a triple thread. The overcoat cloth is of a wonderful texture, and weighs about 14 ounces to the yard.

"Scotch Blackface"—Made of genuine Scotch Blackface wool imported from Scotland. Ideal for men's golf suits, business suits and ladies' coats.

All Biltmore Homespuns are precisely the same on either side. We have seen men's suits that had been worn two and three years, then turned inside out and made over.

Regular weights	\$3.50 per yard
Light weights	\$3.25 per yard
Overcoat weights	\$4.50 per yard
Scotch	\$3.20 per yard

Seven to eight yards are required for a lady's suit.

Samples costing us 10 cents each will be sent on request. Please do not put us to this expense unless you are seriously considering our homespun.



The Homespun Shops, Grove Park Inn, Asheville, N. C.

Lobby Notes



Prof. Bashford Dean, a recent arrival, is one of those rare men who have won distinction in various spheres. He is professor of Vertebrate Zoology in Columbia University and has made important contributions to this field of knowledge which are embodied in numerous publications. He has made dozens of voyages abroad in the pursuit of his studies. He is also curator of fishes and reptiles in the great American Museum of Natural History in New York City and is a member of many scientific societies in this country and abroad. He is equally noted for his knowledge of ancient arms and armor and since 1903 has been curator of this department in the Metropolitan Museum of Art in New York City. He owns a superb private collection of arms and armor, some of which he has lent to the museum and some of which is in his home at Riverdale, New York City. His house is situated on the bank of the Hudson River, near the northern boundary of the city. The estate was formerly occupied by Mark Twain. It contains a great art gallery in which Professor Dean has housed his armor and other beautiful treasures gathered in his journeyings.

Mr. and Mrs. William E. Geil, visitors in former years, are again with us. Mr. Geil is famous as a traveler, explorer, writer and lecturer. Last year while in Battle Creek he spoke on "The Great Wall of China" and thoroughly delighted his audience. One of his journeys covered 120,000 miles. It was begun in 1901 and had the double object of a comparative study of primitive races and independent observations of the missions of the world. He crossed both China and Africa, going farther into the pigmy forest than Stanley. His African explorations covered four years. He studied the Great Wall of China and visited all the nineteen capitals of China. Two years ago he explored Wu Yo, the five sacred mountains of China. He is the author of various books on Africa, China and other subjects. He has lectured in Australia, Japan, China, Great Britain and the United States. He is a member of various learned societies and has received numerous honorary degrees.

After several weeks in Washington observing the proceedings of the arms conference, Mr. J. H. Patterson, chairman of the board of the National Cash Register Company of Dayton, Ohio, has returned for a rest. He spent a number of weeks here last summer and in the early fall. Mr. Patterson is in heart a member of the Sanitarium staff, so much has he done to spread its gospel of salutary living. He has been a regular visitor to Battle Creek for twenty years and has sent hundreds of his associates here to learn the principles of "biologic living." Tuesday last being Mr. Patterson's birthday, a dinner party was arranged for him which was attended by a number of notables now gathered at the Sanitarium.

Miss Olivia Eggleston Phelps Stokes, a recent visitor to the Sanitarium, like other members of the Phelps Stokes family, is noted for her philanthropy and her interest in education. Two books written by her have just been added to the library on the second floor. One is entitled "Forward in the Better Life" and is devotional and inspira-

tional in its nature. The other is called "Inspiration for Daily Living" and consists of extracts from the spoken and written works of the Rev. Dr. Lyman Abbott, the famous preacher and editor of *The Outlook* magazine.

Word has been received of new honors which have come to Sir Robert Ho Tung, of Hong Kong, who was a guest at the Sanitarium for a number of months in 1918. He went to Peking recently and had a special audience with the President of the Chinese Republic, who complimented him on his work in promoting Chinese industries. Sir Robert was made Honorary Adviser both to the Chinese President and to the Chinese Embassy at Washington. Sir Robert was a picturesque figure here in his magnificent garments. He was knighted by King George for his generous gifts to war charities and funds and also for his many public services and benefactions.

For several days the Sanitarium entertained Brave Hawk, a Sioux Indian, who appeared before three Sanitarium audiences with his native songs and dances. He came with Mr. Harold A. Loring, lecturer and musician, who spoke on the life and music of the Indians. Mr. Loring has spent some fifteen years among these people, part of the time making records of their songs for permanent preservation. His original appointment to this work came from President Roosevelt. One talk was given in the gymnasium Friday night, another in the parlor on Saturday afternoon, and the third in the chapel, to students. A number of the patients were interested in meeting Brave Hawk and in hearing of his interesting experiences. He is twenty years old and lives on the Rosebud Reservation in South Dakota. Until a few weeks ago when he joined Mr. Loring in Grand Rapids, Mich., he had never left the reservation except to go to school. This educational experience was not pleasing to him so he "bolted." His home was three hundred miles distant but he reached it on foot in six days. He can run five miles in twenty-eight minutes. He knew nothing about dining car service on railroad trains consequently when on his way from South Dakota to Michigan he went three days and nights without food. Even when he joined his friends he did not complain of hunger. Black Hawk wore the full regalia of his tribe, ornamented with beads, bells, eagle feathers and porcupine quills.

Mrs. Beulah Buck Fogleman of Chicago, a very talented guest, recently left for a professional tour in the West. While here she appeared a number of times before Sanitarium audiences and contributed beautifully to the Armistice Day celebration. Those who heard her readings were delightfully entertained and many were enthusiastic in their praise of her personality, versatility and the exquisite sympathy with which she interprets the various characters in her dramatic presentations. A long career on the Chautauqua platform has given Mrs. Fogleman a finished technique which enables her to hold her audiences enrapt throughout her entire program. She expects to return to the Sanitarium as soon as professional engagements will permit, and the announcement of her return will be looked forward to with deep interest by many of her admirers.



EATING FOR EFFICIENCY

This booklet is a condensed set of health rules—many of which may be easily followed right in your own home, or while traveling. You will find in this little book a wealth of information about food elements and their relation to physical welfare; also effective weight-control diets, acid and bland diets, laxative and blood-building diets.

"Eating for Efficiency" and "The Sanitarium Book" will be sent free of charge on request. Both books will be found of interest and value.

The Battle Creek Sanitarium, Box 1408, Battle Creek, Mich





Don't Worry—Cheer Up and Work!

Worry wears worse than work.

Worry destroys; work produces.

Worry wastes energy; work utilizes it.

Worry subtracts; work multiplies.

Worry dwarfs, depresses, confuses, kills.

Worry is known to cause diabetes, goitre, neurasthenia, gout, and other maladies.

Worry stops digestion, paralyzes the bowels, slows efforts of the will.

Worry anticipates failure and creates disaster.

Worry is a mind malady.

Worry about petty troubles, or even big ones, is useless and may become calamitous.

Work kills worry.

Work with the hands brings the joy and the satisfaction that only creative effort can give.

Work increases absorption of oxygen and so fans the vital fires which consume the body poisons and purify the blood.

Work promotes sweating, and thus increases the elimination of poisons by way of the skin.

Work encourages deep breathing and improves the functions of the abdominal organs. This means increased liver and kidney activity, and consequently elimination of poisons and less nervousness, less irritability, less fatigue, fewer headaches and greater efficiency.

Work taken in the open air combines the benefits of work and of fresh air and the mental stimulus of the out-of-doors.

DON'T WORRY—CHEER UP AND GO TO WORK!

J. N. Kellogg



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Chronic Fatigue—Nervous Prostration

By John Harvey Kellogg, M. D.

NOTE—These "Little Lessons in Health" which appear monthly in The Battle Creek Idea are extracted from original lectures to Sanitarium guests and patients; given weekly in the main parlors by Dr. Kellogg, Superintendent of the institution.

A NERVE cell generates nerve energy, just as a battery cell generates electricity. When examined under a microscope, a healthy nerve cell is seen to contain a number of minute, glistening granules. Certain coloring matters are readily taken up by these granules so that they may be made easily visible under the microscope, and thus their number readily estimated. Professor Hodge, an eminent physiologist, has demonstrated by a minute study of the nerve cells of swallows, that there is a great loss of cell substance after the bird has been for hours active on the wing. These observations, with numerous others, have definitely proved that the granules represent stored energy. That is, they consist of material which the cell uses in producing the energy which it sends out along its axon to other cells, or to the various organs and structures of the body. Thus a cell through its activity consumes itself, just as a battery uses up the elements of which it is composed. The exhausted cell is diminished in size, and it has a much smaller number of energy granules than does the rested cell.

It is evident, then, that the amount of energy which a cell can manifest depends first of all upon the amount of energy which it has in store. A cell which is well filled with energy granules is capable of a much greater output of energy than a cell that is half empty of its granules; just as a battery that has been freshly renewed is capable of sending out a larger amount of current than a battery which is half run down. The nerve cell which has used up its store of energy so that its output is

very small, or has ceased altogether, is in a state of partial or complete exhaustion.

But there must be other causes of fatigue, for it frequently occurs that a person who seems completely exhausted, will after a few moments' rest seem to be quite fresh again and able to resume activity. The time which has elapsed in the interval of rest has been too short to permit the cell to recruit restored energy to any considerable degree; hence, there must be some other influence at work.

Laboratory experiments have demonstrated that an exhausted muscle may be completely rested by simply washing it, showing that the exhausted muscle contains some element, the removal of which restores the ability of the muscle to work. It has been noted, also, that if the muscles of the legs are worked to the extent of exhaustion the arms also become tired, even though they have taken no part in the work. Professor Ranke found that an extract prepared from exhausted frog muscles produced fatigue when introduced into the circulation of fresh muscles. These experiments have led to the conclusion that poisons result from the activities of the cell. These fatigue poisons lessen the cell's working power. If they are removed by the blood and lymph as rapidly as formed, they do not produce the sensation of fatigue. In experiments on muscles it is found that if an interval of ten seconds is permitted to elapse after each movement, the same movement may be repeated for a very long time without fatigue; whereas without the interval, fatigue occurs in a very short time.

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Various other factors contribute to the production of fatigue. For example, a person who could walk several miles without serious fatigue might find himself completely tired out by walking the steel rail of a railroad track for half an hour. The close attention and constant muscular effort required to maintain one's balance while walking on a narrow base are the cause of the greater exhaustion in this case. Simple mental tasks which may be performed with very little effort or without fatigue under favorable conditions, such as the adding of a column of figures, often become very exhausting when done under unfavorable conditions, as amid distracting surroundings or constant interruptions. An attempt to work when the mind is preoccupied with some insistent idea which cannot be put aside, is most exhausting. The intruding ideas act like a brake upon the wheels of the mind, diverting the attention and compelling the expenditure of an undue amount of energy for the accomplishment of the work in hand. Such a person is like a short-circuited battery. The brain energy is consumed in internal work, so that little is available for useful activity. It is thus apparent that working ability depends, not only upon the possession by the brain cells of a sufficient store of energy, but upon a variety of other conditions which must be favorably controlled in order to secure the highest degree of efficiency.

To give the nerve cells an opportunity to renew their energy granules, adequate rest and sleep are essential, as the cell can accumulate energy only when the intake exceeds the output. In order that the working cell may maintain its activity it must be constantly bathed with blood rich in oxygen, so that the waste products of its activity may become oxidized and eliminated as they are formed, thus preventing the accumulation of fatigue poisons. Every one has at some time experienced the refreshing effect of a half hour's walk in the fresh air, after several hours of taxing mental work.

The state of chronic fatigue may possibly be due to overwork, although in the writer's experience this cause is much less frequently in evidence than is generally supposed. The neurasthenic is generally told he has overworked. "Broken down from overwork" is the most frequent diagnosis in neurasthenic cases.

A careful inquiry into all the conditions of life and all influences in operation will, in nearly every case, show other and far more potent causes for the production of a neurasthenic state than excessive work. Insufficiency of sleep, or sleep in a hot, unventilated room, or amid noise or other unfavorable conditions, may easily become a cause of neurasthenia.

Insufficiency of food is another cause of neurasthenia occasionally encountered in this country, though less common than in some others. Like all other body structures, nerve cells derive their stores

of energy from food. It is evident that deficiency of food must deprive the cells of their supplies of energy material, and so must lead to lack of endurance and to chronic fatigue. While this is true, there is no ground for the widely entertained belief that flesh foods, eggs, fish and other foodstuffs which are rich in animal protein, are especially necessary to make good a loss of nervous energy. The truth is the very opposite.

Experiments of Van Noorden, Lusk, Zuntz, and others, have shown beyond any room for doubt that nitrogenous foodstuffs—that is, foods rich in protein or albumin—abnormally exhaust the energy centers and so lead to a great waste of energy. The evidence afforded by the latest scientific studies of this subject goes to show that, while a small amount of protein is necessary for the building up of nerve tissues as well as other tissues, it is the fats and carbohydrates (that is, starches and sugars), with the organic salts found in cereals and vegetables, that are of first importance in replenishing nervous energy. The fats and starches offer the best fuel foods, while protein or nitrogenous substances are an inferior source of energy, whether nervous or muscular; and their use in excess of the amounts needed for tissue repair, is accompanied by loss of energy and other still more serious inconveniences.

Worry is a sort of mental short-circuiting which rapidly exhausts the nerve centers, draining them of their energy and unfitting the body for useful effort. Experiments with the plethysmograph have demonstrated that depressing emotions are far more powerful causes of wear and tear to nerve centers than is healthy brain work. According to Mosso's observations, the effect of vigorous intellectual activity upon the brain is far less than that of a disturbing emotion. Mental work, combined with worry and anxiety, tears down the nerve centers, exhausts their stores of energy, and cripples their ability to recuperate; but it is not the work itself which does the mischief; it is the cross-fire, the short-circuit, the confusing and harassing influence of disturbing emotions, which exhaust the nerve forces and prevent the brain from repairing its losses.

Mental diversion and a favorable psychological environment are unquestionably of importance in the treatment of neurasthenics. But this is not all, however; back of the psychic disturbances generally lie real physical disorders which a patient is more or less powerless to resist. This is illustrated by a story told of the famous Doctor Abernethy, a leading London physician in the early part of the last century. Being consulted one day by a most woe-be-gone and melancholy patient, he said: "You need diversion, sir. Go to hear Grimaldi"—a famous French humorist who was at the time convulsing great London audiences with his wit. "Alas," said the patient, "I am Grimaldi."

Exercises for Busy Folks

Correct Sitting Position

1. Hips back in chair, feet firmly on floor.
2. Chest up, so muscles of abdomen will not be relaxed.
3. Neck back against the collar, make an effort to raise the head a little. Keep chin in.
4. Arms folded, or resting on thighs.
5. Raise the trunk and head high as possible, pressing down firmly on thighs with hands.

Correct Standing Position

1. Hips back about three inches, abdomen drawn in.
2. Throw weight of body forward on balls of the feet.
3. Raise chest, two inches.
4. Head up, chin in.
5. Hands on hips, with fingers closed, or fore-arms resting on hips, arms folded back of body.

Exercises Standing

Relaxing muscles of the arms, body erect.

Shaking the wrists, so that the whole body will vibrate.

I

1. Arms down at sides.
2. Arms at side horizontal.
3. Arms at front horizontal.
4. Arms overhead vertical.

Repeat all movements from 8 to 16 times.

II

1. Hands on hips, body erect, keep spine straight. Bend knees, raising on toes, sinking body until you sit on heels.
2. Hold position bending knees, jumping up and down on toes, body erect.

III

1. Place hands on floor, just outside of feet.
2. Extend legs and thighs, body perfectly straight.
3. Bend arms until you touch chin on floor.
4. Straighten arms.
5. Jump forward, knees in front of chest, keeping hands on floor.
6. Straighten body to standing position, reaching overhead on toes.

IV

1. Circle arms out at sides, palms up.

V

1. Running in place, raising knees high, keeping up well on toes.

Corrective Exercises Sitting in Chair

Hips well back in chair, chest up, bending head backward. Hands on hips, if one shoulder is low, put that hand on back of neck, with elbow well back, the other hand firm on hip.

I

1. Bend trunk forward, with the back straight.

II

2. Close fists, place on shoulders. Turn chest to left one quarter turn, and stretch arms to the sides far as possible. Face front and repeat to right side.

III

1. Arms over head vertical, stretching out well.
2. Bend trunk to the left side, keeping right arm vertical over head, left hand touching the floor.
3. Arms over head vertical, stretching out well.
4. Repeat same to right side, same as 2.

IV

1. Grasping sides of the chair well back, raise chest high as possible, and raise left leg forward, pointing toes forward.

2. Repeat same with Right leg.. 3. Both legs.

V

1. Hands in front of chest, elbows raised up well.

2. Lean forward with back straight and head back. Swing the arms to side horizontal.

Exercises Lying Down

1. Lying on back, stretch out as far as possible with legs and arms.

2. While stretching, raise hips, keep back straight.

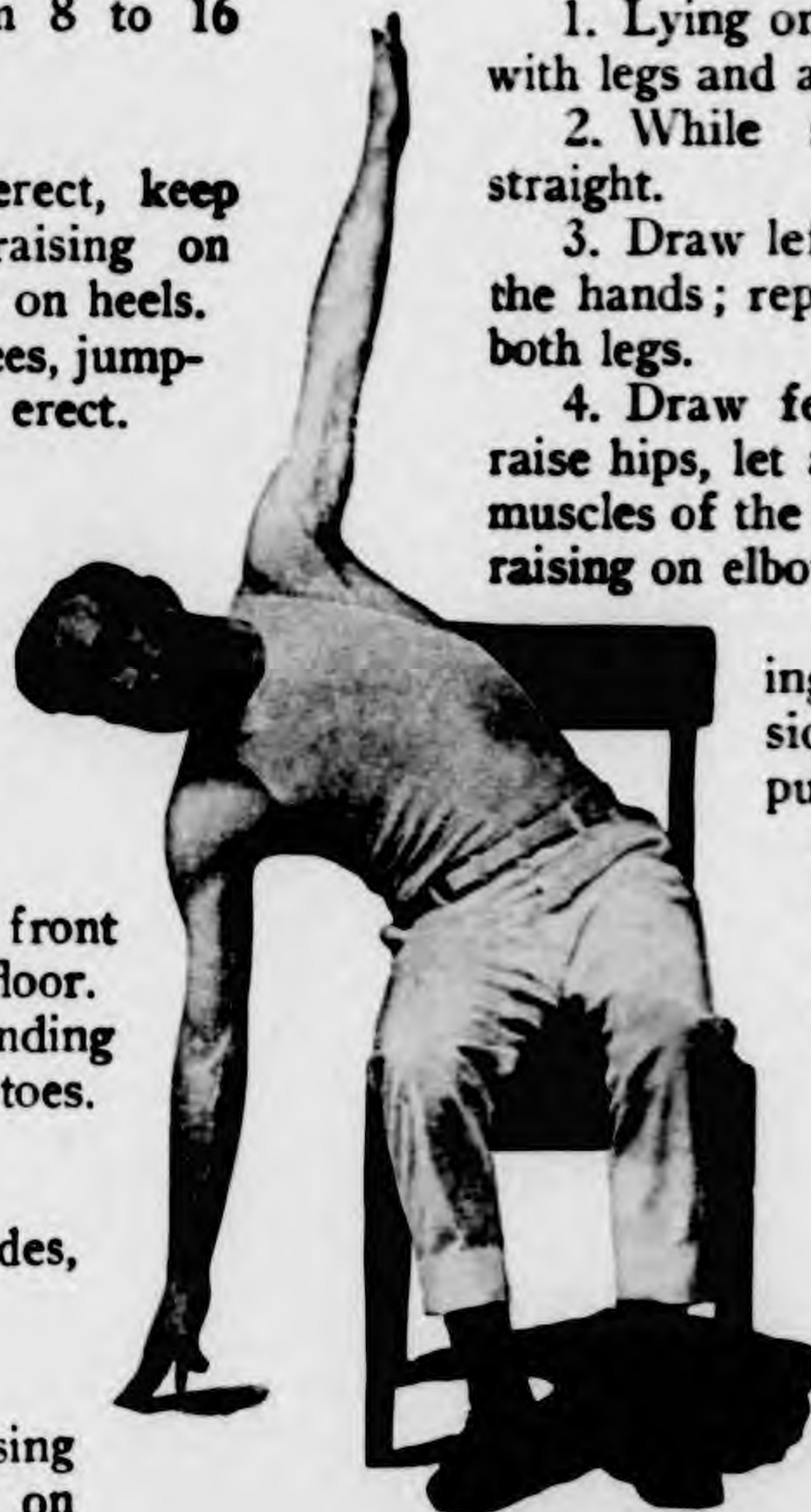
3. Draw left knee down to chest, assisting with the hands; repeat same with right knee, then with both legs.

4. Draw feet up well under hips, knees bent, raise hips, let as much weight be supported by the muscles of the back of neck as possible. Assist with raising on elbows, and back of upper arms.

5. Fingers closed, take deep breathing and make pressure with little finger side of hands, starting just above the pubes and working slowly upward an inch at each breath, until you get to border of the ribs. The pressure should be continuous during expiration and inspiration. Repeat 8 to 10 times.

Exercises, Face Downward

1. Raise chest upward, head back, hands on hips. 2. Arms down at sides, raise both thighs, legs straight. 3. Raise chest and legs at the same time. 4. Roll forward and backward, hands on the hips, chest up, head back well, back arched, thighs extended far as possible.



Interpreting Nature's Danger Signal

When the body is laboring under some physical handicap, Nature puts up her signals of distress. These signals, which are frequently called "symptoms" by the average layman, are but guide posts in the scientific diagnosis of disease. How a complete "inventory" of the entire body is now made with the aid of the most advanced scientific methods and facilities, is treated in this article.



A CASUAL examination of a modern medical dictionary will show how numerous are the diseases to which the human flesh is heir. Hundreds of them are set down, some of them involving the structure, some the functions and many involving both. In view of the multiplicity of these possible ailments, it is easy to see that diagnosis of them is a wonderfully intricate and comprehensive problem. A single organ may be affected in many different ways; disturbance in one place usually affects some other perhaps in a distant part of the body.

The study of symptoms is exceedingly complex. An effect like a headache may be produced by any one of a dozen causes or by a combination of several of them. The old-fashioned way was to ask questions, look at the tongue, count the pulse and write a prescription. Gradually the examination grew more searching and elaborate until now, in a properly equipped, modern institution it embraces the use of many experts and of a varied, extensive and expensive scientific outfit. The division of the medical fraternity into specialists has been going on for some time. As knowledge increases, division is followed by subdivision—for example; in smaller cities, a specialist may limit his practice to the eye, ear, nose and throat. In the big centers, the eye alone is the field of half a dozen groups of experts.

When a patient reaches the Battle Creek Sanitarium, he is assigned to the physician who has made a special study of the class of diseases into which the newcomer's ailment falls. This physician makes a painstaking and thorough physical examination. Next comes the special blood test, chemical and serological. This is to determine whether there is any actual blood disease and also whether the blood contains the normal amount of substances which are eliminated by the kidneys. A marked departure from the standard proportion gives valuable information. The presence of sugar indicates diabetes.

The teeth have come to be recognized as the source of a large number of ailments, which may appear in various parts of the body. If they show any suspicious spots, the X-ray is brought into play and an important diagnosis is made. The patient next proceeds to the department where the regular blood count is made. This test shows the percentage of hemoglobin or coloring matter, the num-

ber of red and white cells, the ratio of the red to the white, the specific gravity, coagulability, lime content, uric acid and bacteria. This information may be of great help to the physician. When the red cells are much below normal, the patient's resistance to disease is greatly diminished and immediate steps must be taken to build up the blood to a healthy level. These red cells number about 25,000,000,000,000 in a well individual and would cover an acre of space.

Even laymen have come to recognize the importance of ascertaining the blood pressure. This may be above or below normal. In hardening of the arteries, the heart must exert extra strength to send the blood through the system. When this increased pressure is detected, the patient should at once place himself under the care of a competent physician, for this indication means the onset of old age or of Bright's disease. Physiologically, a man's age is not his years but the progress he has made on the road to dissolution. "A man is as old as his arteries," is a phrase often repeated by Dr. Kellogg in his lectures to Sanitarium patients. If the arteries and other organs prove that the patient has, physically, been burning the candle at both ends, it behooves him to make an about face in his habits. Fortunately, medical science has advanced so much that intelligent care will compensate in a measure for past errors. Prolonging life is largely a matter of paying the price, not in money, but in careful observance of the rules of biologic living.

Acidosis or lowered alkalinity of the blood is common among the sick. It is due to the inability of the kidneys and lungs to eliminate certain substances. When it exists, the body is handicapped in performing its ordinary functions and also in its efforts to throw off disease. The presence of this condition is determined by the alveolar CO₂ tension test, in which excretions from the lungs are analyzed. Fortunately, the proper diet is of great assistance in combating acidosis.

The X-ray has placed enormous reinforcements in the hands of science for fighting disease. By its help, hidden recesses and processes of the body are brought before the eye of the physician. In numerous cases, hypothesis, theory and conjecture have been replaced by definite knowledge. The X-ray enables the expert to learn exactly the form and location of the heart, the character of its movements, the efficiency of its work and any organic changes which may have occurred. The

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lungs are examined in the same way for information which may be of diagnostic value.

Like the teeth, the tonsils are frequently the seat of an infection which pours poison into the body and may cause pain or disorder in some nearby or distant point. These organs are carefully examined and if they exhibit suspicious symptoms, a smear from them, is sent to the bacteriological laboratory.

Each patient is also given a vision and accommodation test, for the eye may have a physiologic age greater or less than the age in years and knowledge on this point aids in general conclusions about the individual's condition.

The colon or lower part of the intestine is often the breeding ground of myriads of putrefactive bacteria which poison not only the body, but the mind. Special attention is therefore given to this organ in the general examination.

In the strength-test department are made elaborate measurements of the body and of the power of all the important groups of muscles. The sum of the results of these various tests will represent the real strength capacity of the man. To obtain these data, a special machine, known as the Universal Dynamometer, was designed at the Battle Creek Sanitarium after long experimentation. It is now employed by the United States Government at its schools at West Point, Annapolis and Manila, as well as in leading gymnasiums. By means of a graphic, the figures in each case are given, in comparison with the average man or woman. It is of great interest to take a second series of tests after a period of health and strength training and to see the exact measure of physical benefit gained. In some instances the improvement is marvelous; specific encouragement of this kind is usually a strong stimulus to perseverance.

This graphic also gives a series of coefficients which summarize certain important facts and show their relation to each other. The Height-Weight coefficient is obtained by dividing the weight in ounces by the height in inches and shows to what extent the individual is under or over the normal weight. The Strength-Weight coefficient is the quotient resulting from the dividing of the total strength by the weight. This figure tells the number of pounds the person is able to lift per pound of body weight and indicates whether his strength is proportionate to his weight. By dividing the total strength by the height in inches, we obtain the Strength-Height coefficient, which shows whether the strength is proportionate to the height. The Respiratory-Height coefficient gives the breathing capacity in comparison with the normal.

With this chart before him, a person has a complete "inventory" of his strength; he knows where he is below the standard and where he is above it. He can learn just what exercises are necessary in order to gain an all-around, physical development.

A cursory examination of the urine has come

into common use. With a complete laboratory equipment, this test can be made to yield a large amount of information. The blank employed at the Sanitarium for the report of a urine analysis, contains no less than forty-three entries. They cover the physical, chemical and microscopic results.

Exact knowledge about the bacteria which infest the intestines, especially the lower part, or colon, is valuable as telling the presence and the degree of autointoxication. A battle is constantly being fought in the colon between the putrefactive germs and those acid-forming ones which nature provides for man's protection. If the evil bacteria are in control, they may cause a whole host of ills such as chronic headaches, neurasthenia, rheumatism, skin diseases, Bright's disease, hardening of the arteries and premature old age. Physiological treatments, such as diet, exercise, fresh air, hydrotherapy and the like, are effective means of getting rid of these enemies. Science has also found how to plant the acid-forming germs in the system. These bacteria belong to the vegetable kingdom and the phrase "changing the intestinal flora" describes this process of establishing the supremacy of the friendly germs.

The foregoing tests and many others are applied to each patient at the Battle Creek Sanitarium. They constitute a kind of "trial balance." All the reports come to the physician to whom the patient has been assigned and he studies them carefully.

Disturbances of the stomach and intestines are so common that in many cases the barium meal X-ray is ordered. The patient eats food containing the metal barium. This substance is visible by means of the X-ray and can also be photographed, or rather, radiographed, at intervals as it passes through the system. The expert thus learns just how the stomach and intestines function in handling the food. Furthermore, while this barium uniformly coats the inside of the healthy stomach, it does not adhere to a diseased spot. The presence of an ulcer or tumor can thus be determined. Kinks or other malformations in the intestines are also revealed.

Analysis of a test meal gives a wealth of information about the secretions of the stomach and thus suggests the remedies for any disordered condition. The metabolism test, for determining the heat output of the body, is now used in many cases at the Sanitarium. It throws valuable light on the functioning of the ductless glands of the system, which are a determining factor in various manifestations of disease. An accurate diagram of the workings of the heart is given by the electrocardiograph, the action of which is based on the fact that the various movements of the organ cause electric currents which define its state of health. Knowledge of the most obscure troubles can thus be obtained.

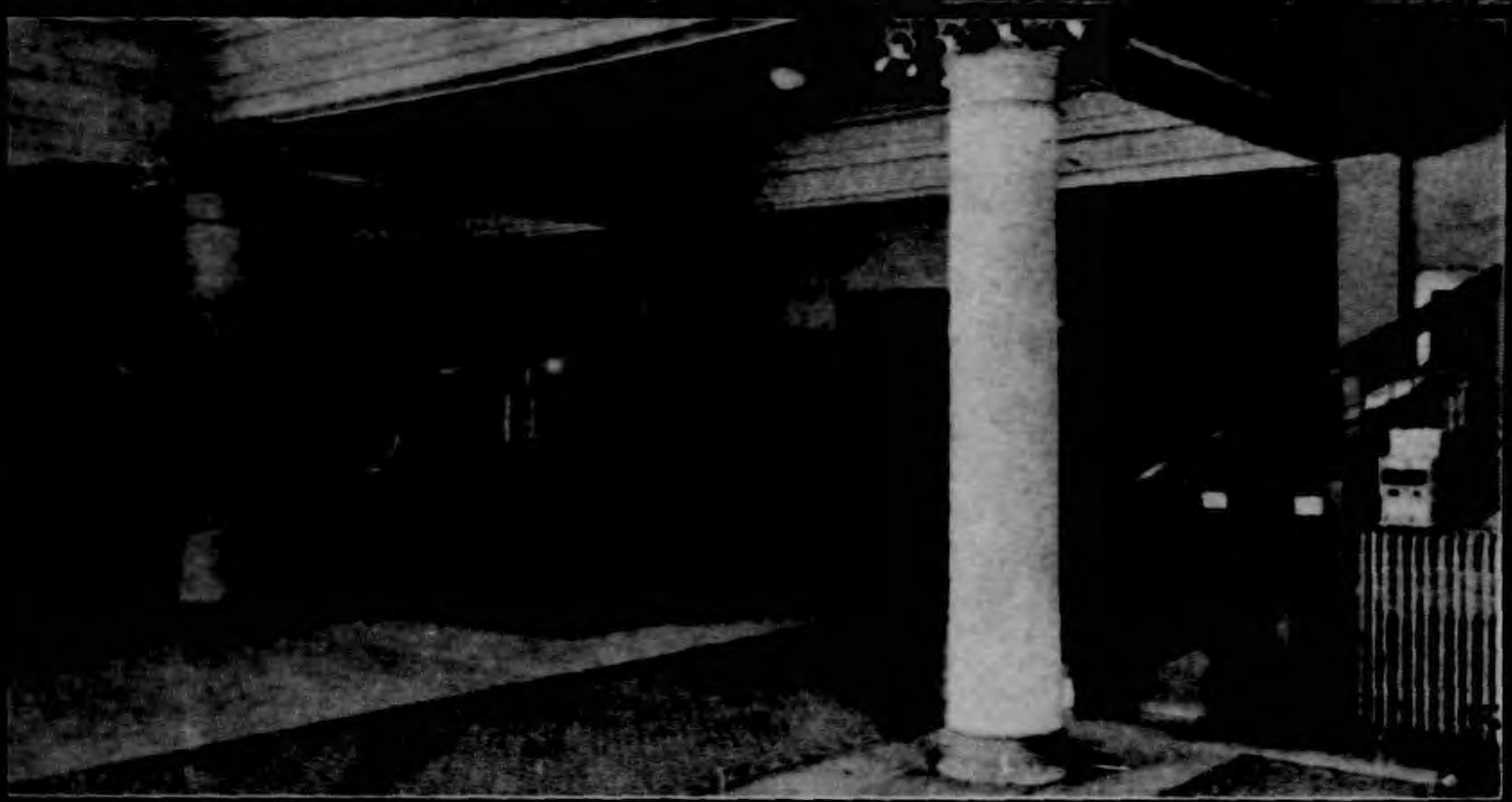
NEWS PICTORIAL SECTION



N. S. P. E. Students at
1921 Summer Camp



N. S. P. E. Summer
Lobby



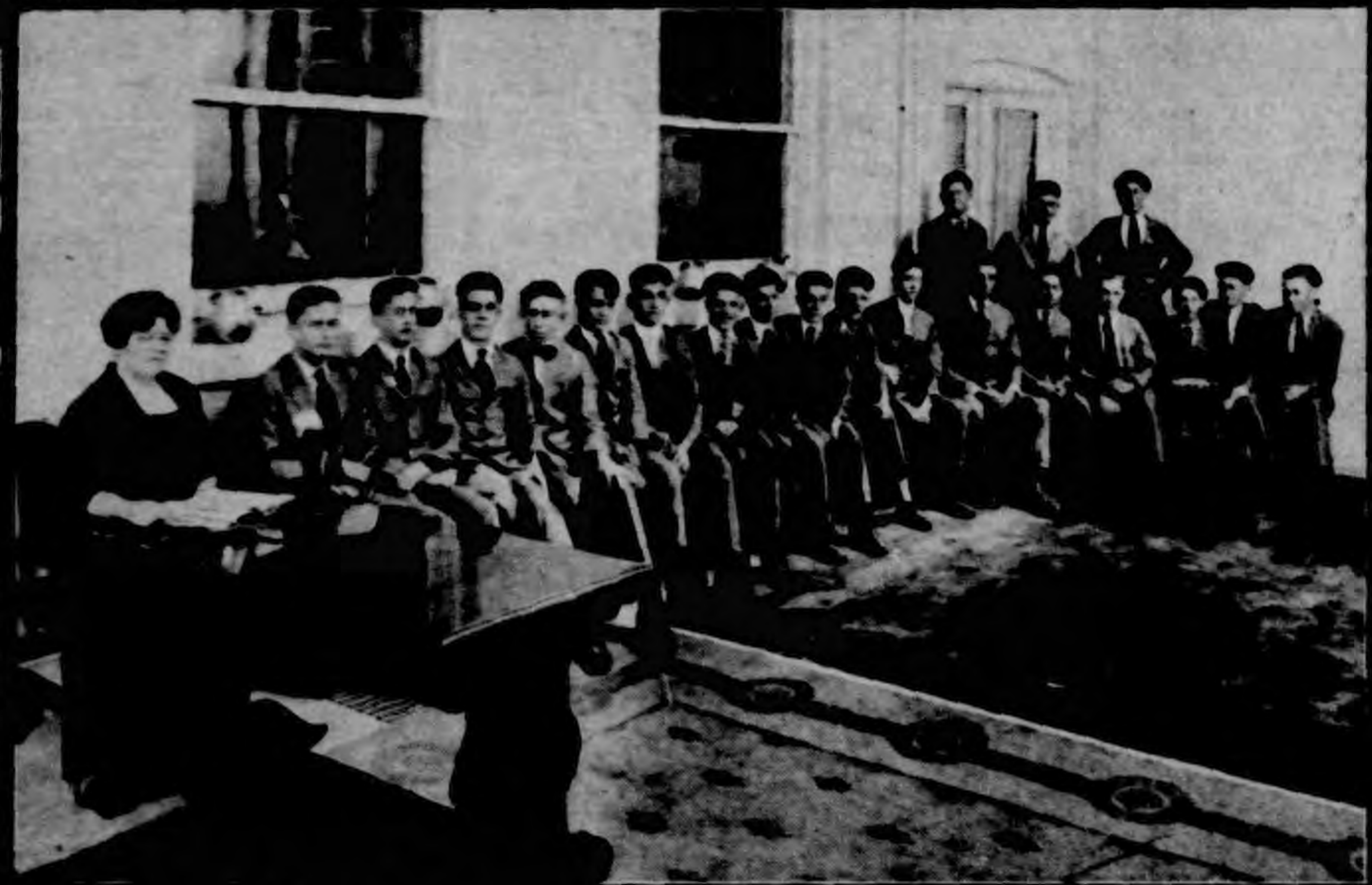
A Corner of the Main Lobby



Dr. Kellogg, Dr. Stephen
Patterson chatting



Unique Luncheon of Rotary Club
in Sanitarium Dairy Barn



Squad of Sanitarium Bellboys—
Always Ready to Serve

CURRENT SANITARIUM EVENTS



Camp at Gull
Island



SANITARIUM N. E. P. E. Students
Off for a "Hike"



Recreation Hall
Top Floor—Main Building

Smith and Mr. John H.
the Palm Garden



A Class in Cooking, Sanitarium
School of Home Economics



A Glimpse of Irving Park, Adjoining
Sanitarium Grounds

The Therapeutic Value of Flowers

"Please send flowers to Mrs. Smith, Room 200."

Although this does not sound like a medical prescription, such orders are frequently given to attendants by Sanitarium physicians; in fact, cut flowers and blooming plants are a recognized curative agency at the Battle Creek Sanitarium. Every one knows that ill health affects the spirits. It is equally true that the spirits affect health. Sorrow or disappointment often cloud a disposition which ordinarily is sunny, while a piece of good news may make one forget many minor ills. This principle of menticulture is well established in medicine and has an important part in the treatment of disease.

Flowers suggest beauty; beauty suggests happiness; happiness is largely dependent upon health. The floral department of the Sanitarium has long been considered as an integral part of the "Battle Creek Idea." You first become aware of it on seeing the well kept lawns and the profusion of flowers and shrubs, which make an inviting park of the grounds surrounding the Sanitarium. Each woman patient on her arrival is presented with a bouquet of cut flowers.

A few roses or carnations, or in the fall, some great, golden chrysanthemums, add a fresh touch of color to the room and help to dispel gloom, if it is present. Soon after arrival, the patient is greeted by the Hostess, or a Social Secretary who makes her

feel "at home" and renders any special assistance which may be needed. A word of welcome and encouragement from the Medical Receiving Office also adds cheer to the reception and creates a feeling of confidence and assurance.

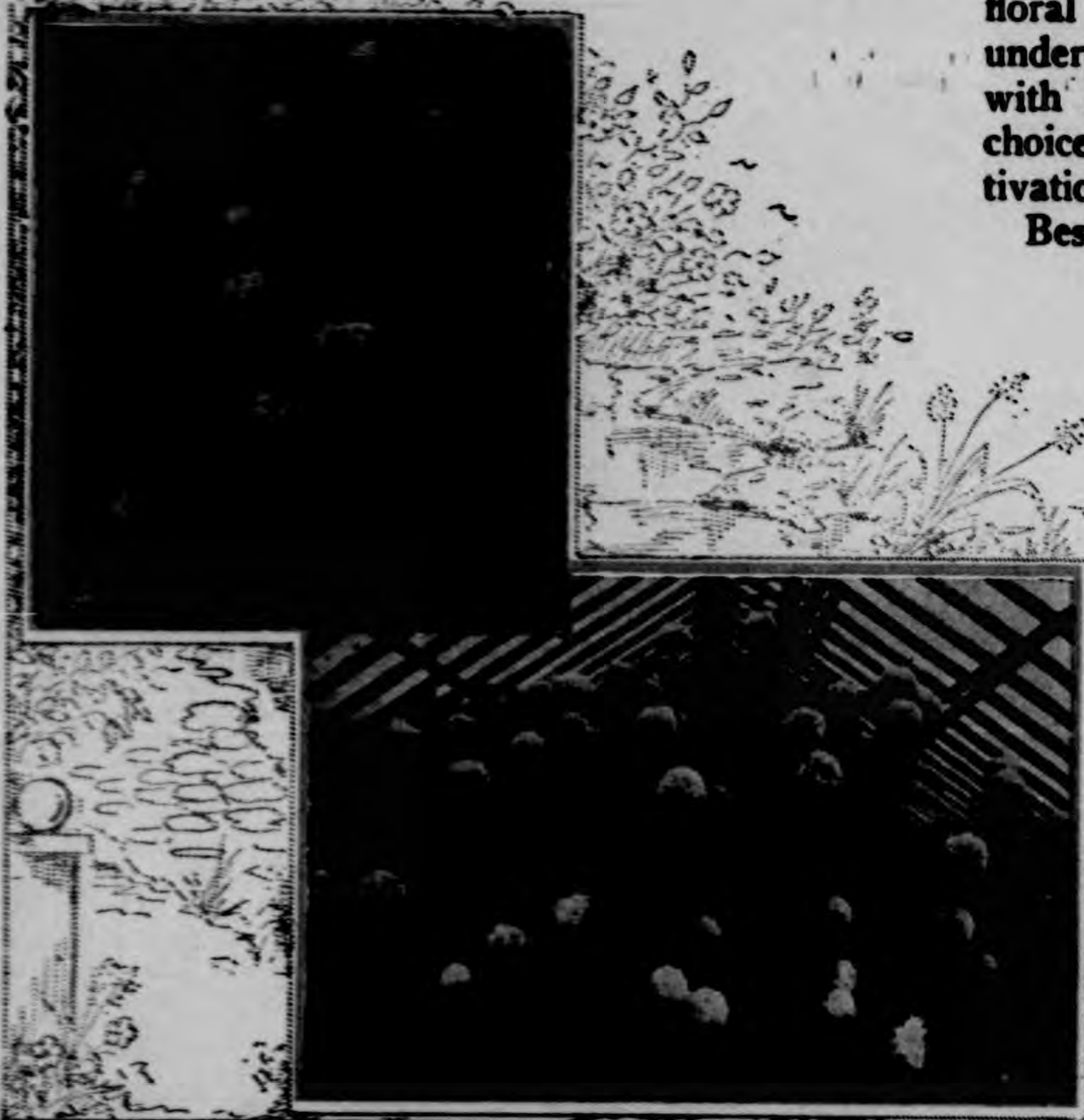
Blooming plants also are always available and some lovers of flowers prefer these to the more perishable cut flowers. They last longer and to watch the daily development of the buds is an interesting pastime. Potted plants may be had free of charge when desired by a patient. It is merely necessary to apply to the greenhouse or to the Women's Medical Office. There have always been enough of these to meet the requirements.

Many guests have been surprised to receive bouquets as a birthday remembrance with an appropriate card of greeting. Some are undoubtedly mystified as to how the physicians or nurses learned the date, but are none the less pleased because of the unexpectedness of the remembrance. When a patient is to receive a visit from a relative or friend, flowers are sure to be in evidence to mark the occasion. It is difficult to imagine the delight and actual physical uplift in some cases by a simple bouquet. Numerous notes of thanks tell of the appreciation of such courtesies.

Usually the flowers go to women as there is a general notion that men do not care for that sort of thing. When such a gift does reach one of the sterner sex, it almost invariably brings a grateful response.

The hospital stands high in the favor of the floral department, as it should. Persons who have undergone operations are always liberally supplied with flowers and plants. A constant supply of choice blooms for this purpose is always under cultivation.

Besides this individual use of flowers, a wide range of greenhouse products are always on display in the lobbies, parlors and other public places. The chief supply, of course, goes to the dining rooms in the Main Building and the Annex. In the winter, cut flowers are sometimes alternated with blooming plants in ornamental jardinières. Around Christmas time poinsettias are favorites for this purpose, and at the Easter season, lilies, primroses, Jerusalem cherries, pelargoniums, genestas, cinerarias, hyacinths, tulips, narcissus, friezias, cyclamen and chrysanthemums are also used. Ferns in large variety appear in the decorations, alone or combined with other plants.



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At Thanksgiving, Christmas, Easter and other holidays, appropriate exhibitions of floral treasures are made. The Christmas decorations in the lobbies, dining rooms, parlors, and auditorium are especially elaborate.

The Palm Garden with its great rubber tree and other tropical plants, its rockery and fountain, is always interesting to visitors. One of the remarkable growths here is the philodendron, a huge parasitic plant which bears edible fruit resembling an ear of corn. Visitors from tropical countries like to linger at this spot and identify the flora of their distant fields of labor.

Until last year the Sanitarium had nine greenhouses. The erection of the great new powerhouse made necessary the removal of some of these. However, two additional houses have been built and plans for other new ones are under way. For many years the Sanitarium has been steadily increasing its area of underglass gardens.

These greenhouses are a pleasant and interesting place to visit. One stands southeast of the gymnasium; six others lie to the east, back of the Main Building: In summer the growing is done out-of-doors, but the rest of the year there is always something worth seeing. The most imposing display is in the fall when the chrysanthemums are in bloom. There is usually a big house of them, a gorgeous mass of yellow, pink and white. The roses fill several long beds in a separate section. Carnations and sweet peas are grown in large quantities. The peas are a fine sight when in bearing.

A big task is the raising of the thousands of seedlings and small plants which are set out each spring in the beds on the lawn and in the gardens which supply the cut flowers for summer use. This work begins in the fall before the first frost, when cuttings are taken for the geraniums and other plants to be propagated. Asters are raised by the thousand and furnish an abundance of blooms for the table and rooms in the fall.

Lettuce and New Zealand spinach are raised in some of the greenhouses for Sanitarium use. Occasionally crops of Swiss chard, Chinese cabbage and tomatoes are produced.

The greenhouse department likewise has charge of the decorations whenever commencement of the Sanitarium Schools or other important functions are held in the gymnasium. It is a cause of surprise to some guests on their first arrival here that the place is more like a high-class resort hotel than an

institution for the care of the sick. Flowers and plants do much to create this pleasant and inviting environment.

A Self-Supplying Community

The Battle Creek Sanitarium is so amply provided for out of its own resources that it is to a great extent independent of outside supplies. This system of self-provision insures absolute purity and unimpaired quality in everything the Sanitarium furnishes to its large family. Only by maintaining its own private sources of supply and minutely supervising every step in the process of preparation, can this high standard, so necessary in a health community, be gained. In addition to the abundant supply of water produced through artesian wells, a distilling plant affords an abundance of distilled and aerated waters. Two large farms and several large hothouses supply fresh garden vegetables every day of the year. The extensive greenhouses, comprising over forty thousand square feet of glass-covered beds, furnish a liberal supply of fresh delicacies, lettuce, dasheen shoots, radishes and various relishes, in addition to the profusion of flowers and plants.

Because of its vast equipment of means for combating disease, and its ideal location, the Battle Creek Sanitarium has become a Mecca for health seekers. All seasons are favorable for a visit to the institution, as there are few spots in this country or elsewhere which afford on the whole a more delightful climate.





One thousand helpers and Students celebrating Sanitarium's 55th Birthday

The 55th "Birthday" of the Sanitarium

One of the most inspiring events of the year took place recently in the big Sanitarium gymnasium, when over 1,000 helpers of the institution gathered to celebrate the Sanitarium's 55th Anniversary. The meeting, which was planned by the Welfare Secretary, opened a series of meetings, entertainments, and special health clinics for members of the Sanitarium "Family" covering a period of three days. In opening the meeting, the entire group stood and faced the American flag above the platform for one minute as a tribute to the great American Nation. Dr. W. F. Martin, Chairman of the Welfare Committee, who presided, spoke in glowing terms of the achievement of Dr. Kellogg and his colleagues and of the many unique advantages enjoyed by those who are so fortunate as to be associated with the institution; giving interesting examples from his own long and happy service as a member of the Sanitarium Medical Staff. Dr. J. H. Kellogg, Superintendent of the institution, who made the principal address of the afternoon, expressed his appreciation for the splendid cooperation received from all departments during the year which is drawing to a close. "I cannot express to you my feeling as I look over this happy throng, recalling the fact that forty-five years ago, when we had about twelve patients and seven or eight helpers, we held our celebrations in one little cottage parlor," Dr. Kellogg said, and then sketched the growth of the institution from its very beginning, when practically no scientific institutions for the care of the sick existed. Even the word "Sanitarium" was unheard of then as it was coined by Dr. Kellogg shortly after he was placed in charge of what at that time bore the name of the Health Reform Institute. "What are known as 'Battle Creek Ideas' did not all originate

in Battle Creek," continued the Doctor. "Some of these health ideas are as old as civilization. They have come down to us through the ages. Priessnitz was one of the first to gain world-wide renown through cures accomplished with the old so-called 'water-cure.' In those days, crude methods, such as water spouts, overhead casks or barrels with stoppers operated by strings, and large wooden tubs, were used. These methods while crude, were effective, due to the fact that the 'principle' was correct. It is the blood that heals. Nature is the great physician. When the circulation of blood is stimulated so that it is sent in sufficient quantities to the affected part or parts, the healing work begins. Electricity is another powerful natural curative force and this form of treatment was instituted here over thirty-five years ago. The Electric Light Bath which originated here, was later copied and introduced in Europe where it gained wide recognition. Many royal palaces are equipped with the Light Bath, which, strange to say, was invented and perfected right here in this little country town. This form of treatment is strictly a 'Battle Creek Idea.'"

Dr. Kellogg then touched upon the many other effective forms of treatment which are used at the Sanitarium in restoring sick people to health; such as the X-ray, the sinusoidal current, medical gymnastics, mechanotherapy, light therapy, and last but not least, the Sanitarium System of Dietetics. Many of the diagnosis and therapeutic appliances used by the institution in examination and treatment were originated or developed by members of the Sanitarium medical staff to meet the special requirements of institutional treatment. The wide variety of unique health foods served in the institution are prepared expressly for this purpose.

Dr. Smith

A Noble Example of "Right Living"

At the Astor House in New York City, recently, the approaching century mark in the career of Dr. Stephen Smith was celebrated. Dr. Kellogg, who was invited to deliver an address at the banquet, chose as his subject, "Dr. Stephen Smith—the Man"—from which is quoted the following remarks:

"Having been a student at the old Bellevue Hospital Medical College in the early seventies of the last century, I have had the privilege of knowing our guest of honor for nearly fifty years. Although in my student days, Dr. Smith was already past middle age, he was the brightest star in a galaxy of brilliant men, noted surgeons and members of the faculty of Bellevue College of which he was the founder, among whom were Mott and Hamilton, James Wood and Lewis Sayre. His marvelous surgery and his masterly lectures on anatomy were an inspiration to the students and among the great drawing features of the school. But the great attraction which drew throngs to his lectures from all over the United States was not after all so much his accomplishments as the man himself. His nobility of character, his manliness, his lofty ideals, the dignity of his bearing and the purity of his life, linked with a keen but kindly humor, friendliness, sympathy and comradeship, made him the idol of the student body. The patients of Old Bellevue saw a halo about his head as he walked the wards with a group of students hanging breathless upon each golden word of information or advice. In his professional capacity he seemed to his pupils like one of the ancient sages returned to revive in our modern world the wise precepts and the noble sanctions of the classic days when Esculapius and Hippocrates laid the foundations of the healing art. To his patients he was the Good Samaritan *redivivus*, a real follower of Him whose life is briefly summed up in the words 'He went about doing good.' His religion was that of noble old Socrates, who said, 'Religion consists of two things: to seek truth and to do good.'

"But with all his classic dignity and conservative poise, Dr. Smith was from the beginning of his career an originator. Not iconoclastic in his innovations, but creative. A keen observer, an adept in the inductive method of investigating scientific problems, he probed everything he touched, and sounded to the bottom every problem presented to him, moral, social or scientific, and continually brought up from the depths which he explored, pearls of practical knowledge the record of which make his writings a mine of information to those who seek truth.

"Dr. Smith's career has been characterized and shaped by an extraordinary breadth of vision. Not content to occupy himself alone with the multifarious duties of a medical practitioner, he has

given the great part of his time and energy to the consideration of the larger questions which relate to human welfare, present and future, to municipal, state and national life. He has always been a promoter of progress, ready to espouse a new cause, to champion a new truth, no matter how unpopular. To his wise and far-seeing leadership must be credited a great part of the work that has been accomplished by the American Public Health Association, one of the most supremely useful of all the great humanitarian enterprises of all time. Millions of men and women are alive today who would have been dead, and millions more who would never have been born, but for the prophetic foresight and the Titanic activity of this extraordinary man in devising and organizing methods for the protection of human life.

"The real greatness of this world benefactor is shown in his modesty, his reticence concerning his great accomplishments, and his ready activity in promoting the interests of other men in and out of the profession. To many thousands he has lent a helping hand, and not only everywhere in this great land, but in distant and foreign parts there are great multitudes ready to rise up and call him blessed and to do him grateful homage. I deem it an honor to number myself among those who are most deeply indebted to him for many long years of friendly counsel and sympathy. His cordial greeting, his benignant smile, his hearty words of sympathy and encouragement have inspired hundreds to great and noble deeds in emulation of his inspiring example.

"Never, apparently, in a hurry, always moving and speaking with deliberation, unceasing activity during almost a hundred years, has enabled Dr. Smith to accomplish such monumental achievements that one can scarcely credit that one human life can hold so much.

"If one looks for the secret of this amazing success in defying the ravages of time and accomplishing such prodigies of work, I think it may be found first in an extraordinary hereditary endowment of what is vaguely termed constitution or vitality, but which means simply an unusually well organized and well balanced bodily structure, and second, an extraordinarily temperate, frugal, biologic life.

"In part this careful living was voluntary and prompted by an unusual appreciation of the value of life and one's obligation to make the most of all his powers, physical as well as mental and moral; and in part involuntary,—one might even say fortuitous. Dr. Smith has often told me of his invalid boyhood and of his affliction with a form of indigestion which compelled him to live upon a diet of bread and milk which constituted almost

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his sole nourishment until nearly his 70th year. What must have many times seemed a misfortune and an inconvenience, in fact proved to be a real life insurance; for according to the latest findings of the bacteriologists, Tissier, More, Torry, Bettger and many others, a bread and milk diet is one of the surest means of driving out of the body the old age germs of Metchnikoff, and protecting the body against the causes of senility. Here is an important practical fact which hygienists should make note of as one of the most effective means of promoting both efficiency and longevity; viz., biologic or scientific eating. If we are to attain the full measure of the century which Dr. Smith maintains is the normal or biologic span of human life, it can only be by conforming to the great and immutable principles through which we are adapted to our environment and which have made of man, in the words of the immortal poet, 'The beauty of the world, the paragon of animals.'

"The example of our noble friend is an object lesson for the world, and this occasion ought to serve in some measure at least to counteract the pessimistic impression left by the recent Eugenics Congress which saw nothing ahead of us but ultimate race extinction. In Dr. Smith's accomplishment, the attainment of his 100th birthday, is the promise of possible race betterment rather than race deterioration and ultimate extinction, even the creation of new and better, finer, longer lived and nobler human race of which he stands as an exemplar and a pioneer.

"Not long ago I had the honor to be one of a group of men who were requested by Dr. Smith to make a careful inventory of his physical condition. We spent some days at the task. We examined him from the crown of his head to the soles of his feet. We exhausted every resource for the interrogation of every bodily function and the scrutinizing of every organ. And at the end of our search for evidence of disease, we found nothing. His eye was still as bright and his vision as clear and penetrating as half a century ago. My good friend, Dr. Stephen Smith, still reads without glasses; his heart action, digestion, lungs, liver, kidneys, and arteries, are sound. He is nearly a century old in years, but is still young not only in mind and heart and soul, but in body as well. So I was not surprised when a lady said to him, 'Dr. Smith, how does it seem to be old?' to hear him say in reply, 'Really I do not know, Madam, I have never experienced that sensation yet!'

"For more than three centuries the Italian Cornaro who by sobriety attained great age has been held up as an example and a model to the world; but henceforth a new and greater Cornaro shall be the world's exemplar, an American nobleman—our loved and honored Dr. Stephen Smith."

Sir Horace Plunkett's Impressions of "Battle Creek Ideas" Quoted

The London Lancet, one of the great medical journals of the world, edited by an eminent English physician, published editionally the following reference to Sir Horace Plunkett's Dublin address about the Sanitarium; and its principles and methods.

"It is good for us all on occasion to see ourselves through the eyes of others, and when the intermediary is a distinguished man of affairs with a record of administrative capacity that can only be characterized as splendid, we are bound to read his opinion on medical practice with attention and respect." Sir Horace Plunkett has given his experiences and impressions of the Battle Creek Sanitarium in a lecture recently delivered before the Royal Dublin Society and now published, which deserves attentive consideration. "This Sanitarium—we follow the spelling adopted by its founders—is probably known by name to most of our readers. It was started in a small farmhouse in Michigan in 1866, much enlarged ten years later, rebuilt after a fire in 1902, and now carries on a very extensive work, partly philanthropic and partly scientific and educational. The health-seeker undergoes (or perhaps it were better to say "enjoys") a course of treatment chiefly dietetic and gymnastic, least of all medicinal, the main purpose being two-fold: first, to cultivate a health and avoid a morbid interest in personal hygiene, and secondly, to give the widest possible opportunity to the "Battle Creek Idea," which appears to be the comprehension of simple physiology." The result was, in Sir Horace Plunkett's case, and in his own words, "to make me treat my own machinery almost as rationally as I treat that of my motor-car." The common idea that ill-health is incidental to a sedentary life is combated, vegetarianism advocated, and a low-protein diet insisted on. A natural open-air life is led, and the results are, as might be expected, most satisfactory. Two considerations Sir Horace Plunkett submits to the medical profession. First, alluding to the "drug superstition," he says: "Is not the scientific (which need not, therefore, be the unintelligible) inculcation of faith in Nature's healing process a safer and surer road to health than psychotherapy, with the vista of illusion and the opportunity for unprofessional charlatanism it opens up?" Secondly, he says, "no concession ought to be made to the prejudice of maternal psychology in the treatment of babies, to whom bottles (with the one exception) are about as much use as a good bedside manner to a sick cow."

Letters from 10.

ALBANY, ORE., Feb. 20, 1902.

I learned of the destruction of the Battle Creek Sanitarium through the morning papers. This is truly lamentable. It is a public calamity. I hope that you may rebuild. The fact that so few inmates were injured speaks well for the management. I do not believe that such a fire ever occurred before where so many lives were imperiled, in which so few were lost. It is remarkable.

Of course you cannot afford to stop now if it is possible to rebuild. The Battle Creek Sanitarium is becoming known the world over, and to stop now would be a great misfortune.

I know that mere words of sympathy are of little use in a great calamity of this kind, but I truly regret this awful accident that means so much in the great reform movement of the age.

I hope that you may not lose courage in this trial.

PHILADELPHIA, PA., Feb. 20, 1902.

I regret exceedingly to see by the papers that your famous Sanitarium has been entirely destroyed by fire. You have our sincere sympathy in your loss, and I hope that if we can be of any service to you, you will not hesitate to call upon us.

GALVESTON, TEX., Feb., 22, 1902.

With deepest regret we learn of the very disastrous conflagration which destroyed your world-famous Sanitarium. We sincerely hope the embarrassment is but temporary and that you will soon be able to erect a new structure which will be a model in service to the country at large, as heretofore.

ROCKFORD, ILL., Feb. 19, 1902.

I am very sorry indeed that your Sanitarium is burned. I have heard very much of your good work. I hope you will soon rebuild, and that your work will go on, better, if possible, than ever.

ATLANTA, GA., Feb. 19, 1902.

I wish to express my regret that the noble work in which you have labored so many years, should be even temporarily interfered with. You all have my sympathy, and I believe a kind Providence will aid you in a speedy restoration, possibly better than ever, of the Sanitarium which means so much to suffering humanity.

HAMILTON, CANADA, Feb. 21, 1902.

Please accept my deepest sympathy for the great loss which you and your noble band of workers have sustained, by the burning of the Sanitarium. You have done a grand work in the past. May a new building arise in which, "phcenix like," there may spring from the ashes of the old one.

a structure that shall continue to be a blessing to the world for many years to come.

AKRON, OHIO, Feb. 20, 1902.

It was with sorrow and regret that I read of your great loss through the recent conflagration. The country can ill afford to be without the Battle Creek Sanitarium. I am glad to note that you contemplate rebuilding at once; the old was fine, but I predict the new will be absolutely up to date in all its appointments.

BROOKLYN, N. Y., Feb. 19, 1902.

I was deeply affected when reading last night of the destruction of your Sanitarium by fire, but thankful to kind Providence that no lives were lost.

I beg herewith to express my sincere sympathy with the Sanitarium family. I hope that the champion of right living will speedily arise from the dust. This country cannot afford to be without such institutions.

CAIRO, ILL., Feb. 19, 1902.

I have learned by this morning's mail of your great loss by fire. Accept my sincere sympathy. I hope that with God's help and the individual energy heretofore shown, the Institution will rise from the ashes more glorious and resplendent than ever.

CHAMBERLAIN, S. D., Feb. 18, 1902.

I was almost prostrated on receiving the news of the burning of the Sanitarium this morning. Certainly Battle Creek has met with one of the greatest losses in its history, and one of the greatest losses, I feel, that could overtake the city at this time. I sincerely hope it will soon be rebuilt, and again be, as it has been, one of the grandest institutions of its kind in the world.

MINNEAPOLIS, MINN. Feb. 20, 1902.

It is with profound sorrow that I learn of the destruction of your extensive buildings, as I know from personal observation and experience that it is not simply a loss to your organization, but also a very great loss to Battle Creek, to Michigan, to the United States, and to the whole world. I fondly hope to see even a greater and more commodious building erected at once, and believe this will be done; for the Battle Creek Idea has not been burned, but will, I am sure, only be awakened to renewed activity, and go on blessing mankind, healing the sick, and teaching the world the true road to health and happiness.

NEW YORK CITY, N. Y.,

Feb. 20, 1902.

I was sincerely sorry to read in the daily press of the burning of your extensive Sanitarium, and I take the first opportunity of expressing my sympathy for you in your misfortune. I earnestly hope that nothing will prevent you from rebuilding at once.

THE NEW SANITARIUM

To Be a Magnificent Temple of Health

After due consideration, the Sanitarium management have decided to undertake, with the co-operation of the friends of the Battle Creek Sanitarium, to erect in place of the burned structures, a magnificent temple of health, which shall fitly represent the great principles which have rendered this institution and its work world-famous, and which have led to the establishment of flourishing branches in all parts of the world. The old structure was built like a piece of patchwork, lacking harmony of design and architectural fitness, but the new building must, in style of architecture and general plan, in the nature of its materials and furnishings, in the equipment, in the facilities, in the surroundings, in every detail, represent the highest ideals in all that pertains to the conservation of health and the healing of the sick. The new Sanitarium must be, in short, a magnificent Temple of Health, an embodiment of all that is known to curative science and art. In architecture its form must be unique as well as appropriate. Half a dozen architects are hard at work putting into form the ideas which have been presented to them, and many experienced brains are contributing to the work of formulating the plans of what will be the latest, and, it is to be hoped, may be the noblest expression of hygienic, reformatory, and philanthropic ideas in architecture.

The knowledge gained by more than a quarter of a century's experience at the Battle Creek Sanitarium has made possible the attainment of this ideal. There is only one thing needful, and that is money. The Battle Creek Sanitarium has not been a money-making institution. It has not year by year been hoarding up thousands of dollars in gold, government bonds, or securities, but every dollar of its savings, and more, has been expended in necessary improvements and in the treatment of the sick poor. From the opening of the establishment in 1866 until the present time, nearly thirty-six years, no dividends have ever been paid to stockholders or members. The managers have not enriched themselves, directly or indirectly, from the receipts of the institution. Men who have for a score of years been officers in the institution still live, as at the beginning, in rented cottages. Other men who have been for years connected with the institution have steadily grown poorer because of their connection with it. Others who have had income from other sources have impoverished themselves through their efforts to promote the principles and the work of the institution, while spending their lives in the service of the work, and that without taking any remuneration for their services.

The fact that charges are made to those who are able to pay has led many to think that the Sanitarium must be a money-making enterprise. This impression has resulted from the fact that the Sanitarium management, remembering the injunction of the Scriptures, "When thou doest thine alms, do not sound a trumpet before thee," etc., have not desired to make a public advertisement of the charitable work administered by them, but have rather depended upon the work to speak for itself.

Since the destruction of the main buildings of the institution by fire on the memorable night of February 18, the tidal wave of public sympathy and kindly sentiment which has rolled in upon the institution, and which has risen especially high among the citizens of Battle Creek, has led the management to invite a thorough investigation of the financial affairs of the institution by a committee of experts especially appointed by the Business Men's Association and by the Common Council of the city. After an exhaustive research into all the financial affairs of the institution, including a careful examination of the books, and a scrutiny of the receipts and disbursements, of the wages paid to managers, physicians, nurses, and all employees, this committee prepared and submitted to the public the following sworn statement, which we take the liberty to here introduce as a guarantee of the correctness of the statements made above and elsewhere respecting the character of the Sanitarium organization which is not only reformatory and philanthropic, but from the beginning has been strictly non-sectarian as regards its work, the use of its funds, and the administration of its charities.

We have given much time and careful consideration to the matters submitted to us. We have held several lengthy conferences with the trustees of the institution, and have, at their request, independently investigated the legal status of the institution as determined by the statutes and the articles of association under which the Sanitarium was organized, and the administration of the affairs of the institution as disclosed by its books and the testimony of its officers and employees.

Every facility for a full and complete investigation has been afforded us. All books and records of the institution have been placed at our disposal. We have been invited freely to examine any and all documents relating to its affairs, and any person connected in any way as officers, trustees, or employees, with its administration. And not only has this freedom been tendered to us personally, but we have been invited to secure the services of any expert whom we might select to make a thorough and exhaustive investigation, under our direction, of the books and records of the institution.

We soon became fully convinced from the facts disclosed to us that the Battle Creek Sanitarium, both by virtue of its legal organization as a corporation under the laws of Michigan, and, as well, by the faithful administration of its affairs according to the spirit of these laws, and its articles of association, is, both in law and in fact, a purely philanthropic and charitable institution, but because of a widespread impression in our community that the institution has been conducted, at least in some degree, for profit, and that in some way or other private gains have been derived therefrom, we determined to make an examination of the books. We invited the Common Council to join us in this investigation, under the guidance of a practical and experienced accountant, so far as might be necessary to settle this question, and also to determine whether any of the funds of the institution are employed outside of the State of Michigan in building up other sanitariums or branches. The Common Council accepted this invitation, and selected Alderman C. A. Caldwell to act in their behalf, in connection with Mr. Geo. E. Howes, of your committee, and these gentlemen, securing the services of Mr. F. W. Dunning as accountant, have personally investigated the books, accounts, and records of the Sanitarium so far as to be fully satisfied on the points in question.

Summing up the results of our investigations, we have to report as follows:—

1. The Sanitarium is organized under the provisions of Act No. 242 of the Public Acts of the State of Michigan as a philanthropic and charitable institution.

2. The Articles of Association of the Battle Creek Sanitarium, so far as they relate to the questions involved in our investigation, provide as follows:—

“The objects of said corporation and other matters germane and auxiliary thereto, are as follows:—

“To found a hospital or charitable asylum within the State of Michigan for the care and relief of indigent or other sick or infirm persons, at which institution may be received also patients and patrons who are able to and do pay for the benefits there received, and which institution shall devote the funds and property acquired and received by it from time to time from all sources, exclusively to maintaining itself, improving its condition and facilities and promoting its purposes, by such sanitary, dietetic, hygienic, and philanthropic reforms and efforts as are germane or auxiliary thereto; all of its said purposes being undenominational, unsectarian, philanthropic, humanitarian, charitable, and benevolent, and in no manner directly or indirectly for private profit or dividend paying to any one.”

3. It is therefore clear:—

a. That no profits of the institution can ever accrue or be lawfully paid to any private party or parties whatsoever.

b. That no funds of the institution can be lawfully sent outside the State to build or support other enterprises of any kind.

c. That any and all revenues of the institution must be devoted to philanthropic and charitable work within the State of Michigan, and to developing and extending the facilities of the institution itself, and for these purposes only.

d. That all of the property of the institution is held in trust for the above philanthropic and charitable purposes only.

e. That title to any of the property of the institution can never be passed to any private party or parties whatsoever, but can only be transferred at the expiration of the statutory limit of the corporation to the trustees of another corporation organized for the same purposes and under similar restrictions.

The above being the legal status, the purpose, the obligations, and restrictions of the institution, it remains for the public to inquire whether the trustees have legally and faithfully fulfilled their trust. This the public has a right to know, inasmuch as under the law the institution is a quasi-public one, deriving its powers and its privileges from the public for public purposes.

To this inquiry your committee has devoted chiefly its time and attention in the manner indicated at the beginning of this report, and we find as follows:—

a. No private individuals or parties whatsoever have, under the present organization of the Sanitarium, derived any profits or revenues therefrom above extremely moderate wages for their services.

b. No funds or profits of the institution have been sent outside the State to promote or support similar enterprises abroad.

c. The indebtedness of the institution, amounting to \$245,109.25, is not due in whole or in part to any of the trustees, or to Dr. Kellogg, or to other parties connected with its management, but is owing in part to banks, and the remainder is held in small amounts by 146 different parties not in the management. A complete list of the holders of these notes and obligations has been submitted to your committee.

The report of F. W. Dunning, accountant, who, with Alderman C. A. Caldwell and Mr. Geo. E. Howes, made for us a special examination of the books and records of the institution, is as follows:—

“BATTLE CREEK, MICH., March 13, 1902.

“To the Business Men's Committee.

“Gentlemen: Having been informed that I had been selected to act with Messrs. Howe and Caldwell in the investigation of the books of the Battle Creek Sanitarium, I entered into the work with the conscientious determination to satisfy myself, beyond doubt, as to certain questions raised by many persons; viz.:—

“1. Whether some of the funds have been diverted to the support of the branch sanitariums outside of the State and in violation of the law under which the institution is organized.

“2. Whether excessive salaries or equivalents are paid to Dr. Kellogg and others connected with the management.

“3. Whether a large portion of the indebtedness of the institution is really owing to Dr. Kellogg.

“4. As to the character and extent of the charitable work done by the institution, and—

“5. A general comparison of receipts and expenditures.

“I will take up these items in their order:—

“1. The diversion of funds to branch sanitariums. Your committee first obtained a list of these branch institutions. I then called for the ledger accounts with these branches, and selecting several at random, carefully examined them, together with the other members of your committee, finding nothing whatever but legitimate charges for goods sold to them, and which were paid for in cash. I verified these charges by comparison with the bill book showing tissue copies of original invoices. There was absolutely no evidence that I could discover that any funds had been used for the support of any branch outside of the State.

“2. Excessive salaries and fees to Dr. Kellogg and others. We made a careful examination of the pay roll, which includes the whole force of employees receiving pay. This roll shows the rates paid to the help in all departments, including those connected with the management. The rates were found to range from \$7.50 to \$88.67 per month, and in the case of the physicians on the staff, \$78.00 per month was the highest, and upon that salary the recipient has to support himself. First year nurses receive their board, rooms, clothing (such as the usual uniform worn by the nurses), and necessary books for study. Second year nurses receive \$16 per month with room and board, and third year nurses, \$20 with room and board. As to Dr. Kellogg, we found that for some years he has received no salary or compensation whatever. We found that the board of trustees agreed that a certain amount should be set aside for Dr. Kellogg's compensation, but that Dr. Kellogg made it obligatory upon the board of managers that this amount, \$96.33 per month, should be devoted to various benevolent purposes. To make sure that there was no other account in which money is paid to Dr. Kellogg, or in which he might be credited with services, I asked to see the personal account with the doctor in the general books, and this account was carefully examined by the members of the committee. The result of this examination was a surprise to me, as I found that Dr. Kellogg was charged with whatever he obtained from the Sanitarium, and for any work done for him at his home by any of the help in the employ of the Sanitarium, and he paid for it the same as any other individual. In no instance did I find that he had received credit for a single dollar for services rendered the institution.

" 3. The indebtedness of the Sanitarium. We were furnished a schedule of the bills payable, as prepared for the auditing of the books. To verify this, we called for the original bills payable record, which was produced, and contains the record of notes back into 1898, the year of the reorganization. The committee compared items in this schedule, taken at random, with the original record, and found them to tally exactly in every instance. We also verified this schedule or list from the ledger. We found the schedule showed the names and post office addresses of one hundred and forty-eight holders of obligations against the Sanitarium. They were scattered from California to Cape Town, South Africa. We could find no evidence whatever of a single dollar of indebtedness held by Dr. Kellogg or any other member of the board of managers.

" 4. Character and extent of the charitable work. I found, by examination of the books and files of orders for treatment, etc., that thousands of patients have been treated either absolutely free or partially free. I took, at random, the week ending June 30, 1901, and found that the books showed 130 patients coming under this heading, and for the week ending October 27, 1901, 159 charity or part charity patients. These weeks were selected by myself, and not chosen for me.

" I found that in the year 1899 there was an expenditure of \$29,347.00; in 1900, \$30,300.00, and in 1901, \$44,000.00 for charitable work in this branch. This makes a total of \$103,647.00 in three years.

" It is to be noted that the above expenditures for charity, now amounting to over \$40,000 per year, does not include surgical fees or concessions on account of treatment, nor the large supplies of food sent out in baskets, which range from forty to a hundred and forty per day, to the poor of this city, nor does it include discounts to physicians, clergymen, etc., which are charged to a special discount account. The amounts charged to this charity account are determined by a method which was fully explained to the committee, and which was perfectly satisfactory. I found that a considerable number of these patients are Battle Creek people, whose names and addresses I was permitted to inspect, which, of course, for obvious reasons, I cannot make public, and these I verified by comparison with the city directory.

" 5. A general comparison of receipts and disbursements. We observed that the patronage of the institution has been extensive, and the receipts proportionately large, but its expenditures have also been on a large scale, covering such items as new buildings, furniture, medical and surgical equipment, the pay roll of the help, amounting to about \$18,000.00 per month, fuel and lights, water, insurance, interest charges, payments on principal of debts, table and food supplies, and many other items of large amounts.

" Your committee was afforded every possible opportunity to examine any and all books and accounts, records and papers of all kinds, a full and complete investigation apparently being courted by the Sanitarium people.

" Very respectfully yours,

" F. W. DUNNING."

Finally, your committee are constrained to add that the revelations made by our investigations have been a surprise to us. Not only were we personally unaware of the wholly philanthropic nature of the institution under the law, but we were also unaware of the vast amount of charitable work performed by it, and the wonderful sacrifices made by the managers and employees generally. There are over eight hundred of these employees — physicians, nurses, helpers, etc. Dr. Kellogg donates to the Sanitarium all the services he performs for it, including all surgical and professional fees. He receives no salary or compensation whatever, and has not for years; on the contrary, he contributes annually from his private resources, derived from the sale of his popular medical books, thousands of dollars. The large corps of physicians receive no professional fees, and only weekly wages so small that their services are practically a charity. This is also true of the hundreds of nurses and helpers. They are a band of sincere people conscientiously devoting themselves to a great work for humanity, and not for personal gain. This we do not need to tell those who have made themselves familiar in the past with the Sanitarium and its work.

It should be remembered, also, that the dispensing of alms to the poor is not the only nor, indeed, the highest form of charity. The silent influences, unseen, but powerful and persuasive, of a great benevolent institution like the Sanitarium, are of far greater value. No such colossal work can be carried on in the spirit which actuates and controls the Sanitarium without producing results absolutely incalculable for the good of humanity.

We have, many of us, misjudged the Sanitarium. The members of your committee have themselves heretofore supposed that at least some persons connected with it were deriving large personal gains from it. As stated above, we are surprised at what we have discovered. The more deeply we have gone into the investigation the more convincing and overwhelming the proofs have become of the straightforward management, the lofty purposes, the widespread beneficence of the institution, and above all, of the personal devotion and wonderful self-sacrifice of the nearly one thousand persons employed in it, from Dr. Kellogg, *its renowned chief, whose great ability and superior skill are the foundation upon which it rests and whose labors, enthusiasm, and devotion are the soul and substance of it, dozen to the youngest helper.*

We rejoice that one of the consequences of the fire which consumed the principal buildings of the Sanitarium has been this occasion for investigation and the enlightenment of our people upon matters not only vitally affecting the interests of our city, but of importance to the world.

Respectfully submitted,

S. O. BUSH,
I. L. STONE,
GEO. E. HOWES,
W. S. POTTER,
NELSON ELDRED,

Committee.

At a special meeting of the City Council, held Wednesday afternoon, the following resolution was passed:—

" Resolved by the Common Council of the City of Battle Creek:—

" That the report from the Citizens' Committee, as made at a special session of the Common Council, said committee having as one of its number a member of this Council, has been submitted to us, and we are willing and ready as the Common Council here assembled, to indorse their report in full."

The main buildings burned represented a compact structure one thousand feet in length and four stories in height. In the conversion into ashes of this magnificent pile of buildings with their contents, a large part of the property of the institution was destroyed. The insurance companies have promptly allowed the full amount of the insurance, amounting to \$154,900. To replace the burned property will require at least \$200,000 additional. The property remaining unburned is just sufficient to cover the debts of the institution.

This property, together with that consumed by the fire, represents, not accumulated earnings or gifts bestowed by men of wealth, but the savings resulting from services donated by doctors, nurses, managers, and others during the thirty-six years since the organization of the institution. For example, a nurse who works for \$20.00 a week when her services will command \$20.00, is donating \$15.00 a week to the work; and a doctor who labors for a mere subsistence wage of \$3.00 a day,—less than that received by a brick mason or a blacksmith,—receives no compensation for professional services whatever, but must receive credit for donating in service from one to five thousand dollars a year. The same may be said of business men and others who have labored for the institution for merely nominal salaries, or wholly without compensation. The contributions of this sort made during the last thirty-six years amount to more than \$2,000,000.00, of which but a very small fraction remained at the time of the fire. The greater part, together with the forty odd thousand dollars donated by members and other friends, has been expended in necessary improvements or in the treatment of the sick poor.

It is evident, then, that the erection of the new Sanitarium will depend upon the attitude of the public toward this enterprise. The Sanitarium management have never made any demands upon the public. No subscription paper has been circulated on behalf of this institution. It has been a self-supporting, charitable work, maintained by the contributions of those connected with it, and the revenues derived from its own work.

That this work can easily maintain itself if provided with a suitable equipment has been proved by the past history of the institution, and of the sixty odd branches of the work established in different parts of the world. But to undertake to erect such a structure as is required by the aid of hired capital would be to impose an additional debt upon the institution, which would cripple it, and practically compel the management to suspend its charitable features, at least as regards the treatment of the sick poor, for a whole generation to come.

The Sanitarium is an institution thoroughly democratic in character. Heretofore the poor have received the same consideration as the rich. This must be true in the years to come. No other consideration would make it possible to hold together the noble little army of self-sacrificing men and women who have served as doctors, nurses, and in other capacities, and whose services could not be secured in any purely money-making enterprise for several times the amount which they have received as a bare subsistence allowance.

The work of the Sanitarium must go on. Its charities must broaden instead of narrowing. Its principles must be promulgated to every community in the whole civilized world. Its distinctive methods must be represented by larger or smaller branches in every city and town of every civilized land, and through the establishment of medical missions in heathen lands as well. The work of this institution is too broad, too important, too sacred, to be crippled by lack of facilities.

Under the circumstances, the management feel justified in holding up these facts before the public and telling the exact truth of their situation, not as an appeal to charity, but for the purpose of making known the situation so that those who feel inclined and are able to do so, may have an opportunity to invest in an enterprise, the solidity of which has been proved by a whole generation of successful work, and whose future success is assured, not only by its past achievements, but by the growing interest in its work and principles, and by the good will of thousands—yes, hundreds of thousands—of those who have been directly or indirectly benefited by the grand principles and the wholesome influences of which it is the recognized center for the whole world.

The new building must be erected without incurring a dollar of debt. Two hundred thousand dollars is needed immediately for this purpose. It is believed that it is only necessary to make this need known to the hundred thousand invalids whose lives have been prolonged or whose sufferings have been ameliorated through the work of this institution, to elicit from them a generous response. Two dollars from everyone who has been successfully treated at the Battle Creek Sanitarium would suffice to build and equip the splendid new structure which is needed. The addresses of a large number of these have been lost through change of residence. Some have already made contributions without solicitation, knowing the tremendous loss which has been sustained. There are those who have offered to surrender their homes and everything they have to help in this enterprise. Sanitarium helpers, doctors, and managers, have almost unanimously offered their services free till the new building shall be erected and paid for. The generous spirit which has been manifested, warrants the belief that the money can be raised, and that quickly. If a sufficient number of contributions is received at once, the erection of the building can be started immediately, and by bringing to bear the most approved modern building method appliances the whole building can be erected and prepared for occupancy early in July, so that the multitudes of invalids who have been planning to spend the coming summer at the Sanitarium may not be disappointed, but may realize more than their greatest expectations.

We append below the names of some of those who have been first to offer contributions to the new building:—

D. K. Cornwall.....	\$10,000 00
J. H. Kellogg.....	20,000 00
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50 YEARS AGO TODAY
From the Daily Journal of
FEBRUARY 12, 1885.

Dr. J. H. Kellogg has put a telephone in his office.

BATTLE CREEK, MICH., FEB. 1885.

DEAR _____

You will doubtless recollect that at our last Annual Convention at St. Louis, a petition, to be sent to the publishers of Fashion Magazines was presented and approved by our National Organization. That petition I have had printed and now send you with this a supply of blanks for signatures. Will you not circulate them throughout your state and obtain as large a number of signatures as possible. We want the names, especially, of all our leading women, of women distinguished in different walks of life, of wives of eminent men, leaders of fashion, of physicians and all persons whose influence would aid us, beside the name of every W. C. T. U. member in our broad land. It occurs to me that if every Dist. President would take the responsibility of circulating the petition in her District and among the eminent persons of her acquaintance it might facilitate matters considerably. I desire that as large a number of names shall be obtained in as short a time as possible, and you who are best acquainted with the workers and the way to do things in your State will best understand how to accomplish the end desired.

I also send you with the blanks a paper on which are the signatures of our National President and Secretary, this paper you may use to obtain signatures of any such influential parties as need the indorsement of our own leaders to encourage them to lend us their names and influence; and as a heading for the list obtained in your State when all the names possible have been secured.

Please return every paper to me for final forwarding to the publishers of Magazines.

Get as many names as possible. If there is not room sufficient on the blank sent, paste more paper at the end for signatures. This petition originated in a suggestion given by our beloved President, who is working continually to circulate it among such persons as she hopes will aid us. It has her highest sanction, and I feel sure it will have yours and that of all our own noble women.

Yours Sincerely,

MRS. J. H. KELLOGG,

National Superintendent of the Department of Hygiene.



THE ACORN from which has grown that mighty oak, the Battle Creek Sanitarium, was a small building, only part of which was two stories in height. It was opened in 1866 as a "water cure" establishment. It had some good ideas and some that were not so good. These more or less counterbalanced each other, for the institution made slow growth. In the Centennial year, 1876, however, a young physician, graduated the year before from the Bellevue Hospital Medical College, New York City, was placed in charge. So youthful was he in appearance that some of the patients found it hard to believe that he could really be the new superintendent.

Under this administration, changes were made. Practices not based on sound medical principles were quietly dropped. Such advances in the healing art as demonstrated their usefulness were adopted, whatever their source. Mankind, after all, has a rather unerring instinct for finding out a good thing, so the number of patients increased steadily. New buildings were erected from time to time. Adjoining properties were bought. More physicians, nurses, employees of all kinds were engaged. The scientific equipment was increased and improved. In short, a growth set in which has continued down to the present time and bids fair to go on at an ever-hastening speed.

Meanwhile the scope of the institution was broadening. Primarily its purpose had been to heal the sick. Gradually it became as well a center for health teaching, a lighthouse for spreading the beams of right living. Our Superintendent has expressed the idea thus:—

"This work, this institution, is not an achievement; it is a growth, a movement, one of the results of the growing sense of need for help, for succor from the ever-rising

tide of disease and degeneracy which is rolling in upon the civilized world, an attempt to answer in a small way the world-wide cry for deliverance from sickness and suffering, the result of ignorance and departure from the normal and biologic way of life."

In accordance with this great purpose, schools were established in succession of nursing, home economics and physical culture. With the addition of a school of liberal arts and another of music, these have recently been united into the Battle Creek College, which is showing a vigorous vitality and a marvelous growth. Thousands of the graduates of these schools are spread over the earth, teaching and exemplifying in their own careers the lessons of biologic living which they learned there.

But the spoken word cannot reach the multitudes. Printers' ink has a much wider spread, and it has been employed on a lavish scale in the educational work. For half a century the magazine *Good Health* has been issued monthly, the total number of copies circulated running far into the millions. Our leader has contributed a stupendous bulk of articles to this journal. In addition he has written numerous books on health and medical subjects, of which more than a million copies have come into the hands of readers. Many more millions of tracts, booklets and leaflets have been scattered.

Merely to conduct the affairs of such an institution as the Battle Creek Sanitarium would be a big job for a big man. But the Superintendent has done much more—very much more. He has had personal charge of thousands of individual medical cases; he has performed thousands of surgical operations; he has conducted many experiments and researches leading to new knowledge about the curing of disease by the physiologic method; he has invented improved apparatus and instruments for medical and surgical purposes; he has helped in various civic move-

ments and was for sixteen years a member of the State Board of Health; he has traveled extensively in this country and abroad, to study the advances made in medicine by the great scientists, so that his own institution might benefit thereby; he has given thousands of lectures and addresses in Battle Creek and throughout the country; in his weekly Question Box he has answered inquiries on health subjects to a vast number; the health foods which he invented have given rise to factories in Battle Creek employing thousands of people; this dietary has changed the breakfast habits of the nation and been of effect even in foreign lands; his continuous and brilliant advocacy of the vegetarian principle has lessened the consumption of meat in many homes; our chieftain endowed the Race Betterment Foundation in 1906; its two conferences, one held in Battle Creek in 1914, the other at the Panama-Pacific Exposition in San Francisco in 1915, were attended by many men of distinction and the papers read gave an enlightening diagnosis of the ills of the human family as a whole; charitable work has been carried on continuously, the scale growing with the years; in the earlier days and often since then there have been heavy financial burdens to be borne but the strength to bear them has never failed. All this is but a partial picture of the activities of the man who for half a century has been the head of the Battle Creek Sanitarium.

The fire which, in February, 1902, destroyed almost the entire plant, seemed at first a most crushing blow. The institution was left with "\$50,000 less than nothing." But the indomitable spirit which had been at the helm so long, did not falter. The present magnificent building is a testimonial equally to his personal efforts and to favor with the public which the institution had won by its methods. In 1916 occurred the semi-centennial of the Sanitarium, marked by a notable and noble celebration spreading over three days and attended by many dis-

tinguished visitors. At that time the announcement was made that over one hundred thousand patients had been received. In the ten years since that date, the number has been about sixty-five thousand.

A fitting accompaniment to the golden jubilee which we are celebrating tonight, is the beginning of work on a fifteen-story addition to the Sanitarium. If history pursues the path which she has followed for half a century, even this enlargement will before long be outgrown and a further building program will be in order.