DIPHTHERIA.

Dr. Geo. M. Laughlin.

Diphtheria is an acute infectious disease. It differs from typhoid in that it is highly contagious, while typhoid is not contagious. It largely affects children between the ages of three and ten, although anyone can contract diphtheria. I had one case in a man forty years old. It is a disease that is common in this zone, common throughout the United States, and more prevalent in winter and spring, but sometimes commences in the fall. There are more cases in winter than spring.

Characteristics. It is characterized by rather abrupt onset, sore throat, false membrane, and very toxic condition. In fact, practically all deaths that occur from diphtheria occur from the overcoming of the nervous system by the toxin. There are a few deaths from suffocation, as there are also in membranous croup.
Bacillus. The disease is caused by the Klebs-Loeffler bacillus. Without that bacillus we can have no diphtheria, and in that particular it is like typhoid—there must be the bacillus. Since these facts have been established the spread of typhoid and diphtheria have been largely overcome, particularly in localities where they have thoroughly established and well regulated health departments.

Membranes. There are other organisms which produce false membrane membranes that look a good deal like the membrane of diphtheria, but they do not cause true diphtheria. Take for example the streptococcus, the staphylococcus and the pneumococcus—they will produce false membranes in the throat in certain conditions. Take a child sick with scarlet fever, and sore throat is one of the principal symptoms. The glands of the throat become greatly distended and swollen, the throat is very sore, and a membrane forms. Some have thought this was true diphtheria in connection with scarlet fever, but it is not. The membrane is from the streptococcus infection and toxins, and while they may be very severe, they are never so pronounced as in a bad case of diphtheria, although we do have cases where the symptoms do not amount to much, where the findings of the throat in the laboratory shows the throat infected with the Klebs-Loeffler bacillus.

Degree of Intoxication. There are different degrees of intoxication in different cases. Some children have very little fever and never go to bed. These children can infect other children, in whom the disease might appear in a very severe type. Always make a careful examination of the throat in winter, particularly bacteriological.

Causative Factors. In addition to the Klebs-Loeffler bacillus we must take into consideration other causative factors. If that alone were the cause in all cases, all of the children in a school or in a neighborhood when the disease came around would have diphtheria, but they do not. Out of hundreds of children exposed only a small per cent contract the disease. Certain families are more susceptible to the disease than others. In some families all the children take it, and in others none of the children take it.

Catarrh. Chronic catarrhal condition of the nose and throat—Enlarged Tonsils. Children with enlarged tonsils, those who are subject to ordinary sore throat and colds—these are more susceptible to diphtheria.

Lesions. Lesions, bony and muscular in the neck, upper dorsal and region of the first rib. You will find children who are subject to catarra, who have frequent colds, enlarged tonsils, etc., have bad necks. The muscles are tight and contracted, and the muscles are thick in the upper cervical. The neck is sore. By recognizing these conditions we are able to treat such cases as adenoids and enlarged tonsils. After all operations for removal of adenoids and enlarged tonsils osteopathic treatment should be given.

Obstructed Circulation. Elevated first ribs on either side or both sides, cervical lesions, contracted condition of the neck, contracted muscles under the angle of the jaw, will obstruct the circulation in the throat and cause congestion of the tonsils, abnormally flat upper dorsal, etc., also.

Principal Causes. There are three principal causative factors, i. e.

1. Bacillus—without which we cannot have diphtheria.
2. Chronic inflammation of the nose and throat.
3. Lesions in the neck, upper dorsal, first ribs and perhaps the clavicles.

Tonsils. It is well known that the tonsils and lymphoid tissue of the throat have a function, and its principal function is to resist infection. A good many infections take place through the throat, but when the throat tissue is in normal condition the child will not have diphtheria in all probability, unless it gets a very virulent infection. Tubercular infection often takes place through the throat on account of the impaired condition of the lymphoid tissue and the glandular tissue about the throat.

Dissemination. How is the disease disseminated? It is a contagious disease, and children catch it by contact. Nurses catch it frequently by coming into contact with patients. Physicians are known to contract the disease by handling patients. If a patient should cough when the physician is examining the throat and a piece of the false membrane or secretions of the throat fly out into his face and get into his mouth and nostrils, there would be an infection of a very virulent form.

Children are much more susceptible, and the disease is carried around, not in the air in all probability, but upon articles of furniture, on bedclothing, etc., so that the children of the wash woman, (if clothes are sent from the room of a diphtheritic patient to some laundress, and her children come into contact with the clothing), are apt to contract
the disease. The germs will live for many months if not exposed to sunshine and are not thoroughly dried. The germs will stick to things such as books and toys and clothing; dogs and cats will carry the infection in their fur and it is carried about in the clothing.

Prodromes. There are not many, if any, prodromal symptoms. The incubation period is less than a week usually, although there is no set time for the incubation period in any disease. Anywhere from two to seven days is the incubation period in diphtheria, that is, the number of days after the child is infected or exposed until he has temperature. We always say an infectious disease starts at the time of first temperature.

Chill, Fever. Sometimes there is a chill or a chilly sensation; that is followed by an elevation of temperature, the child will have fever and headache, and feel cross, but the throat is not sore as yet. He will lose his appetite, the stomach is upset and he will vomit.

Throat. Perhaps next day he will complain of his throat being sore when he attempts to swallow, and then later on his throat commences to fill up. Sometimes the throat bulges out on the sides until it is wider than the head. This is due to the enlargement of the lymphatic glands; then it is that the membrane makes its appearance. If you examine the throat early you will see just a little white speck on the tonsils. That is the most common site of the false membrane, and then the next day it gets larger and keeps growing for two or three days. Then it will have spread all over the tonsils, and spreading forward and back and all around until the membrane is as large as a postage stamp, and sometimes it gets larger.

Membrane. There is considerable difference between the membrane in an ordinary case and a membrane which is the result of streptococcus, as in scarlet fever, ordinary sore throat, or follicular tonsillitis. The chief differences are as follows:

Growth. In diphtheria the membrane spreads from one or two or three points. As the membrane grows these points all coalesce, and you will have one solid membrane. The membrane is continuous, is thick and terminates abruptly. It is as thick as a cuff or even twice as thick sometimes, say about one-eighth inch, and is of a dirty gray color. Looks wizitke and almost crystalline in some cases, and instead of terminating in a rounded edge, breaks off abruptly like the edge of a board, and you can see how thick it is from looking at its edge.

Odor. Then, there is a peculiar odor in diphtheria. I cannot describe it, but you can smell it when you enter the room. It is not particularly offensive, excepting after the membrane starts to slough off and the odor changes. It might be called an “alkaline odor.”

Fever. The fever runs up pretty high—102 or 103 degrees and stays along there for three or four days, depending on the severity of the case. It does not fluctuate much. Patients do not have morning nor evening remission in temperature, and after a day or two in severe cases the child will get very toxic. He does not become delirious but almost unconscious. Lies around sleeping and keeps quiet. He breathes hard, and has difficulty in swallowing. That is a pretty bad case and hard to handle.

Bowels. The bowels are usually constipated, and the urine highly colored, and there is often albumen in the urine.

Swelling. In ordinary tonsillitis you will have little patches around over the throat here and there; in diphtheria there is also a contracted condition of the muscles of the back—I have found that in all cases of diphtheria; extreme swelling of the neck, difficult breathing, bad condition of the stomach, the tongue is coated, then the peculiar odor, and the bowels constipated.

Membrane. With reference to the location of the membrane, it is usually located on the back part of the tongue, runs up over the uvula, and sometimes in looking down the throat you can see it very readily.

Examination. In a small child you sometimes have difficulty in looking into the throat, because they will not open the mouth wide enough. Where it is absolutely necessary to resort to force, wrap the child up a blanket with his arms next to his body. Hold his nose and he will have to open his mouth to breathe. If he bites your finger you will have a very bad finger. You may have all the constitutional symptoms of diphtheria from the infection.

Nasal Membrane. The membrane sometimes extends up into the nose.

Membrane. That does not cause much more trouble than when it is in the throat only.

Eye. Diphtheretic infection can take place in the eye and membrane form there.

Laryngeal Membrane. The most serious form of diphtheria is where the membrane forms in the larynx and goes down into the
Trachea. Membranous

Croup. When the membrane forms there we have what is known as membranous croup. These two diseases are exactly the same, both due to the Klebs-

Leptner bacillus; the constitutional symptoms are exactly alike in both cases, only when the membrane forms in the larynx we have membranous croup, and it is a much more dangerous disease to deal with. A large per cent of the cases terminate fatally.

Heart Failure. The respiration is obstructed, and great suffering is entailed. While there is great difficulty in breathing the patients rarely die from loss of breath, but from heart failure on account of the struggle for breath and the extra work put on the heart.

COMPLICATIONS. Diphtheria is a very serious disease. It kills a large number of children every year, and the rate of mortality is quite high.

Paralysis. One of the most common complications or sequelae is paralysis in some form. This paralysis is not due to any defect or inflammation, nor to degeneration in the central nervous system. Most of the cases of paralysis are due to some trouble in the brain or spinal cord, but paralysis which follows diphtheria is not that kind. It is paralysis which is due to the inflammation of the peripheral nerves. We have a good many cases of paralysis due to what we term peripheral neuritis, or inflammation of the nerves that go outside of the spinal cord or brain. They are due to the effect of some toxin on the nerves. Sometimes there is what we call traumatic paralysis caused by injury. Most cases of neuritis are not caused by injury but to some toxin acting on the nerve. Some mineral poisons will produce inflammation of the nerve, but most toxins are those which follow infectious diseases.

Throat Paralysis. In diphtheria the throat is most frequently paralyzed.

Paralysis. This is not particularly serious because practically all cases of post-diphtheritic paralysis recover. They recover more readily under treatment than without. The system can be built up and the toxins which remain in the system eliminated much more rapid than without treatment.

Leg Paralysis. The next most common form of paralysis, the next place commonly attacked is the legs. Even in children during convalescence they will lose the use of their legs. These cases practically all make a good recovery after awhile.

Pneumonia. If paralysis of the throat appears while the child is sick as it sometimes does, while he is toxic and the fever high it may be caused by another serious complication—pneumonia. Some of the food may get into the trachea and that is apt to produce bronchopneumonia, or aspiration pneumonia. That is a very serious form of pneumonia. You should then not feed him by the mouth for a day or two or if the throat is paralyzed it may cause pneumonia of that kind to develop. Pneumonia of this character usually terminates fatally.

Endocarditis. Another complication which is serious is endocarditis. But that is not so common as some other forms of heart complication.

Myocarditis. Myocarditis is the most common complication of the heart. Where that exists (and it always exists in bad cases) the patient is likely to die without notice. The patient becomes weaker and gets more and more toxic. The pulse gets feebler and more rapid, respiration more rapid, and you can tell pretty nearly every time within a few days whether the case will terminate fatally or will get well.

Heart Failure. In diphtheria the patient may be lying fine, and then suddenly drop dead with heart failure. The heart muscle gets inflamed, the toxin has a bad effect on the muscle and it degenerates. The heart gets flabby, and if some extra exertion is brought on the patient all at once, if he sits up or struggles to get up, the heart will stop. The patient will die in a minute's time. That is something you must look out for. That is true not only while the child is sick, but for two or three weeks during convalescence. The patient should be kept in bed and not allowed to get up for anything. The heart should be examined every day to see that the sounds are regular and good and that there is no change in the size of the heart.

Nephritis. As a result of the action of the toxin on the kidneys there is usually more or less nephritis of an acute character. As a result of that inflammation there will be a lessened amount of urine, highly colored, and it will contain more or less albumen and sometimes a few casts.

I do not believe that nephritis is one of the serious complications of diphtheria. It is one that frequently occurs but is very apt to disappear during the period of convalescence. That is not true in all cases of infectious diseases, particularly when it is not true of scarlet fever. Following scarlet fever nephritis is apt to appear and may even become
chronic, and if acute may run a course of three or four weeks and give very serious symptoms. It is a complication of scarlet fever which requires our closest attention while in diphtheria it is not nearly so serious.

**Urinalysis.** In any case it is well to examine the urine from time to time—every few days, at least—to see to what extent the kidneys are complicated. If albumen persists in the urine after convalescence give special treatment to the kidneys, and put the patient on a special diet. Give osteopathic treatment to the lower dorsal and upper lumbar. In all these cases where we have complications you will find the spine in the lower dorsal and upper lumbar more or less rigid; it is always quite tender and frequently you will find lesions in that region. A rigid spine is a lesion as much as a subluxation. You will find contracted muscles which are sore on deep pressure, irritation, or a break between some of the vertebrae, or perhaps a subluxated eleventh or twelfth rib. If any of these are present, treat daily until you have overcome the contraction or adjusted the lesion.

**Correction of Lesions.** During the period when the disease is at its height it is not always possible to correct the lesion in any disease. In typhoid fever, pneumonia, diphtheria, scarlet fever, etc., while the fever is at its height and the patient most toxic, it is not always best to correct the lesions account of the protrusion of the patient. You can, in all those cases, give sufficient treatment to stimulate the action of the kidneys by thoroughly relaxing the structures on either side of the spine in the lower dorsal and upper lumbar, and during convalescence if any bony lesions remain they can be corrected. Really it is not always necessary to give relief by correction of bony lesions. If you succeed in getting out the contraction and treat the articulation where the lesion exists you will free it up.

**Diet.** Diet is important in the treatment of kidney complications. In acute nephritis it is absolutely essential that the diet be limited to liquids, and the best diet that can be given in nephritis is milk. Frequently I have kept a patient on milk for a month, nothing else at all. If there is dropsy I sometimes limit the amount of drinking water. If not dropsical, allow the patient to have all the water he wants. Lemonade is allowable in nephritis unless the patient is dropsical.

You will find in connection with your treatment and the patient remaining in bed, on this diet that practically every case of acute nephritis will get well; while without removal of lesions, treatment to eliminate toxins from the system and confining the patient to a diet which keeps work off of the kidneys that the patient will get gradually worse.

**Rest in Bed.** Rest is one of the principles of treatment which should be applied in every case of inflammation, whether in a joint, malignant or simple inflammation, or whether it is an inflammation of an organ like the kidney. An organ should not be permitted to a lot of work when inflamed; its function should be lessened as much as possible. There is no difficulty in treating nephritis in diphtheria or scarlet fever if you follow these rules. In thoroughly chronic nephritis no treatment does much good.

**Respiratory Complications.** Sometimes the membrane attacks the trachea. We have no history of cases where the disease has advanced downward in the esophagus.

**Broncho-pneumonia.** There are other complications of the lungs—pneumonia, particularly bronchopneumonia. This is more common in children than lobar pneumonia, and bronchopneumonia is a more serious disease than lobar. It frequently follows whooping cough and other acute infectious diseases, diphtheria and measles particularly. It hardly ever comes on while the disease is at its height, but is apt to appear during convalescence. It is very serious, and the mortality is high especially where it follows an acute infectious disease.

**Adenitis.** Permanent enlargement or suppuration of the lymphatic glands of the neck often follows diphtheria. In bad cases the lymph glands get very large in the neck. Ordinarily these glands subside in the course of a week or such a matter after the fever declines, and the glands return to normal. But in some cases they remain permanently enlarged, especially after scarlet fever and in some cases of diphtheria. It is adenitis which causes fibrous tissue to form in them, and if the glands become infected they will get soft, break down, and discharge. In the course of time they heal up but leave a scar. I do not know as this is a serious complication, but one we do not like to have, as it is a matter of annoyance. It is not a menace to the patient's life. These glands are not tubercular.

Paralysis of the throat and extremities, myocarditis, nephritis, bronchopneumonia, enlargement of the glands of the neck,—if the patient escapes all these his recovery will be uneventful and complete.
Differential Diagnosis. There are not many diseases like diphtheria,—only two. One is acute tonsillitis and the other is scarlet fever. If you can eliminate these two diseases you can make your diagnosis without any trouble. In all these diseases we have sore throat, may have the membrane—we always have it in diphtheria. In both scarlet fever and diphtheria we have enlargement of the glands of the neck, and we have constitutional symptoms, fever and toxemia. The toxemia in scarlet fever is as severe, and just as virulent as it is in diphtheria.

Acute Tonsillitis. What is the difference between acute tonsillitis and diphtheria? In acute tonsillitis the disease usually is not so severe, although it may be more severe. Usually it is not, and the toxic condition is not the same. The fever is high, but it does not last quite so long as a rule.

Membranes. The principal difference is in the character of the membrane. It may be almost impossible to tell unless you can make an examination of the throat whether you have tonsillitis or diphtheria. The membrane in diphtheria is thick and continuous, and of a gray color, almost transparent—you can almost see through it. If you peel a piece of it off it will leave a bleeding surface, because it is adherent to the mucous membrane, while in tonsillitis you can scrape the membrane off. It does not look so fibrinous, and does not leave a bleeding surface unless it is very hard. But by gently loosening the membrane it will not leave a bleeding surface. Neither will it in diphtheria, if old. After a week or so the membrane in diphtheria sloughs off, and sometimes great, tough pieces hang in the throat. That is after the fever has disappeared and the child is getting well. So take a pair of forceps and get hold of the membrane. It is as tough as a piece of leather. It is not advisable to remove the membrane early in the disease, as it will leave a bleeding surface and will reform, is painful and does no good. The disease is not in the membrane but in the tissues below. The membrane forms because the fibrin and leucocytes appear on the surface as a result of the inflammation, coagulation takes place, and we have this membrane formed.

Culture Test. In order to be absolutely certain in making differentiation between tonsillitis and diphtheria it is well to make a swab—take a stick and put absorbent cotton on that and get down and swab around the throat. It is not necessary to get a piece of the membrane. Take that and put it in a culture tube and stop it up, and if you cannot make a culture yourself, send it to a laboratory. A culture can be made in twenty-four hours. A smear may be made and the organisms may be detected by use of a microscope, right away, but it is best to make a culture.

In the country where it might be a week before you could have a culture made, you simply cannot wait. If you have a case you suspect to be diphtheria, treat it the same as diphtheria by quarantine and by proper methods of treatment, so as not to run any chances.

The microorganisms producing diphtheria will remain in the throat for two or three weeks after the child is well; that is why it is necessary to keep the child at home from school after he is up and around the house. You should take a culture during the second week and one during the third week, and if the result is negative the child may go to school.

Scarlet Fever. How do you differentiate diphtheria from scarlet fever? Scarlet fever comes on a great like diphtheria. The initial symptoms are more severe. The child has headache, nausea and vomiting, and the temperature runs up high, while it does not go up so fast in diphtheria. It runs higher in scarlet fever than in diphtheria. The glands of the neck enlarge in scarlet fever and the throat is sore. Perhaps the throat is as sore and the glands just as large, or larger, than in diphtheria, but we do not get the characteristic membrane in scarlet fever, although we do get a membrane probably due to the streptococcus. This membrane is not the outstanding gray looking membrane, but is a dirty, flat milky sort of a membrane like that of tonsillitis.

Principal Difference. The principal difference is the rash. In diphtheria the patient may have sort of a little rash, but you get a good scarlet rash in scarlet fever, and on this we depend more than on anything else. This scarlet rash appears the second or third day and is very pronounced. It will disappear temporarily on pressure. Sometimes it lasts only two days, and sometimes it lasts a week. The child in the latter case becomes very toxic, sometimes delirious, with fever high, throat sore and glands extremely enlarged. We are more apt to have severe kidney complications in scarlet fever than in diphtheria. Unless you recognize the rash of scarlet fever, it would be well to have an examination made of the throat bacteriologically. In very mild cases we may overlook the rash, but if the case is mild it is not serious.

Duration. Diphtheria does not last very long—that is one good thing about it. The suspense is not very long. The cases that terminate fatally usually die within two or three days. If
they live past that period they usually get well unless there is a recurrence. Occasionally there is a recurrence of the disease.

Immunity. One attack will render immunity for a time. The immunity usually lasts one or two seasons. In 999 cases out of 1000 the immunity will last one season.

Prophylaxis. Parents should see that their children are in the best health possible, that they have proper diet, proper amount of exercise and proper air. If they have chronic throat trouble they should have treatment. Enlarged tonsils, adenoids, etc., will render them more susceptible to infectious diseases. Such children do not get sufficient air, and as a result do not develop physically nor mentally as they otherwise would. Such a child does not have a good chance in life, so any child with enlarged tonsils or adenoids should receive prompt attention. So many parents do not realize this and allow their children to grow up with some disease of the throat.

Boards of Health have done a great deal in establishing quarantines, supplying clean drinking water and vessels, and in disinfecting articles in school rooms where so many children handle them, etc. That is all good.


The child sick with diphtheria is a hard patient to treat, especially in many cases is a very hard patient to give osteopathic treatment to. The treatment is somewhat painful, the child is feverish and cross, and sometimes hard to manage. Unless you can get the confidence of the child it is hard to give it a local treatment.

Cervical Treatment. Right from the beginning and throughout the disease it is necessary to give good cervical treatment. I mean by that treatment of the neck behind the sternocleidomastoid. Some treatment is necessary in front of it, but I will describe that later.

At first just treat behind the muscle; get in deep in the upper cervicalis all along on both sides, commencing very gently. As you work along gradually those muscles will relax, and after ten or fifteen minutes you have the neck loosened up, and you can get good motion between the vertebrae. That has a good effect on the nervous system and the circulation of the throat.

Throat. Commence next to treat the front side of the throat. Anteriorly. If the glands are large and distended, do not work directly on the glands to amount to anything. A little pressure is all right but be careful about bruising the inflamed glands.

Angle of Jaw. Get right up at the angle of the jaw and commence gently there and work easy. As you work along the soreness will disappear; work ten or fifteen minutes, very gently at first and as you loosen the tissues you can get in deeper.

Daily Treatment. Many believe a good thing is to bandage the throat in antiphlogistine, but do not change your tactics after you commence your line of treatment.

Cold Packs. Cold packs should be used right in the beginning, and continued throughout the disease. Do not wait until the child’s throat is swollen up. Cold packs are good in any case of sore throat. They are good to absorb inflammatory tissue. Use them in bad joints, in any sort of inflammation, whether acute or chronic.

Technique for Packs. Take a soft towel or a piece of flannel, a good size piece, dip it in cold water, wring it so the water will not drip and run. Wrap that around the neck cold, and on top of that put a big towel and wrap it around dry. When the inflammation goes down you can get in deeper and spring the jaw forward. It helps drain the tonsils and tissues there. These are practical points.

Sordes. In bad cases the tongue is coated and the teeth are covered with sordes, the lips are parted, the tongue is swollen, etc. It is necessary two or three times a day to clean out that mouth. Get a soft rag and use listerine, that is about the best, or Hydrogen Peroxide 25% solution. In large patients you can use a small tooth-brush. Scrape the teeth and scrub the tongue. Take a swab, dip that into the hydrogen peroxide and clear the throat from mucus, and perhaps some of the particles of membrane. Do that several times a day. Some get a small atomizer and spray the throat. That is all right.

Difficult Breathing. Especially in membranous cases I have treated patients almost continuously throughout the night. As long as you treat the child it seems to breathe better.

Hot Fomentations. Apply hot fomentations over the chest and over the neck. Heat woolen cloths and add a little turpentine to the water, and then steam. The moist air seems to relax the constriction in the throat.
Method of Steaming.

The child lies on the side of the bed with his head near the edge; get a bucket of water and put it on the floor. First take a couple of newspapers and make a tent over the child's head big enough to come over the edge of the bed, to catch the steam out of the bucket. Heat irons or rocks in the stove and drop them into the bucket; the steam will come up in clouds, and by holding the tent over the child's head it will gather and furnish plenty of steam in ordinary group as well as in diphtheria that will give some relief. Often in the treatment of diphtheria you are anxious to give any kind of relief. It is not something you can wait on. These cases do not last long. They either get well or die in a few days.

General Spinal Treatment.

General treatment is given for the purpose of eliminating the toxins and improving the condition of the nervous system. This must be given all along the course of the spine as where the child is toxic the spinal muscles are contracted. If you relax these muscles it will have a beneficial effect upon the bowels and kidneys, the nervous system will tone up, and there is nothing more important than that.

Spinal treatment in diphtheria should be given from mid-dorsal to mid-lumbar two or three times a day. You will always find that part of the back so tender that the patient can hardly stand the weight of your hand on his back. That is due to the action of the toxin on the general nervous system.

Abdominal Treatment.

Treat the bowels,—give the abdomen some treatment in a purely mechanical way. If necessary, give daily enema. Let the child have plenty of pure drinking water.

Diet.

The diet should be very light. Just a little milk or broth, or something of that sort. This treatment is fully as important, if not more so, than the neck treatment. Give it every time you see the case. Unless they are so thoroughly toxic that they will respond to nothing, they will be better after every treatment.

Intubation and Tracheotomy.

The danger is from passing a tube the wrong way or passing a portion of the tube into the trachea and often very little good comes from it. The trouble is the membrane lies below the tube. The mortality in tracheotomy is very high. The child is apt to get pneumonia, and there is danger of infection from injury to the mucous membrane. The children die from bronchopneumonia or from the toxins of the disease. This operation is seldom performed any more.

Antitoxin and Vaccination.

As a school we are not opposed to antitoxin or vaccination. White rats have an immunity against diphtheria toxin. Guinea pigs have not. We are immune to some diseases and not to others. If a virulent enough culture is inoculated into any individual he will contract such diseases as tetanus, anthrax or diphtheria.

Duration of Immunity.

When a person recovers from an infectious disease he is immune for a time. Some times the immunity is permanent as in smallpox. In typhoid the immunity will last for a time. In scarlet fever the immunity is almost permanent. In diphtheria it does not last so long. Probably only lasts one year, may be two or three.

Theory of Immunity.

On account of, and in connection with disease, while there is infection, toxin is formed. This toxin stimulates cell activity and an antitoxin is produced.

If the blood of an immune animal is injected into another animal, it will acquire temporary immunity. The injected blood will give immunity for about thirty days. By use of antitoxin the mortality in diphtheria is reduced from 45% to 4% or 5%. If it is used the first day the symptoms appear, the patient will usually get well. If a small dose is given as a prophylactic measure, the child will not have diphtheria for at least thirty days. The only bad results from the use of antitoxin is where it is not properly prepared.

Vaccination.

Antitoxin acts differently from vaccination. In vaccination the disease is introduced into the system in an attenuated or mild form.

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**SOME IDEAS ON CERVICAL LESIONS.**

A. D. Becker, D. O.

Synopsis of talk and demonstration given to the Atlas Seniors at the Hall, March 8, 1909.

We will discuss for a few minutes cervical lesions including only those from the third to the seventh cervical vertebrae.

Lesions between the third and seventh vertebrae are frequently spoken of as lateral lesions. Also we hear the terms anterior and posterior lesions used in this connection.

Now we do have deviations of the entire cervical spine, its normal curve being convex anteriorly is sometimes accentuated. The reverse is also true in which we find a straight cervical spine or even a curve
convex posteriorly. These deviations in the curve of this region are due to changes taking place in the intervertebral discs rather than in the bodies of the vertebrae.

The foregoing statement is true as a rule. In discussing lesions of this portion of the spine we are leaving aside actual diseased conditions of the vertebrae such as we find in rheumatoid arthritis and tubercular disease. We are also leaving out of this consideration conditions of congenital or early acquired torticollis, which by their continued deflection will actually change the shape of the vertebrae themselves. We most frequently find individual lesions between two articulating vertebrae, and it is more particularly of these which I wish to speak.

Again, owing to the free mobility of the cervical spine, we find compensation abruptly established for scoliotic conditions of the upper dorsal spine, and furthermore for scoliotic conditions extending from the upper dorsal into the lower cervical area.

The idea I wish to convey is that frequently where we have the transverse processes of the lower cervical vertebrae rotated forward on one side, the upper cervical vertebrae will be rotated in an exactly opposite condition, compensation having been quickly accomplished. This again I wish to say is peculiar of the cervical spine on account of its excessive mobility.

In correcting lesions of this area it is well to prepare your field of work by first getting at least some movement between each two articulating vertebrae. The greater the amount of irritation, the more thoroughly does this preparatory work need to be done.

In lesions with slight irritation the preparatory work can oftentimes be eliminated. It generally pays to spend five or even ten minutes in preparation, following which corrections can frequently be made in one minute or less. Thus, as you see, it frequently requires more time to make the preparation than it does to do the actual corrective work.

First we will take up the methods by which a certain amount of preparation may be carried out. With the patient seated upon a stool, the operator standing at the patient's right, he places his right hand upon the patient's forehead, with his left hand on the posterior cervical tissues. The thumb of the left hand lies lightly on the mastoid process, the fingers reaching around to the opposite side of the neck about as far anteriorsly as the transverse processes. Have the lower edge of the hand resting upon the spinous process of the first dorsal, and the upper edge of the hand lying upon the suboccipital tissues. The head is now extended and rotated gently from side to side. As the manipulation is continued for a few seconds, the head is further and further extended, thereby securing relaxation of the tissues and some slight extension of the cervical spine. This manipulation may be repeated from the opposite side.

Again, standing in front of the patient, who is still seated upon a stool, the forehead of the patient is placed against the operator's breast. Both hands of the operator are placed on the posterior tissues of the neck, one hand rather supporting or reinforcing the other. The lower edges of the hands reaching, or resting upon the first dorsal spine and the upper edges reaching to the posterior external occipital protuberance. The patient is now drawn gently toward the operator, while at the same time the operator leans slightly toward the patient.

This is a very powerful manipulation, and should be given with a degree of gentleness. It secures quite a marked degree of traction, and further relaxes the tissues of the neck.

Again, with the patient lying upon the table in the dorsal decubitus, the operator stands at the side of the table corresponding to the patient's left. Reaching with the left hand over the patient, place the hand well around the neck on the posterior cervical tissues. The right hand is placed on the left side of the patient's head. Now, pulling with the left hand while the right hand is rather thrust forward turning the face of the patient towards the operator, slight traction is made with the left hand, and counter-force applied with the right, thoroughly rotating all vertebrae of the cervical region. This manipulation can be repeated from the opposite side.

Again, the patient on the table in the dorsal decubitus the operator standing at the head of the table, place the left hand on the posterior tissues of the neck on the left side with the palms of the fingers in the suboccipital space, the right hand holding and carrying the right side of the head, the face being turned to the left. Pressure is exerted with the right hand, using the left hand as a fulcrum, the dorsum of the left hand being now upon the table with the fingers flexed on the hand at nearly right angles.

This manipulation secures not only a relaxation of the tissues but also a separation of the articular facets on the upper or right side of the spine. This manipulation can be repeated on the opposite side by merely changing the positions of the hands and rotating the face to the opposite side.

After having accomplished a fair degree of relaxation and deep springing of the spine, we now come to the more specific part of the treatment, that is, the actual correction of the individual lesions. However, it will now be found after having completed this much of the work
that many minor slips between the vertebrae have already been corrected—in other words, thorough relaxation and deep springing of any portion of the spine will oftentimes correct slight lesion, and if persisted in will indeed frequently correct lesions which before the relaxation and preparation appeared to be considerable.

Now, in correcting specific lesions of this area, I have found that almost without exception they can best be corrected with the least trouble to the operator, and also the least pain to the patient, if they are worked upon as if they were rotations. This to my mind is the key to the correction of most cervical lesions. As we said before, we frequently find the transverse processes of the upper cervical rotated exactly opposite to the direction taken by those of the lower cervical region, and in this way we frequently find a reverse curve with which we have to deal. In other words, we will find the transverse processes of the seventh, the sixth and the fifth forward on the left, while those of the third and fourth are forward on the right, bringing our point of greatest irritation between the fourth and fifth. Now, in correcting such condition, I place the distal end of the metacarpal bone of the index finger of the left hand on the articular processes of the fifth. The right hand is placed on the right side of the patient's head, sweeping around the mastoid process, and the right side of the suboccipital space. The patient's head is then flexed laterally upon the left hand turning the face somewhat to the right, the head being lifted slightly from the table. Then pressing firmly with the left hand, and maintaining the lateral flexion with the right, a short, sharp, quick rotation is given, the left hand coming slightly superior and the right hand carrying the head and being carried slightly inferior and to the left.

The chief value of this manipulation lies in the fact that the movement is abrupt and quick. Another essential is, that great force is absolutely not indicated. If the flexion is well secured, and if the patient relaxes, a very few ounces of force do the work.

If that amount of force will not accomplish the correction, the fault is in the technique, and is not an indication that more force should be exerted.

The rotations of the fifth, sixth and seventh cervical are corrected in the same manner, the right hand being placed upon the articular processes of the seventh, the whole cervical spine being flexed upon it, the left hand carrying the head, the face of the patient being turned slightly toward the left, pressure is made with the right hand, lateral flexion being maintained by carrying the head well to the right, and again the short sharp, quick rotation, using but a very slight amount of force, the rotated vertebrae being twisted back into their normal relations.

This manipulation, from one side or the other, is applicable to any individual lesion between any two articulating vertebrae from the third to the seventh cervical, inclusive. Again I say the success of the manipulation depends more upon the flexion and the abruptness with which is exerted.

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O. S. C. N. Y. MEETING.

The Osteopathic Society of the City of New York held its October meeting at the Waldorf-Astoria, October 23, '09.

Dr. E. M. Downjning, representative of the A. O. A. gave an address on the Importance of Local State and National Organization.

Dr. Geo. Laughlin of the A. S. O. faculty addressed the meeting on "Diagnostic Points in some of the Nervous Disorders."

As Dr. Laughlin was to address the meeting of the State Society at Albany, October 27th, the O. S. C. N. Y. arranged to attend in a body.

The officers of the O. S. C. N. Y. are: President, Dr. Geo. W. Riley; Vice-President, Dr. Greenwood Ligon; Secretary, Dr. Joseph Ferguson; Treasurer, Dr. Cecil R. Rogers.

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X. Y. O. S. MEETING.

The New York Osteopathic Society held its eleventh annual meeting at Hotel Ten Eyck, Albany, N. Y., Oct. 27, '09.

The morning was given over to business meeting.

At 2:30 p.m. Dr. Geo. Laughlin of the A. S. O. faculty opened the session with a talk on Orthopedic Surgery, with clinical demonstration. Dr. Ada A. Achorn of Boston, followed with an address on The Work of the Section in Gynecology and Obstetrics.

Dr. Chas. E. Fleck of New York presented an illustrated paper on Structural Diagnosis.

The following officers were elected for the ensuing year: President, Dr. W. L. Buxton, of Mt. Vernon; Vice-President, Dr. Hugh Russell, of Buffalo; Secretary, Dr. G. E. Phillips, of Schenectady; Treasurer, Dr. J. H. McDowell, of Troy.

Directors: Dr. W. M. Smiley, of Albany; Dr. C. D. Berry, of Rochester; Dr. C. F. Fletcher, of New York City.

Dr. Chas. Hazzard was continued as chairman of the Advisory Committee.
HOOKWORM DISEASE.

It will be recalled that John D. Rockefeller has recently donated one million dollars towards the eradication of the "lazy-bug" in the south, and so much else has appeared of late in the public prints with regard to Hookworm disease, that we believe our readers will be interested in an article on the subject by its discoverer, Dr. Ch. Wardell Stiles, Ph. D., Chief of the Division of Zoology, United States Public Health and Marine Hospital Service, which we have abridged from Public Health Reports.

Etiology. Hookworm disease is caused by the presence of small worms belonging to a group of roundworms known technically as Ureinariae. Two different kinds of hookworms occur in man. One of these is known popularly as the "Old World hookworm," the other as the "New World hookworm." The Old World hookworm is relatively rare in the United States, whereas the majority of cases of infection must be attributed to the New World parasite.

The New World hookworm is known technically as Necator americanus, which means "the American murderer." This name was given to it because of the great number of deaths it causes, directly or indirectly. It is about one-fourth to one-half an inch long and about as thick as a small hairpin. It has hard cutting plates or jaws guarding the entrance to its mouth, with the aid of which the parasitizes fastens to the intestinal wall.

Habitat. In its adult stage the hookworm is found fastened to the lining membrane of the small intestine. It is also sometimes found in the stomach. It makes a wound, sucks the blood, and produces a poisonous substance which injures the person infected.

A person may harbor a few hookworms, or several hundreds, or several thousands, according to the amount of infection to which he has been subjected. As children are usually subject to infection more than are adults, the disease is usually more common in them.

Development. These parasites do not multiply in the intestine, as their eggs require oxygen in order to develop. It is important to recall that for every hookworm found in the bowels a separate germ (young worm) must enter the body.

The parasites in the bowels lay hundreds of eggs which are discharged by the patients in their stools. An ordinary stool from an infected person may contain thousands upon thousands of these eggs. This is an exceedingly important point to remember, for it is only through the discharges from the bowels that these eggs escape from the patients and if all such discharges are properly disposed of hookworm disease can be stamped out of existence.

A few hours after the eggs are passed by the patient a young embryo develops in the egg and escapes from the egg shell. This tiny worm, which is scarcely visible to the naked eye, feeds for a few days. Within about a week it sheds its skin twice, in somewhat the same way that a snake sheds its skin. It now continues to live in the cast-off skin, but it takes no more food until it enters a person.

Mode of Entrance. The young worm may enter persons in two different ways. First, it may be swallowed in contaminated water or food. Secondly, it may bore its way through the skin. This second method of infection is doubtless the more common. The young hookworms in boring through the skin produce an attack of "ground itch" (also known as "foot itch," "footsore," "dew itch," "dew poison" etc). Thus "ground itch" is usually the first stage of hookworm disease. It is quite generally believed that the wearing of shoes will prevent ground itch, and this popular belief is correct to a great extent, namely, so far as ground itch on the feet is concerned; wearing shoes will therefore reduce but not eradicate hookworm disease.

After entering the skin, these young worms make their way to the blood, and pass with the blood through the heart to the lungs. From the lungs the parasites pass up the windpipe, down the gullet, through the stomach, to the small bowels, where they gradually shed their skin two more times, become mature, and then begin their work of injuring the wall of the intestine, of sucking the blood, and of poisoning their victims.

Factors There are certain factors which are especially favorable to the development of these parasites.

Favoring Climate—Climate has an important influence on these worms. The hookworms which infest man require a certain amount of warmth in order to develop and on this account they thrive better in the South than in the North. Therefore, generally speaking, this disease is a tropical and subtropical malady. In the United States it is a southern disease, and its occurrence north of Maryland is exceptional. For practical purposes, we may say that the Potomac and the Ohio rivers form about the natural northern limit of its distribution, although some few cases do occur north of these streams.
Soil.—A loose soil, such as a sandy soil, is much more favorable to the development of the worms than is a hard, compact soil, such as clay. Moisture and shade.—As the drying action of the sun is usually fatal to the worms when on the ground, shaded and moist localities are more favorable to the disease than are unshaded and dry localities.

Soil Pollution.

It has been stated in the foregoing that the only way by which the hookworms’ eggs escape from the patients is through the stools. As this is also the usual method by which the typhoid germs escape, it is seen that careless disposal of the body waste is favorable to the spread of both of these maladies. The contamination of the ground with disease germs is known as “soil pollution,” and other things being equal, hookworm disease will increase in frequency as soil pollution increases, and will decrease as soil pollution decreases.

Exact studies have not as yet been conducted in this country, covering any great area in regard to the percentage of negroes infected with hookworm disease as compared with the white race in the same localities, but it is thoroughly established that hookworm disease does occur in the negro as well as in the white, and that in some countries it is especially common in the negro. The comparative statistics thus far available for Georgia and Florida show (in accord with what theory demands) that in our Southern States also hookworm disease is more common in the negroes than in the whites.

An examination of several hundred farms in North and South Carolina, Georgia, and Alabama shows that of the farms having no privies twice as many are occupied by negroes as by whites. This would indicate the negro to be a much more frequent soil polluter, and if he is infected with hookworm disease in equal proportion to the white race he will, because of his more frequent pollution of the soil, be a greater factor in the spread of the disease to others and its general dissemination throughout the community.

Effects.

The effects of hookworm disease may be divided into the direct effects and indirect effects.

Direct Effects.—Under the direct effects of this disease we may include the symptoms and deaths due directly to the infection. My experience has been chiefly among the whites and, in comparison, only to a limited extent among the negroes. Thus far I am persuaded that in reference to symptoms this infection is more severe on the white race than on the negro race, and this experience is in harmony with the observations of other workers. To put it into technical language, the negro (when compared with the white) presents a relative immunity to the direct effects of hookworm infection. This observation carries with it a very important thought, namely, that probably the negro race has had this disease for so many generations in Africa that it has become somewhat accustomed to it. This thought may be a very comforting one to the negro from one point of view, but from another viewpoint it must be decidedly disquieting to the white race, for it carries with it the thought that on an average, in the rural districts from the Potomac to the Gulf the 833 negroes to the 1,000 whites (found in eight States) represent theoretically 833 possible hookworm reservoirs who do not suffer so seriously from the direct effects of the malady, who are therefore not so likely to come under treatment, but who are likely to act as spreaders of the disease to the rest of the community; it also possibly indicates that the negro has brought hookworm disease with him from Africa and because of his soil pollution has spread it broadcast through the South, thereby killing thousands and causing serious disease among tens of thousands of others.

Whether this line of thought be considered justified or not, we must all frankly face the fact that the negro does have hookworm infection, and because of his insanitary habit of polluting the soil, especially in rural communities, his presence is a menace to others not only in respect to all other diseases spread by soil pollution.

Among the symptoms due to the direct effect of hookworm infection the following are especially prominent:

In severe infections the patients may be underdeveloped both physically and mentally; they present an anaemia (often mistaken for malaria); the skin may be dry and tallow like; the hair is dry; the shoulder blades are often very prominent and the abdomen is frequently swollen (“pot-belly”); there is usually a tenderness in the pit of the stomach; in about half of the severe cases there are (or have been) ulcers on the skin; in about 90 per cent of the cases the patients have had “ground itch;” the hair in the armpits and on the pubis is frequently very seamy. Hookworm disease is the most frequent cause of “dirt eating.” It is also the most common cause of anaemia found among farm and cotton-mill hands in the South. The patients are weak, and this weakness brings with it an indisposition to work, frequently interpreted as “laziness.”

Indirect Effects.—As this infection injures the intestinal wall, brings about an intestinal catarrh, and thus interferes with the digestion, it naturally increases the chances of death in case a person is infected at the same time with some other disease in which good nourish-
ment is important for recovery. As hookworm infection decreases the number of red blood corpuscles, it also increases the chances of death in case a person is infected at the same time with some other disease in which a good supply of oxygen to the tissues is important for recovery. Since good nourishment and proper functioning of the blood are two of the most important factors in recovering from pulmonary tuberculosis (known commonly as consumption), it is to be expected that persons who have both tuberculosis and hookworm disease will stand less chance of recovery than will persons who have consumption but not hookworm disease. In other words, hookworm infection has an indirect effect in increasing the death rate from pulmonary tuberculosis. It has been estimated that it about doubles the chances for death in cases of this disease. Now, even admitting that the direct effects of hookworm infection on the negro are less than on the white, it is a suggestive combination of facts that the tuberculosis death rate is about three times as great in the negro as in the white (namely, 490.6 to 173.5 per 100,000).

It is evident, therefore, that the eradication of hookworm disease is of great importance to the negro in his fight against tuberculosis.

Quite recently some very important observations have been made in Manila upon the indirect effects of hookworm infection. When the Americans took charge of Bilibid prison the death rate was 238 per 1,000 per year; by improving the sanitary conditions this death rate was reduced to about 75 per 1,000; here it remained stationary until it was discovered that a very high percentage of the prisoners were infected with hookworms and other intestinal parasites; then a systematic campaign was inaugurated to expel these worms, and when this was done the death rate fell to 13.5 per 1,000.

Although the death rate among our American negroes has not as yet been reduced in a similar way, it can not be doubted that a reduction of their hookworm infection would result in a reduction of their general death rate (from all causes), which, when compared with the death rate of the whites, is in the ratio of 29.6 to 17.3 per 1,000 per year for the registration area.

Education and Hookworm Disease. Hookworm disease has a serious effect upon the mind and prevents children from fully and properly assimilating the education that the country is offering them. Hookworm children are apt to study and learn with difficulty. As I visit the country schools and pick out the children suffering from this malady, the teachers generally exclaim: "Why, Doctor, you have picked out the most stupid children in the class!" That same mental handicap which this disease places upon the white children seems also to rest upon the negro children, although, as already stated, my observations among the negroes are much less extensive than among the whites.

The point to be made is this: Because of the effects which this infection has upon the mind, the present soil pollution (which spreads the disease) so prevalent among the negroes is necessarily resulting in a severe handicap in the mental advancement of the negro children.

As nearly as can be estimated (admittedly a rough estimate) the physical condition of the southern country school children with whom I come in contact is such that they can not possibly assimilate much over 70 per cent of the education they receive; in other words, somewhere about 30 per cent of the educational efforts are wasted, and prominent southern educators have stated that this estimate is very conservative. It may be stated that many of the country schools and country churches are breeding places for disease, and whatever they may do for education and religion they are in their present insanitary condition a menace to public health; a large number of the country schoolhouses and country churches are not provided with any privy, and children congregating at the schools by polluting the soil may spread disease to one another.

Prevention. All persons, whether infected or not, but living in the infected area, can aid in preventing this malady. The most important point involved is to prevent soil pollution. As stated in the foregoing, because of the absence of privies many farms, schools, and churches are acting as a medium for soil pollution, resulting in hookworm disease and certain other maladies.

If there is a sewer present, it is best to construct a water-closet and connect it with the sewer. If there is no sewer, the next best thing is to construct a septic tank and a water-closet. There are many who can not afford to have a water-closet with septic tank, and under these circumstances the next best thing to do is to construct a sanitary privy and to clean it regularly. The following are the chief features of one type of this important outhouse: There should be a good floor extending under the seat as well as under the front part; a water-tight tub or barrel or galvanized pail is placed under the seat; on the bottom, inside of this receptacle, is placed a thin layer of sand or dirt each time it is emptied; the tub should be filled about one-fourth full with a 5 per cent crude carbolic-acid solution (1 part of crude carbolic acid to 19 parts of water); if economy is an important point, the tub may be filled one-fourth full of water and a cup of kerosene poured on the water, but if kerosene is used care should be taken not to throw any lighted
matches into the tub; the back of the privy is provided with a hinged door, which is opened only in order to remove the tub for cleaning, while at other times it should be closed tightly in order to keep out flies and animals; the seat should be provided with hinged covers; the front door should be hinged so that it will close well, to keep out the rain; it is a good plan to place a ventilator in the roof, also one on each side near the roof, and one each side of the tub; it is desirable to screen with wire netting all of these ventilators, in order to aid in keeping out the flies.

The tub should be cleaned regularly, once or twice a week; the night soil should be burned or buried; if buried, this should not be done within 300 feet of any well, creek, spring, or other water supply. Under no circumstances should the night soil be used as top dressing on the gardens; if used at all for fertilizing purposes, it should first be allowed thoroughly to ferment, preferably in a vat, and then it should be plowed under in fields far removed from the house; while fermenting, a cup of kerosene oil should be poured into the vat in order to keep flies away; it is dangerous to dump the night soil on the manure pile, as flies breed in the manure, and if the night soil is mixed in, the flies may carry fecid material to the kitchen or dining room and infect the food with filth and with disease germs.

Still another plan is to build a vault under the privy. If this is done, it is well to pour a cup full of kerosene oil into the vault occasionally in order to repel flies.

The average privy found in the South is known as a “surface” or “dirt” privy, and is a very poor substitute for a water-closet, as it permits soil pollution.

Whatever style of closet is selected or whatever fluid is used, the chief points to be held in mind are: Prevent soil pollution; so protect the night soil that flies and other insects cannot breed in it or feed upon it; and keep it out of the reach of animals of all kinds.

It lies within the power of preachers and teachers to play a very important role in reducing the death rate. They are the persons to whom many people look to set the example. If preachers and teachers themselves permit the yards of churches and schools to be defiled by soil pollution, it need not be thought strange if farmers permit soil pollution to occur around the homes. Further, it should be recalled that every church and every school around which soil pollution is permitted to occur may act as a disease-breeding center from which infection can be spread to the farms and homes. Further, also, not only can preachers and teachers do good by setting an example in preventing soil pollution, but if they will point out to their friends the dangers which this

pernicious habit carries with it, they can be very important factors in inducing the public to institute more sanitary customs, and thereby they can be important factors in reducing the death rate.

**A NEW TEST FOR BLOOD.**

Testing for the presence of blood under various conditions is a common procedure in both clinical and legal medicine. For this purpose there are several good and reliable methods which give accurate and delicate indications of the presence of the blood pigments. Most of these are, however, more or less complicated or require a certain amount of expensive apparatus, and are, in consequence, though of value in the laboratory, somewhat cumbersome for private practice. The test requires a microscope and the spectroscope test demands an instrument but rarely found in the equipment of the practicing physician. The guinea test is good, and is made in a test tube, but has the disadvantage of requiring drugs not often found in an office, and demanding careful technique in carrying out its various steps. Recently, however, Julius von Kossa of Budapest has devised a new blood test (Deutsche medizinische Wochenschrift, August 26, 1909) which is simple and requires only such chemicals as are found in the cabinet of every country physician.

The principle of this test is based upon the insolubility of hemoglobin in alcohol. To ten cubic centimeters of a watery solution of the material to be tested is added an equal amount of ninety per cent. alcohol. The solutions are mixed carefully without shaking and five cubic centimeters of chloroform added. This is then mixed gently. If blood is present the hemoglobin is precipitated out of the solution, and falls to the top of the chloroform, where it collects in a layer of tiny red droplets.

The author claims that the test is extremely delicate, giving a definite reaction with a solution containing so little blood that a layer six centimeters thick gives no absorption band visible in the spectroscope. In applying the test to the urine, von Kossa varies the concentration in that to the ten cubic centimeters of urine he adds an equal amount of distilled water and only five cubic centimeters of alcohol. After adding the chloroform, as above, especial care must be taken to prevent shaking and consequent emulsification. Occasionally instead of the hemoglobin droplets a rose-colored ring appears between the chloroform and the alcoholic solution. If this happens the overlying fluid is poured off and a few cubic centimeters of alcohol added, whereon the typical droplets appear.
The simplicity of this test is an advantage, and if on further use it is found to be as delicate and as accurate as the author considers it, it should prove, though perhaps not a great addition to a scientific laboratory, at least a useful help to the practicing physician.—Medical Record.

** A HANDSOME ORNAMENT. **

The committee appointed last spring to bring to completion a Coat of Arms for the Atlas Club has finished its work after many delays and discouragements caused by the makers.

The sample arrived about the first of November, and on this page appears a cut which will give field members some idea of its elegance.

While difficult to describe accurately, it is something about as follows:

The metal portion is of copper about 8¼ x 9 inches and is a fine piece of the metal-workers' art. As outlined in a former issue of The Bulletin, the matting is of pebbled goat texture with raised ornament feature overhanging and falling to the sides of the rest of the arms proper, over the center of which is a right hand clasping the decoration.

The figures of the arms proper are all upon a raised and burnished plain and are the ornamental crest and escutcheon—a burnished beveled shield bearing a chevron, upon which is the emblem of the Club, the Atlas bone. The chevron bears closely arranged parallel perpendicular lines, signifying, in heraldry, red, while the plain burnished surface similarly signifies white, thus giving the Club colors. It was originally intended to have the colors themselves appear in red and white enamel, but the makers state that owing to the process by which these shields are made it is impossible, so the above plan was substituted.

Beneath the escutcheon is a scroll or streamer upon which is cut in Greek letters the motto, "To one another friendship, to the people, health."

The copper design is mounted upon a Norman beveled shield of mission oak, of beautiful, lustrous surface, the grain of the wood showing through enough to give it depth and character. The size of this shield is 16 x 16½ inches in its widest dimensions.

This makes a very effective ornament for office, den or home, and one we feel sure our members will be glad to have.

Owing to the quality and workmanship it was not possible to get them even wholesale so that they could be furnished to members at less than $5.50, express to be paid by recipient. Our brothers desiring these should send money order or draft for this amount to the Pylorus of the Club, and shipment will be made promptly.
THE BULLETIN
OF THE ATLAS AND AXIS CLUBS.

IRVIN FISH CRAIG, Editor.
M. A. Roys, Business Manager
Dr. Carrie M. Mendie, Axis Editor
Dr. Nannie J. Chappell, Axis Grand Chapter Editor

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Copies lost through change of address without notification can generally be furnished by the editor at ten cents per copy.

KIRKSVILLE, MISSOURI, NOVEMBER, 1909.

EDITORIALS.

Life Membership The Life Membership Certificates are meeting with favor by our field members, and at each business meeting a number of applications for them are read.

Those issued to date are to: Dr. A. T. Still, Complimentary; Dr. M. A. Barr, Muscatine, Iowa; Dr. E. P. Wood, Los Angeles, Calif.; Dr. J. R. McDougall, Chicago, Ill.; Dr. Irving Colby, New London, Conn.; Dr. Frank H. Smith, Kokomo, Ind.; Dr. J. F. Stevenson, Royston, Pa.; Dr. J. Leeoy Near, Berkeley, Calif.; Dr. W. A. Merkley, Brooklyn, N. Y.; Dr. Frank P. Heine, Pittsburg, Pa.; Dr. J. K. Dozier, New Haven, Conn.; Dr. Wm. A. Atkins, Clinton, Ill.

Some of the Atlas men in the field have not been exactly clear as to the length of time they are entitled to paid-up subscription to The Bulletin on the ten dollar plan, the reading of paragraph 3, Sec. 8, Art. VIII not being quite clear.

It is as follows: "Provided as to paragraph 2 that for each previous year's dues so applied one year shall be deducted from the ten year period for which a paid-up subscription to the Bulletin is therein offered."

This means that the ten year period of paid-up subscription is not to be counted from the date of the issuance of the Life Membership Certificate, but from the date of graduation. To illustrate, if a member has been out eight years and pays two dollars he is entitled to The Bulletin for two years and also a Life Membership. At the expiration of the two years he is entitled to The Bulletin at fifty cents per year. If he has been out four years and pays six dollars he is entitled to The Bulletin for six years and afterwards for fifty cents per year, etc. The two illustrations given presuppose the Bulletin account to be square at the time of taking out Life Membership.

In other words, whatever dues a member has paid in previously pays his subscription to The Bulletin at the rate of $1.00 per year up to the time the Certificate is issued, and he receives paid-up subscription to The Bulletin for the remaining years of the ten. Is this now clear?

The Bulletin Appreciated. This month has brought us a number of "roses" on the two preceding numbers of The Bulletin. We certainly appreciate your kind words, doctors, which are an incentive to harder work.

It is our aim to make The Bulletin one of the best osteopathic publications extant, and if our field members will give us a helping hand, we believe we can make the reception of The Bulletin an event to be looked forward to each month by our members. As The Bulletin is the connecting link between our local and field members, we are especially gratified to be meeting the approval of the latter in our efforts to give them something interesting and valuable.

Brother O'Neill, (96) of New York City expresses his appreciation of the articles on practice as follows:

"I want to congratulate the Club on The Bulletin as it is now published. The last two numbers under the direction of Editor Craig are certainly the best that I have ever seen. The students thought when I was in school that under the editorship of Dr. Rogers the Club was editing a fine Bulletin, but I certainly think that the Bulletin as it is now published is as good and better, and if you can keep it up to the present standard with articles of such excellence as the ones on Typhoid Fever and Scarlet Fever by Dr. Geo. Laughlin, you will certainly have earned the regard and commendation of every field and student member of the Club.

Regarding the literature on Typhoid, I can speak from experience, for I have just recovered, coming through a ten week's siege of it this
summer, and am only now gaining back my strength; and if anywhere, in any medical text book on Diagnosis or Practice (and I have five or six of the standard authors and have read them all) there is as clever, complete and absolutely true description of that disease as Dr. Laughlin's lecture, I have failed to see it.

Dr. B. F. Still, (08) of Elizabeth, N. J., writes: "I enjoy reading The Bulletin very much, and think the management is to be congratulated on getting out the best numbers I have ever seen. The articles of Dr. Geo. Laughlin are especially interesting and instructive."

Dr. R. McCrae Echols, (Jan., '07) of Winston-Salem, N. C., says of the Practice articles: "The Bulletin I am glad to note is forging ahead and assuming large proportions. I congratulate the Club on its improved appearance, and also the interesting and valuable reading matter contained within its covers. If there was only one article, Dr. George's lecture on Scarlet Fever in The Bulletin would be worth for October and full amount of the $1.00 I am sending you for a year's membership 1909."

Dr. A. L. Evans, ('99) Editor and Manager of The Herald of Osteopathy, Chattanooga, Tenn., in sending in his field dues for the current year writes: "I want to congratulate you upon the improvement in The Bulletin. No member should complain that he is not getting the worth of his money."

Dr. J. Pierce Bashaw, ('01), of North East, Pa., closes a letter to the Club by saying: "I want to congratulate the Club on the splendid quality of The Bulletin."

There are others, too. We are not quoting them in a spirit of ostentation, but we take it for granted that some of our brothers are not satisfied with The Bulletin—it's impossible to suit everyone—and we want such to know that there are Atlas men in the field who seem to be perfectly satisfied in this regard.

In connection with school duties it is a big job to issue The Bulletin each month, and we believe if we could only impress this upon our field members by some means we believe they would help us more freely.

** Club **

Entertainments. We are thankful to one of our field members this month for calling our attention to the opinion prevalent among some of the Atlas men in the field that part of the money they pay into the Club for yearly dues is spent for entertainments, dances and social functions.

We quote the following paragraph from his letter: "You mention that field members in some instances have not kept up their dues. Cannot this be because they think that some of the money so paid was spent for the weekly or monthly entertainments of the local students at the Club? I know in my time it was thought by some of the field members that such was the case, although it was not so, and local entertainments were paid for by the students who enjoyed them, and never came out of the Club dues or Club funds, nor should they. I don't believe they do now, but some field members may not so understand it, and perhaps it would be well if that point was clearly noticed in The Bulletin from time to time."

The doctor is right. Various little social functions are held in Atlas Hall from time to time, but they are practically private parties and not given nor paid for by the Club, but by the members of the Club participating in them.

The Club is as scientific in purpose now as it ever has been, and no field member is justified in assuming that local members of the Club are not as serious minded nor imbued with as high osteopathic aims as were members of the Club when he was a local member.

We fully agree with the doctor quoted. As stated in one of the editorials in the September Bulletin, the Club is composed of serious-minded men, and osteopathy is their watchword. The social feature of school life here is more than covered by other organizations and this, the oldest foremost and best of osteopathic clubs stands for our science first, last and all the time.

Brothers if any of you are not paying your dues because you think original purpose of our organization has been lost sight of, you are making a mistake. Your money and ours is being used to the best of our ability to raise the standard of our practitioners.

This matter is fully covered by the Amended Constitution. Read Art. VIII, Sec. 2-3.

** Field Members. **

Some few of the field members to whom we have appealed for contributions for The Bulletin have promised articles, and while this shows a bent in the right direction, the articles would be even more welcome than the promises.

As we said in our initial editorial, we cannot make The Bulletin what it should be unless you will help.

We realize that many of you feel that your composition is inadequate to express just what you want to say—the editor feels somewhat handicapped that way—but do the best you can.

A number to whom we sent personal appeals did not even give us
a reply, which we believe business courtesy should inspire, leaving out altogether the question of loyalty to the Club.

We know, brothers, that there is a strong tendency to get out of touch with the Club after you have been away from Kirksville a couple of years. We realize that names new and unfamiliar to you appear in The Bulletin in the local news, but some of these names may become prominent in the osteopathic world some day, and you may be proud to say they are Atlas men.

One field brother intimates that The Bulletin is a local paper. If this brother, or any other, will tell us how to fill it with field news except through the medium of our brothers in the field we will appreciate it.

The Bulletin stands for you and your Club. It will be what you make it. It reaches the most prominent men in the profession, and if you have an idea or theory that you want to exploit to the thinking men of the profession—those who are doing things—send it to The Bulletin.

Our friends say the September and October numbers of The Bulletin are good, and worthy of preservation for the articles on Practice if for nothing more.

Your membership in the Atlas Club is something to be proud of, and the more interest you take in it, the more help you give its organs—your organ—the higher the standard, and the prouder you will be that you are affiliated with it.

***

Earnestness. We spoke last month of the fact that many students do not take up the study of osteopathy in a serious way. To them osteopathy is the means of a livelihood and really not a profession.

This is very much to be deplored. Osteopathy is one of the great sciences, and should be treated as such. Is it not much more scientific than medicine, which boasts of being one of the great sciences? Surely.

Some of these students (we feel more like calling them boys and girls) would be more in harmony with a course in massage or stenography or something of that sort. They do not even seem to think, much less realize, that at no very distant day they will be dealing in human lives!

Oh, yes, you can set a lesion in the neck and cure a headache, you can adjust an innominate and relieve some suffering woman, but did you ever stop to think that some day—and who knows how soon—you may be called in an emergency case where your lack of preparation now will mean the loss of a loved one—possibly the bread-winner whom you might have saved had you taken your preparation more seriously?

Call it “graveyard talk” if you want to. It’s true, and you know it. All you have to do is to close your eyes and call to mind some instance within your own experience where, had an incompetent physician been called, some loved one would not be with you now.

Awake to your responsibilities and make earnest effort to be what you should.

***

Opening an Office. Last month we gave a reprint of a pamphlet circulated by a young osteopath who had just established himself as an osteopathic missionary, and invited our field members to give their opinions as to whether this was ethical or not, and also what they would suggest in relation to establishing one’s self under like circumstance.

This is something most of you have been through and it is something which will face us, of the next graduating class, in less than a year, and we would appreciate your discussion of the matter.

***

Boost—The organization does not exist which is run in such manner that everyone is satisfied—the makeup of man is not along those lines. Suppose something about the Club does not suit you, that is no reason why you should not bend your energies to advance its interests. Perhaps the fellow whose methods you do not like is just as much in earnest, and strives just as hard, maybe harder, to see osteopathy advanced as you. We are not of the same minds, of course, and luckily so. Were it not for earnest efforts along divergent lines on which the minds of men are bent, what an unbearable place this old earth would be! You should at least be charitable enough to give the other fellow credit for being sincere, even though you think him incapable along the lines upon which he is working. Help him along in your way—it may be better than his, and if so, he is apt to see it; if your endeavor is in good faith, the chances are that he will receive your advances in the spirit you wish. Boost, brothers, don’t knock.***

Field Chapters. Within the last two years there has been quite a little discussion in regard to the advisability of chartering subordinate chapters. Nothing was done for considerable length of time, but when the Constitution and By-Laws were revised last spring provision was made in Art. IX of the Constitution and Art. II, Sec. 1.
of the By-Laws for the organization of subordinate chapters. This was
done at the earnest request of a number of field members, our Cali-
ifornia brothers desiring to organize a subordinate chapter as soon as
possible. Nothing has been heard from them since the plan became
available.

The matter is now brought to the attention of the editor by a letter
from brother Perrin, of Denver, who, among other things says:

"It was one of the enjoyable features of the Minneapolis Conven-
tion to meet with the Atlas men, and, by the way, the Atlas men are
doing things in every avenue of osteopathic activity. I for one am
in favor of extending our lines so as to organize a Field Chapter so that
men of prominence and ability can be taken into the Club circles, and
to strengthen our Club from a strictly osteopathic standpoint."

Where will the first subordinate chapter be organized?

** * *

New Directory. As mentioned in the October issue of The Bulletin,
the Clubs have decided to issue a joint roster of mem-
bers, and the work has been inaugurated.

It will be arranged, both alphabetically and by states and cities as
previously, so as to be available for ready reference, and not a list
which will only be in the way in your desk.

It will contain a complete list of members of both the Atlas and
Axis Clubs giving year of graduation and present address. While the
name and address of suspended members, or those who are delinquent
in the payment of dues will appear, they will be indicated by * or other
suitable means. Life members will also be suitably indicated.

See to it that your correct name and address are in possession of
the Clubs, and that you do not belong to the delinquent class.

The Committee expects the work to be completed and Directory to
be mailed about the first of the new year.

** * *

Open Meeting. A number of guests from the June, 1912 class gathered

with members on the evening of October 23rd which

was regular open meeting night.

Dr. Geo. Stull and Dr. Wm. Smith were both scheduled for addresses
but by irony of fate Dr. George was called to Kansas City the night before
and Dr. Smith was out on an obstetrical case the night he was on the
program.

However, cigars were plentiful, cards and other games were played,
in addition to which brother Jacobs gave a vocal solo, instrumental

solos were rendered by brothers McGonigle and Hollis, brother Crocker
gave a dialect recitation, while doctor Deason gave an interesting account
of some physiological laboratory experiments conducted at Rush Medical
College, Chicago, the past summer, which tended to prove the error
of the drug theory.

Dr. Colpantz closed the program with a recital of some harrowing
experiences of the past summer.

The evening was much enjoyed despite the fact that the speakers
disappointed us by other absence.

** * *

Club Reception. The Club did not hold a reception to the men of the
new class this year. Of course there was divergence
of opinion and much discussion.

A majority thought it was not the best means to gain knowledge
of the desirability of new men for membership, and the opinion was freely
expressed that so long as the Club stands for the best in osteopathy and
selects members with the good of the science in view that we will not
lack for membership of the right kind.

** * *

Hospital Dr. Smith designated Saturday, November sixth as
Saturday. "Hospital Day" and plans were made accordingly.

He must also have spoken to the weather man, as
day was ideal.

At nine o'clock or earlier, students began to gather, at the A. S. O.
A large number appeared in costumes weird, fantastic, comic,
hideous and otherwise. The various school organizations were rep-
resented by floats, groups and individuals.

To attempt to describe it in detail would fill this issue alone, but in
short it was the best ever seen on the occasion of Hospital Day.

It was the desire to raise $1500 on this day, a house to house canvas
being made but at this writing it is not known definitely how much was
realized.

** * *

The Editor would appreciate it if some one will kindly furnish him a

copy of The Bulletin Vol. S. No. 2 issued October, 1906, to complete
his file.

** * *

The Bulletin is a little larger than we intended this month, but
the December number will be reduced so as not to make the average
cost burdensome to the Clubs.
Millard. As one of our field members put it, "Atlas men are doing things in every avenue of osteopathic activity" and this is again illustrated in Dr. Fred Payne Millard of Toronto, Canada, one of the Atlas '01 boys.

The "Osteopathic Physician" for September gave brother Millard quite a write up as one of the progressive sort of osteopaths. To quote from that article:

"Dr. Millard is one of the workers, all right, and has been making good right along in his private studies and in his practice. He has done a great deal of special work in the pioneer department, and has been writing some interesting and valuable contributions for the A. O. A. Journal along this line.

The profession will recall that Mr. Millard has been studying new angles for illustrating anatomy and has been seeking to blaze out a "royal road of learning" for osteopathic and medical students. He has worked out complete sets of nerves and blood vessels in model form, placed in proper relations inside an actual skeleton, so that the present student who has this equipment does not have to see these intricate structures in pictures and printed discussions and then try to imagine how they stack up in their real dimensions in the anatomy. With Dr. Millard's model before one, he has the basic structures of the nerve and blood systems right before him very much after the fashion of actual life.

Dr. Millard also makes use of these models much of the time with his patients, being able to demonstrate to the layman just how and where the nerve connection comes from the spinal cord and how they are often interfered with in the foramina of the spinal column.

We believe that Dr. Millard has a good deal of further usefulness for the profession along this line, and congratulate him on finding time in midst of busy practice still to keep this sort of pioneer work going ahead."

**

Dr.? Are osteopaths modest? Some of them. Anyway, here is one that is.

He writes an interesting letter to the editor and as a reason for us to withhold his name quotes Dr. Gerding who said that "a great many osteopaths rush into print long before they really know their letters."

"I have been treating a couple of cases of rheumatic fever. One is in pretty fair shape, and the other is otherwise; this last one had a bad mitral lesion besides being physically weak. Have been treating the case for four weeks, and you would hardly point to it with great pride, expecting the results to convert many disbelievers to osteopathy.

A young fellow had a very severe attack of chicken-pox about two weeks ago; the eruption covered his whole body and face; he looked like—the doctor forgot to say just what he did look like. After scaling he was left with little nodules which have not all disappeared yet. On Monday he went up to get shaved and the barber was scared and told him it was smallpox and would not shave him. On Tuesday morning the Marshal called to see me and in the afternoon the Health Officer was sent out to examine the case, and he pronounced it chickenpox. Perhaps the barbers will now come out of hiding.

I called on this Health Officer. He is an allopath. He asked me if I was satisfied with osteopathy and I said yes. He replied that he would not be, for what could we do with a case of diphtheria, etc.?

I did not try to tell him how, but asked him if he read the article in the Medical Record of a few days ago where over one page was devoted to tell how two New York doctors treated a case of diphtheria and scarlet fever without drugs. He paled in surprise, but admitted that he was not exactly satisfied with drugs and said "If you fellows would use some sort of medication you would have us beat to death."

**

Fiske. Dr. Franklin Fiske, formerly of the A. S. O. faculty and editor of the Journal of Osteopathy, who resigned Sept. 1st, has decided to engage in practice in the East, and has opened offices at No. 1 W. 34th Street, New York City.

**

Link. As mentioned in October number of The Bulletin Mr. E. C. Link, formerly of the A. S. O. Staff, resigned to engage in private practice.

Since last Bulletin was issued we learn that Dr. Link's new address is 517 N. Broad St., Elizabeth, N. J.

**

Wolfe. Dr. J. Meek Wolfe, who finished his P. G. course with the historic Skiddoo last February, drops us a note to advise that he is now located at Marion, Va., where he is doing well.

Dr. Wolfe wants to know if we cannot send some good men to Virginia as there are only ten or twelve osteopaths in the state. Who will respond?
The first initiation of the new term occurred in the evening of Oct. 16th, the candidate being Frank S. McNugile of the 1911 class.

The boys were all glad to welcome Mar to membership as he is well and favorably known. He has rendered instrumental music and accompanied soloists at the Club open meetings on a number of occasions.

Mar was formerly a clerk in a railroad office at Pocatello, Idaho, and became interested in osteopathy through a relative—Dr. Dalton of the Altman Bldg., Kansas City, Mo., and through taking treatments himself.

On Nov. 13th the following gentlemen were initiated:

Curtis H. Muncie, 1910, formerly of Brooklyn, N. Y., a relative of Dr. Forest Smith of Mt. Clair, N. J. He became interested in osteopathy through the replacement of some ribs, by Dr. Bandel, of Brooklyn, which were dislocated by a fall. The replacement of the ribs was followed by immediate relief and Mr. Muncie decided to study osteopathy instead of medicine.

Henry W. Clement was formerly a caterer at Nashua, N. H. He is a relative of Dr. Chas. G. Hatch, who interested him in osteopathy to such extent that he decided to take up the study.

Chas. J. Alexander was a student at Charleston, Ill., with High School and Normal School education. His observations of the practice of osteopathy on himself and friends coupled with the fact that he has three relatives in practice influenced him to take up the course.

James L. Walker, 1911, was a teacher at Memphis, Mo., but the merits of osteopathy won him to study the science.

Charles B. Doron was a manufacturer at Rochester, N. Y., and holds B. S. degree from Swarthmore College in Pennsylvania.

Osteopathic treatments achieved such results in his family that he decided to study the science at Kirksville.
the wheels or, we might say, the "knees" of social and professional relationships with the oil of kindly interest that professions of friendly feeling are ever proved to be genuine or lasting.

So the first friendly greeting counts for but little except as a beginning. But just there lies its immense importance—it is the beginning,—the only introduction possible to more intimate acquaintance in the future, and it can be made a true sample of what that acquaintance is to be, or it can be made a deceiving and disappointing forerunner of that future acquaintance either in promises that it does not fulfill or in lack of promises of what it means to fulfill. The perfect greeting of welcome is the one alone that lightly outlines future relationship and invites the test of time to prove its cordiality. It is such a one that the Axis Club would extend to the Freshman girls this evening. We would ransack our brains to the very innermost and cobwebbiest corners to find just the right language to describe the true spirit of the Axis Club toward the strangers in our midst.

First of all, we would welcome our new friends as fellow-women who are to be our neighbors and associates for some time to come. This is the broadest welcome that could be given to any one. It takes in every individual and applies at every time and in every place. Neither is there any phase of life to which a cheerful greeting between woman and woman does not add a brighter glisten. I have in mind now a young girl who was here for treatment some years ago. She was a bright, pretty little thing but was very lame. One hip was badly affected and she walked with a cane. She was not one of the despondent ones, however. Her bright face and smiling glance was a tonic more bracing than Paine's Celery Compound or Pabst Extract or any other patented concoction would be, even if it did all its advertisements claim for it. When one met her with a, "How do you do," she invariably would look up gaily and answer, with a smile, "I'm happy, thank you!" Her manner bore the sort of greeting that makes an impression. It has a subtle charm about it that one remembers just as one remembers the perfume of roses after the flowers are faded. Sometimes I think it is too bad that more of us have not that beautiful gladness of manner that I have just mentioned in that little cripple girl. With Riley, I can say:

"I must certainly believe.
When a man's just glad plum through,
God's pleased with him, same as you."

Again, we would welcome the Freshman girls as fellow-students. Such a welcome covers a narrower field than the last, but no less does it apply to every one of us and with a far deeper meaning; for it brings us together on the plane of common interests and of mutual hopes. There is nothing like work in common to draw people together. From the very first, one naturally takes an interest in a stranger if he knows that stranger belongs to the same profession, and nowhere is this more clearly to be seen than among osteopathic students and in osteopathic circles. Each is interested in all that pertains to all the others.

It is only natural, then, that we feel an interest in the Freshmen as fellow-students. We who have been here some time necessarily know more than they of the ins and outs of life in Kirksville and work at the A. S. O. The new comers will have ups and downs, to be sure, that have not yet appeared; but, on the whole, the "ups," exceed the "downs," and there is never any cause for discouragement anywhere along the line.

The most serious, the most important, and the most difficult thing, of course, will be the work at the school. Not that it is difficult to every one, for, to some, it seems to come quite naturally and easily. But the most of us have to work hard to cover the required ground, and there are very few who, some time or other in the course, do not reach a place, at least once, when they feel that they are at a stand still and don't know how they are to get any farther. But that is just the place where you mustn't give up. You have the unbounded consolation of knowing that many others before you have been in the very same place and have come out all right, and this thought ought to inspire you with a neverflagging try-try-again spirit. As John Kendrick Bangs neatly puts it:

"If you're in doubt if you can do
A thing some one has asked you to,
Don't sit you down and mourn and cry
Because you can't, but wink your eye
And try!"

And keep on trying. You will accomplish a great deal and something worth while, even if you don't quite come up to the standard you have set for yourself. As long as you feel that your work is not complete and perfect, you have something to continue striving for, and you can be like the shepherd dog who has treated a squirrel—look up and keep barking even if you can't quite reach the prize. Perhaps the squirrel will come down within reach, in time.

Even when one keeps up with the school work, it sometimes happens that he makes mistakes of different kinds, to the disturbance of his peace of mind when he looks back. But this shouldn't be allowed to trouble him. The thing to do is not look back, but forward, and then old mortifications and humiliations will have no disturbing power. In
one of his talks before a former graduating class, the old Doctor once said: "The good soldier does not say, 'Where did we camp last night?' but 'Where will we camp tomorrow night?' Let the past go; look forward!" And if you are one of the Old Doctor's good soldiers, that is just what you will all do with whatever blunders you may make,—let them go; look forward to future deeds that will not be blunders.

There is no more inspiring sight on earth than watching some one or something, bravely struggling against heavy odds without giving up or getting discouraged. It is all the same whether it is a gritty little spider trying to weave a web in a strong wind, or an A. S. O. student battling perseveringly with Cunningham's Anatomy—the struggle is on the same general principles. Such effort inspires admiration of a different sort from that inspired in any other way, and it is as the result of such effort that the greatest successes have come.

This makes me think of a little story I once heard about a certain Irish lad named Pat, who certainly seemed to have the odds against him, but who was, none the less, equal to them. It appears that, one icy winter morning, Pat arrived at school very tardy.

"Why Pat," exclaimed the teacher, frowning disapprovingly, "What do you mean by coming to school so late? It is half past nine o'clock!"

"Sure, mum, Oi couldn't help it," exclaimed Pat. "Oi thought Oi'd never git here at all, at all. The road was that slipper y that for every step Oi took forwards, I slid two backwards!"

"But," objected the teacher, "if that was the case, Pat, how did you get here at last?"

"If ye please, mum," said Pat, "Oi had to turn around and go the other way."

This story ought to be proof enough that there is always some way out of a difficulty. So long as we don't get discouraged, it doesn't matter if the odds are against us or if we happen to blunder a little, now and then. Everybody makes blunders and sometimes they are good for us, for we may profit by our own blunders as well as by those of other people.

And you mustn't think that the struggles with anatomy, physiology, and kindred subjects are the only trials that are likely to befall the new comer at the A. S. O. and Kirksville. There is the gauntlet of boarding-houses to be run and the terrors of various lodging-houses to be braved. You may learn what it is to sit at one table where soup and plum-pudding are served for breakfast, and at another where posseties and batten cakes come on for dinner. Or you may have the experience of being forced to find new lodging because a baby cries con-

No doubt, if I went on, I could name other hardships that the stranger is likely to meet in Kirksville, but I don't want to leave the impression that hardships are the only things to be found here, either in the town or in the school. No indeed! They say Kirksville is noted for just two things, osteopathy and mud. I call you all to witness that this is my first mention of the mud, and I promise faithfully it shall be my last. However, in passing, I should just like to be allowed to state my theory that the reason Kirksville is noted only for these two things is that osteopathy and mud are Kirksville's two commodities that stick.

And remember, I said when I first began that our life here, as a rule, has more ups than downs, and its pleasant phases, therefore, will be numerous enough to more than offset the more trying sides. I have gone into the hardships so at length only to, in a manner, prepare you for them, that you may not be surprised and discouraged when they come and, in case they do, that you may have the comforting assurance that you are not alone in such experiences,—comforting on the foundation principles of the old adage, "Misery loves company," you know.

But I am proud to say that we are sure we can welcome the Freshmen girls to more happiness than misery, and they will see more sunshine than shadow if they but look for it. To every one that is properly fitted for it, the school work itself, though hard, will be a constant delight, while social privileges and all the outside adjuncts that go to make life
pleasant are not lacking. The cosmopolitan nature of Kirksville's student population makes congenial companionship always at hand in abundance for everybody, while church, club, and other popular institutions contribute, in greater or less degree, their share in rounding out the opportunities for culture and recreation that the place affords.

It is common for students of both sexes, in not the best of health, to come here and study while taking treatment, thus gaining the greatest professions, osteopathy, and the grandest of blessings, health, at the same time. Possibly some of you are of this class and, to your praise and encouragement, we want to say that, time and again, the plan has been carried out successfully, and there is no reason why it should not succeed again in your case. In fact, the evolution from sickness to health, side by side with the evolution of the individual into an osteopath, is so common and so marked as to be quite familiar to every one who is least familiar with Kirkville. Some time ago, a patient here, in noticing the fact, said that to her it seemed like a new theory of evolution that beat Darwin's all to pieces. She said that in this new system the origin of the species was in their ills, the development of the species was in the study and treatment, and the perfection of the species appeared in the finished, healthy, osteopath. She amused herself by working out her theory in rhyme. I hope any of you who may be in need of it will go through this very process of evolution. It went something like this:

"Evolution a la Kirksville,"

(1) Origin of Species.
"There was a sickly man
Of Texas or some other kith or kin,
Whose weight of brains compared
Quite favorably with any, masculine.
"One day he heard a tale
Of funny doings in a distant land,—
Of health and strength restored
By a few punches from a practiced hand.
(2) Development of Species.
"'Ah, Ha!' the sick man cried.
'That doesn't sound much like good common sense;
But I'm laid up, so I'll
Just test the matter and its excellence.'
"He took the punching stunts,
Then turned his wits to solve their mystery,
Mid books and crooked bones
And skeletons in gruesome company.
the feather-bed, to be tattered and scattered by the gale; be the cyclone itself. Twirl! even if your field to twirl in is nothing but a tea-cup. Keep twirling! Gather up sand as you go and diffuse it throughout your general make-up. Be a gritty little whirlwind, and, be assured, you will sweep every obstacle before you!

**CASE REPORTS.**

Female, age forty-four. Mother of seven children. Had received medical treatment at intervals during past twenty years for "liver trouble." When first examined presented the following symptoms: Temperature 103 degrees. An enlarged cyst which reached to umbilicus and so distended that palpation disclosed it as a very hard tumor with extreme tenderness. This tenderness extended along course of biliary duct and common duct. Enlargement of liver to such an extent that lobes could be readily outlined, below ribs. With each inspiration dull heavy pain in region of liver. Sallow skin, with considerable jaundice. Almost total occlusion of biliary passages from catarrhal condition. The pain constant with extreme exacerbations—patient compelled to assume semi-reclining position. Loss of appetite. Periods of persistent vomiting followed by more or less relief.

Lesions: Fifth to tenth dorsal very tender with marked deviations; depressed ribs on right side; anterior right innominate. There were many other minor lesions throughout the spine as patient had never had osteopathic treatment.

Treatment given often—twice daily, and directed to correction of lesions with manipulation of the cyst according to the Old Doctor's instructions for emptying the gall bladder in such conditions. The local manipulation resulted each time in partial emptying of cyst, and great relief attained.

I was called on Sept. 12th and dismissed the case Oct. 1st, at that time patient was able to resume household duties stating that she not only felt relief from the condition, but felt ten years younger.

Dr. Nelle Ferry.

**Mr. A., age fifty-five. History of chronic constipation; tumor on right side of some months standing. Patient had had but one movement from bowels in three weeks, under medical treatment, when an operation was advised as a last resort.

Examination revealed ascending and transverse colon greatly distended and packed, and the supposed tumor was a marked impaction in the right iliac fossa. Marked tympanites. All symptoms of extreme toxemia.

Patient was treated once daily, given plenty of water to drink, liquid food. Results were gratifying from first treatment and after the sixth treatment a thorough evacuation of the bowels followed which brought away the impaction. Treatment was continued for a month resulting in a correction of the cause of constipation which was a posterior condition of the lower six dorsal and lumbar vertebra and contraction of the muscles of the splanchnic area.

Dr. Mina A. Robinson.

Below is a brief history of the eleven ladies who have recently been initiated into the mysteries of the Axis Club:

Mrs. Herman Still was born in Neosha Falls, Kansas, but was raised in Wichita. Ill health prevented her from finishing High School, but she attended a Pro Cathedral School in Wichita. She was introduced to osteopathy and finally led to the taking of it up as a profession through Dr. Herman Still. He was practicing in Wichita. She was successfully carried through an attack of pneumonia by Dr. Still in July, 1901. This was her first introduction to Dr. Still and resulted in their marriage in September of that year. In March 1908 they moved to Kirksville Mo., and in the Fall of the same year Mrs. Still entered the Freshman class in the A. S. O. She is at present a member of the Junior class.

**Miss Ella D. Coltrane was born near Greensboro, N. C. Her parents moved to Kansas when she was but a child and lived within thirty miles of Kansas City. Miss Coltrane spent four years in Normal School, finally graduating from the Kansas State University. She later taught school in Lawrence, Kansas, and still later in Albuquerque, New Mexico. Her attention was first directed to osteopathy by observing what it had done for others. What osteopathy did for her after a severe accident caused her to come to Kirksville where she felt she would get the best treatment. The wonderful results of the treatment enabled and influenced her to take up the study of the science with a view to pursuing it as a profession. She is at present a valued member of the Junior class and a strong advocate of the science which has done so much for her.**

**Miss Mabel Lucile Willis came to Kirksville from Lincoln, Nebraska. Her home at present is Centralia, Washington. She has had a High School and Business education and later took the Literary Course in**
the University of Nebraska. Her attention was directed to osteopathy through what it had done for her mother about ten years ago while here in Kirksville under Dr. Charlie Still's treatment. Later she herself received benefit from the treatment. These combined influences led her to take up the study which she is now pursuing with the January, 1912 class.

* * *

Mrs. Fannie Stoner was born in Battle Creek, Iowa. She lived here until seven years of age when her parents moved to Blytheville, Mo., where she lived until she came to Kirksville. Her early marriage interfered with her finishing High School. She has known of osteopathy all her life. She was directed to Kirksville through ill health and came here for treatment. While here she decided to take up the study of osteopathy and entered the A. S. O., where she is now a member of the 1911 class.

* * *

Miss Mary Sewall Howells was born in Cornwall, N. Y. Her home at present is Albany, N. Y. She is a graduate of the Albany High School. She holds a Regents' Academic Diploma which is one of the necessary qualifications for teaching in that State.

She has known of osteopathy since seven years of age and was later influenced to study the science through Dr. Mac Hart, a graduate of the A. S. O. Miss Howells is a member of the 1911 class in the A. S. O.

* * *

Miss Franziska Niekenig was born in Boonhofen on the Rhine, Germany, but lived in Wiesbaden. She attended Seminarium at Wiesbaden and here took her State Board examination which is a requirement in Germany for teaching. She taught two years and a half in the Latin school in Elzville on the Rhine. She attended College in St. Clara, Holland. In 1907 she came to America and located in St. Louis for the purpose of studying English. While here had her first introduction to osteopathy through taking treatments of Dr. Bertha Buddecke. She received so much benefit from the treatment that she decided to come to Kirksville to continue treatment and to enter the A. S. O. She is at present a member of the 1912 January Freshman class.

* * *

Miss Helene Eugenie Celia Katharin Larmoyeaux was born in Ravenna, Ohio. She spent much of her life in Florida. Entered Mercy Hospital, Chicago in 1899 and graduated in 1902, after which she spent six months in Europe. While there her time was spent in attending clinics in Paris and Brussels. On returning she practiced nursing in Indiana around Muncie. She was first introduced to osteopathy in 1908 while suffering from severe headache and became immediately interested in the science. Through Dr. Hanna of Muncie, Ind., she was directed to its study in the A. S. O. She expects to finish her course in June, 1910.

* * *

Dr. Margaret S. Thompson was born and reared in Kentucky. When it came time for her to enter school she was sent to Gallatin, Tenn., where she entered Howard College. Her osteopathic education was received from the Southern School at Franklin, Kentucky. At present she is in Kirksville taking a Post Graduate Course. Her osteopathic life has been intensely interesting with only a short starvation period. She has practiced in Cincinnati, Ohio, for six years. She went there a stranger and three months passed before she had a patient. After this trying period her practice built right up. She has found osteopathy an ideal profession for women and very lucrative. Her practice has been confined to women and children exclusively.

* * *

Mrs. Myrtle Cadwell Riley was born in Larnard, Kansas. She attended school in Kansas City, Mo. Her attention was first directed to osteopathy some years ago through Mrs. S. S. Still correcting an ankle displacement. She is the sixehnt member of an osteopathic family through her own and her husband's relatives. Her husband was the first osteopathic physician in Connecticut and is now located in Hartford where Mrs. Riley will practice with him at the completion of her course. She met her husband when he was a Senior student in the A. S. O., where she is now a member of the 1911 class.

* * *

Miss Francis Armita Bailey was born in Kirksville, where she received her kindergarten education. The bulk of her education however was obtained in St. Louis, where she graduated from Eugene Field's Grammar School and later spent three and one half years at Central High School. Miss Bailey has known osteopathy all her life. Her osteopathic relations are legion. Her father who is an osteopathic physician is located in St. Louis, Mo., where he has practiced about twelve years. Through his influence she came to Kirksville to study in the A. S. O. She is a member of the Eastern Star organization and of the class of 1911.
Mrs. Anna Rachel Murphy was born in Jackson, Tenn., where she was reared and received her education. She graduated from High School and later from the Methodist Female Institute in Jackson. Through treatment and the influence of a friend, Dr. Maude G. Russel of Fort Worth, Texas, — who is an Axis member — she was lead to the study of osteopathy and came to Kirksville last January and is at present a member of the January, 1912 class.

On the evening of October 15, 1909, the Axis Club entertained the ladies of the Freshman class and Honorary Club members.
The Club Rooms were beautifully decorated in autumn leaves, the school colors and pennants.
An interesting program was rendered including an Address of Welcome by the President, Mrs. Ida Rogers.
An instrumental selection by Mr. McGonigle.
An address by Dr. Pratt.
A Vocal Solo by Mrs. Learner.
After the program an opportunity was given for the guests to get better acquainted with the Axis Girls and with one another.
Refreshments consisting of punch and cake were served and later dancing was indulged in.

A brief summary of Dr. Pratt’s address:
About thirty five years ago a man came into his inheritance and became great before his death.
He has divided his inheritance among more than five thousand joint heirs. All they have to pay is the income tax.
The income tax is the work put in here and the latest comers have to pay the highest tax because of all those who have gone before and have made the work essential.
No mistake is made in choosing osteopathy as a profession. Women are especially fitted for the work because of their temperament, which is sympathetic and responsive to suffering.
They also have tact and skill in the sick room knowing just what to do to alleviate pain.
The health and moral life of a child is almost wholly in the mother’s hand.
The woman physician can work through the mother in upbuilding the race. The mother will confide in her and she in turn will advise the mother and they together will work for the best interest of the child.

A card was received by the Axis Treasurer from Dr. Daisy E. Washburn inquiring for her indebtedness and also containing words of sympathy a cheer for the Treasurer. Such cards does one good and the Treasurer would like to get more of them.
Dr. Washburn is located in Masonic Temple, Port Clinton, Ohio, and has a large practice.

In a communication from Dr. Nora B. Pherigo to Mr. Boyes she compliments the staff on the improvement in The Bulletin. She also promises some case reports. We are pleased to hear from Dr. Pherigo and wish her much success in her practice in Fulton, Ky.

In a letter to the Axis Editor from Dr. Florence A. Boles she states that she and Dr. Wismer are located in Kalispell, Montana. It is a town with a delightful climate, Dr. Boles says.
We wish them much success in their new field and hope from time to time to hear from them.

Dr. Frances Thoms in a recent letter told of an interesting experience with her first patient. He proved to be a man who came up to fix the electric lights in her office. He asked her what a mammal was. He said that he had been told by the M. D. that he had a heart murmur. She gave him the information asked for and some valuable advice as to abstaining from stimulants of all kinds and avoiding over exertion and in every way proved herself master of the situation.

The Axis editor is much pleased at the receipt of several interesting letters from field members received within the last month. She feels much encouraged as to prospects for case reports and interesting Bulletin items. Many thanks for them. Our combined efforts will do much to improve the Axis items. Not the least of her hopes is centered in her sister members of the class of ’09. Any communication sent to Axis editor, 302 S. Elson, Kirksville, Mo., will be gladly received.

Dr. Edna Keirle Ashcroft is located at Kingston, Ontario, and is anxious to receive the Bulletin at that address. We would like to hear more from Dr. Edna Ashcroft.

Dr. Mary LaFonda Gable’s address is changed from 624 Davis St., Evanston, Ill., to Downers Grove, Ill. In her note to the Secretary she wishes the the Club success and says the Bullets are always welcome.
Miss Arminta Bailey, who represented the Axis Club in the parade on Hospital Day received the first prize for best ladies’ costume. She represented a Southern Mammy and wore a suitable costume. The Axis colors—green and white were carried out in the stockings.

Miss Prisco carried out the part of the giant baby beautifully. The size of the baby was in part due to the capacity of its nursing bottle as well as the ability of its Mammy. A mineral water bottle with rubber hose attachment was necessary to hold and convey the milk the child demanded. Miss Finney was the assistant nurse girl.

Mr. Davidson, who awarded the prize—a five dollar pair of shoes—is a southern man and appreciated the skillful personation.
ber would pay promptly. Consider this please and let me credit a large number of you this coming month.

**F * F *

The Secretary of the Odontoid Chapter is busy preparing the statements of each delinquent and they will be sent out very soon. Why not anticipate and send her a check for the amount due? You can readily figure your balance yourself as you are to pay to the Odontoid Chapter $2.00, a year, from the year of graduation, for five years, making $10.00 for a life membership. Many of you are on the "never paid" list and I beg of you send your check have your name erased from the list and put yourself in good standing.

**F * F *

**BABY.**

Mothers and nurses often make a great mistake in looking upon an attack of measles as a very slight thing, a harmless sort of illness, and, indeed, very often it is so. But, even though an attack of measles may be a slight thing, it very often ends fatally; this fact is chiefly owing to the complications that arise in so many cases from chest mischief, especially such serious ones as bronchitis and pneumonia.

At present, as, indeed, is generally the case at this time of the year, measles are very prevalent, so it behooves all who have charge of children to be very careful in watching them.

The disease usually begins with a headache, a constant desire to fall asleep and a running at the eyes and nose, which may be mistaken in the first place for a bad cold in the head. Many children, in fact, who are in reality suffering from measles are sent to school and allowed to run because they are only supposed to have a cold in the head, and it is in this way that measles are spread so much just before the rash appears, which is the most infectious period.

As a rule the rash comes out about the fourth day in the form of rose-coloured spots, which generally make their first appearance behind the ears, so that if an impending attack of measles be suspected, this is the place which must first be examined. The spots next appear on the cheeks, then on the chest and stomach, and finally on the arms and legs. The child must be kept very warm, for it is dangerous if the rash be driven in too suddenly, as will be the case if there is any chill. Great care must be taken against draughts, and although the window must be opened once or twice a day so that the room may be well ventilated during that time the little patient must be covered up completely, so as to prevent any possibility of a chill being taken.

Great weakness is generally experienced in the eyes, which are usually swollen and inflamed; it is therefore necessary that the room should be kept rather dark, for any kind of bright light will make the eyes ache, and they will be very painful.

The eyes, nose, and mouth must be washed out very often with water. Small pieces of soft rag or cotton wool are the most suitable to use for the purpose, but they must be burnt each time after use.

If very hot and uncomfortable, the physician should order sponging with warm water and vinegar, as this lowers the temperature, and will frequently soothe the little one off to sleep. This must be done very carefully, removing the sheets from the bed, and rolling under the child an old blanket, putting another at the top. Only the part actually being washed must be uncovered at a time, and that must be sponged and dried with a warm towel as quickly as possible. After the sponging has been completed, the sheets, which should have been hanging to the fire all the time, must be replaced, the damp blankets having been removed; the bed will then feel dry, warm, and comfortable.

**How to Keep Children Healthy.**

Very often the little ones are troubled with weak digestion, constipation, etc., especially at this season, when fruit is scarce and meats and rich gravies are frequently set before them. Ailments of this sort, while amounting to very little at first, causing only slight fever, and perhaps noticeable irritation on the part of the child, should not be left without the mother's attention, or they may develop into a serious illness. In such cases intelligent regulation of the diet will not only remedy the trouble, but will prevent its repetition.

For infants with weak digestion, oatmeal gruel, made after the following recipe, is said to be excellent: Add one heaped cup of oatmeal to two quarts of boiling water slightly salted; let this cook for two hours and a half, and then strain it through a sieve. When cold add to one gill of the gruel one gill of thin cream, and one teaspoonful of sugar. To this quantity add one pint of boiling water, and it is ready for use. A thin gruel of this sort is good for the older children as well as for the babies, and if they show the least signs of weak stomach or indigestion, let them have this instead of their usual allowance of plain unboiled milk.

The little tots will not crave meat, and it is unwise to force it upon them while they are very young. The blood is richer in solid constituents than that of adults, and as animal food increases its richness, their blood is, as it were, set on fire.
Avoid Extremes.

Subjecting children to extremes of temperature is a common cause of their taking cold. It does not seem to be generally understood that colds can be caught by going suddenly from a very cold temperature that has chilled the body, into a very warm room; but this is the case. A child who has been out in very severe weather, and who is chilled through, should not be taken directly to the fire, but be kept away from it until he has been in the room for a while, and the extreme has disappeared.

Dr. Minnie Schaub.

5172 Vernon Ave., St. Louis.

***

CASE REPORTS.

Weakened Arches.

Female, age eighteen. Student. Had been suffering with her feet for three months. Walking or standing caused pain and every night feet ached.

Had been wearing a high heeled shoe and thought a French heel the most comfortable; was wearing braces. Both feet effected, but right one much the worse.

Symptoms: Entire plantar surface somewhat tender and especially to the astragalus-navicular articulation. Pain along the inner side of the foot, at the heel and arch. A dull pain in the lumbar region and headache that seemed to be caused from the jar in walking.

Examination showed a twisted pelvis and the right innominate anterior. Fifth lumbar anterior. A very high arch, which was very much weakened; rigidity and contraction of the plantar muscles. I advised her to wear a different shoe, one with a broad toe and common sense heel and wearing the braces only a part of the time. The treatment consisted in correcting the lesions and local work on the foot. Abduction and flexion springing the arches breaking up of the rigidity of the foot.

Instructed her how to walk with her feet parallel and practice tip-toe exercises.

Treatment was given three times a week for three weeks with very satisfactory results. Symptons had all been relieved, the arches were still a little weak, but two months later said they were all right.

***

Male, age forty-eight. Painter. Was suffering from a weakened arch and had tried several braces and shoes but without any relief. Case was of six months standing. There was a constant dull pain in the arch of the foot and on the inner side. Examination showed a posterior left innominate and a weakened arch.

Treatment consisted in correcting the innominate lesion and local work on the foot as in the above case.

Five treatments cured the case, and did not use the braces after he began treatment.

***

Plantar Neuralgia.

Female, age forty-two. School teacher. Had been suffering for months from what she supposed was a weakened arch in the right foot and was wearing a brace, although it did not relieve her any.

On examination I found the arch in normal condition and the brace was throwing the foot into an unnatural position cramming the toes and throwing the weight on to the metatarsal bones and the pain which was very severe and of a neuralgic type in the plantar nerves.

Found a twist at the tenth dorsal, the muscles in the lumbar region contracted; a backward dislocation of the right innominate.

The treatment consisted in correcting the lesions and a little work on the foot.

Gave her twelve treatments extending over eight weeks during which time she was constantly on her feet and retarded the recovery. When she discontinued treatment her foot was much improved but still gave her some trouble but after her vacation when she was on her feet constantly the trouble disappeared.

Keene, N. H.

***

GRAND CHAPTER FIELD NOTES.

Dr. Mary E. Harwood, of Kansas City, Mo., has returned home from a visit with her daughter at Boston and Falmouth Heights.

***

Dr. Minnie Schaub, of St. Louis, Mo., has moved her office from the Carleton Bldg., to 5172 Vernon Ave.

***

Dr. Julia A. Johnson, of Ashbury Park, N. J., sent in her Grand Chapter dues with best wishes for all the Axis sisters.

***

Dr. Ella Still, of Des Moines, Ia., visited with relatives and friends at Kansas City, Mo., for a few days the latter part of October.

***

Dr. Esther Whitaker has moved from Perry, Ill., to Gooding, Idaho. Our best wishes go with you doctor.
Dr. N. Mandle Kellet and Genoa A. Sanborn, of Skowhegan, Maine, sent their dues with best wishes.

* * *

"I am glad to see new members being enrolled and was sorry to see in the Bulletin that only two members responded to the call for dues."
—Dr. Emma C. Fager, Havana, Ill.

We also are very, very sorry that so many of the sisters fail to respond to our repeated call for dues. However busines picked up the past month—ten payments were made.

* * *

Our president, Dr. Bertha A. Buddeke, of St. Louis, Mo., is camping in the Ozarks—enjoying her annual ten day outing.

* * *

Dr. Laura DeLong has moved from Redding, Pa., to 96 Engle St., Englewood, N. J.

* * *

✓ Dr. Sarah L. Dilley has located at Hoxie, Kansas.

* * *

✓ Dr. Julia V. Fiey, formerly of Denver, Colorado, is now located at Trenton, Mo.

* * *

Dr. Anna B. Lown, formerly of Boston, Mass., has located at Newton Center, Mass., with offices at 1 Bradford Court.

* * *

Since Dr. Elizabeth Ingraham wrote her article on "The Hook Worm," that same little parasite has aroused considerable discussion all over the country and many state and local committees have been appointed to investigate its habits and to plan ways and means of driving it out of the south. It is understood that John D. Rockefeller has donated $1,000,000 towards the cure of its victims. Dr. Ingraham has been interested in the Hook-worm for several years and took great interest in examining actual cases and otherwise investigating it at close range.

* * *

Dr. Charlotte C. Sawyer, of Cleveland, O., having purchased the practice of Dr. Lillian Wentworth at Augusta, Maine, will locate in that city with offices in the Augusta Trust Bldg.

* * *

Ten members paid their dues this month, two last month and twenty-five at the annual meeting in Minneapolis. Not a very good record do you think?
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CONTEST RESULTS.

The results of the misspelled word contest show conclusively that people do read THE BULLETIN advertising. Not only people around Kirksville but also people all over the country read this advertising. Many letters have been received during the last month from different parts of the United States sending in answers to the contest.

The following results are given:

In the B. F. Henry Drug Co. ad the word “specialty” was spelled “specility.” Mr. Hollis being the first to report the word was awarded by the B. F. Henry Drug Co. a pair of nice manicuring scissors.

Myers Brothers gave Mr. Crocker a shine card for being the first to show that the letter “u” had been substituted for the letter “o” in the word “brothers.”

In Mr. Griffith’s ad the word “business” was spelled with a “y” instead of an “i”. Mr. Bean won the prize but we have not learned what Mr. Griffith gave.

These were the only words for which prizes were offered. The other misspelled words were typographical errors.

We are indeed glad of the results of the experiment and take this opportunity of thanking the B. F. Henry Drug Co., Mr. Griffith and Myers Brothers for the kind support they have given us.