

SUPPLEMENT.

DR. NILES' PLAIN TALK TO THE FARMERS AT RIDGE SPRING.

The Nature and Causes of Tetanus, or Lockjaw, Fully Explained and a Sure Means of Prevention Set Forth.

At the recent Farmers' Institute at Ridge Spring Dr. W. B. Niles, of the South Carolina University, read an excellent paper on lockjaw. The essay was of unusual interest to the farmers. They saw that Dr. Niles was thoroughly informed on veterinary science and asked him question after question and obtained from him considerable valuable information. The paper of Dr. Niles is as follows:

TETANUS, OR LOCKJAW. Gentlemen: Although I have written on a medical subject it has not been my object to prepare a paper for professional men alone, but to present the subject in such a way that the stock owner may obtain some facts which will enable him to prevent to a great extent the loss which occurs from tetanus, or, as it is usually called, lockjaw. I have chosen this subject for two reasons. First, on account of its frequent occurrence and great fatality in our most valuable animals—horses and mules—and, second, from the fact that it can usually be prevented.

WHAT IS TETANUS? Tetanus may be defined to be a painful and fatal disease characterized by tetanic, that is, spasmodic, contractions of certain muscles, or groups of muscles. As the mouth is kept fairly closed at certain stages by the spasms of the muscles of the jaws the disease is commonly called lockjaw. Cases of tetanus are frequently met with in the human family as well as in domestic animals. Of domestic animals horses and mules are the most frequent sufferers. Among these animals cases are of very frequent occurrence. In cattle and the smaller animals the disease is more rarely met with. This disease is one of the oldest and, on account of its distressing symptoms and its fatal termination, one of the most dreaded. It occurs more in warm than in temperate or cold countries, and in all countries it is more frequent in summer than in winter. In this State it is much oftener met with than in the Northern States. The reason for this will be noticed when speaking of the cause of the disease.

THE CAUSE OF THE DISEASE. Tetanus is usually described as traumatic, i. e. resulting from a wound on some part of the body, and idiopathic when it occurs without obvious cause. Most cases observed follow a visible wound, and we now suppose that the few cases which do not follow a visible wound are the result of a wound not visible. This makes all cases traumatic. Recent investigations in regard to the exciting cause of the trouble indicate that infection always takes place through a wound. Not only are accidental injuries followed by tetanus, but many surgical operations as well. Why wounds in certain regions and certain operations are more liable than others to be followed by the disease has not recently been a mystery.

The disease in men most frequently occurs from wounds of the feet, knees and hands. In the horse and mule punctured wounds of the feet are the most dangerous. As an example may be mentioned punctured wounds of the feet, caused by treading on old nails. "Sticking nail in the foot" is a part of the history of most of the cases of tetanus in these animals. In general we find that punctured wounds (wounds penetrating deeply into the tissues) and wounds (accidental or surgical) which are apt, from their location, to come in contact with the soil or litter of any kind, are those usually followed by the disease. Tetanus may very properly be called a nervous trouble. The symptoms indicate a deranged function of the nervous system. Instead of the muscles receiving only a sufficient amount of nerve stimulus to cause them to perform their ordinary work, a sufficient amount reaches them to keep them in a spasmodic state of contraction.

SYMPTOMS OF LOCKJAW. This gives rise to peculiar symptoms which are readily recognized by most horse men. The symptoms appear a few days after the infection of the injury, usually from the fourth to the fourteenth day. Very often the wound is slight and almost healed before the symptom occurs. There is usually a stiffness in the muscles near the seat of the injury. Soon this extends to other muscles and eventually the whole muscular system becomes involved. The muscles of the head become affected early and the animal has then great difficulty in working the jaws. Saliva flows from the mouth, swallowing is performed with difficulty and soon the jaws become so set that the animal cannot eat at all. At this stage the eyeballs are drawn within the sockets, causing the hair to show in the corner of the eye. The neck is so stiff that the head cannot be moved from side to side nor lowered to the ground, the breathing is accelerated, the nostrils dilated, the tail is kept elevated and works like a pump handle if the animal be disturbed. If made to walk the movements are performed with a great deal of difficulty. Although the spasmodic contraction of the muscles is continuous the amount of muscular contraction is not at all times the same. If the animal be suddenly disturbed by a strong light, noises, etc., paroxysms of great severity occur. These symptoms continue to increase in severity. The muscles of respiration become involved and the animal dies at about the sixth to the ninth day from suffocation caused by spasm of the muscles of the throat and chest. When recovery takes place they are generally weak.

ANATOMICAL EXAMINATION. A post-mortem examination reveals a marked condition of the large nerve trunk, the brain and spinal chord. Until recently the symptoms of tetanus were supposed to be due to nervous irritation in the wound. The wound was supposed to be the exciting cause of the disease. We now know that the wound merely serves as a means for the entrance into the system of the disease germs, which are the true cause. Bacteriological research has proven that many diseases are caused by minute living organisms or called bacteria. These diseases are living germs constitute the virus of these diseases. These germs grow

and multiply in the animal body, in the blood and other organs, when they disturb the normal functions of these tissues and give rise to the disease symptoms. They enter the body by means of wounds, with the food, water and air. They leave the body along with the excretions, and if the conditions are favorable enter the body of another animal of the same kind, where the characteristic symptoms of the disease again develop. The germs do not multiply in the soil, water and other media outside the animal body, but lie dormant until taken into the body of a susceptible subject. In infectious diseases the germ grows and multiplies in suitable media (soil, water, etc.) outside the animal body, and thus finds its way indirectly from animal to animal. It is thus seen that an animal contracts a contagious disease usually by coming in immediate contact with diseased animals.

THE GERM OF GLANDERS. As an example of such a disease glanders may be mentioned. This is a contagious disease found most frequently in horses and mules. The germ of glanders develops and multiplies in the body and gives rise to the symptoms of the disease. The animal has a high fever, the lymphatic glands under the jaw swell and a nasal discharge appears. This discharge contains the virus of the disease, thus making it the means of communicating the disease to other animals. As examples of infectious diseases may be mentioned typhoid fever in man, Texas fever in cattle and tetanus. Here the disease germs are not obtained direct from sick animals, but from the soil, water, etc. It was not until recently supposed that tetanus was an infectious disease. Bacteriological investigation has shown, however, that the exciting cause of the disease is a living organism that grows in the wound. This organism exists in the soil and is conveyed into the wound at the time of its infection or enters afterwards. The germ of tetanus is abundant in the soil of warm countries, warmth being favorable to the growth of low forms of life. This explains why the disease is more prevalent here than in Northern States. The disease can be experimentally produced by putting a little earth containing the germ under the skin of a mouse. I have several times at our laboratory in the University at Columbia produced the disease in mice by inoculating them with a little soil from the University grounds. Such soil if conveyed into a horse's foot by a nail would produce a case of lockjaw.

THE BEST PLACE FOR THE GERM. The germ of tetanus grows best in a deep wound and it is for this reason that punctured wounds are the most dangerous. During the growth of the organisms a substance is produced which acts upon the system as a poison and gives rise to the spasms which characterize the disease. To sum up, we may say that tetanus is an infectious disease, produced by living germs which get into the wound at the time it is made or introduced later.

THE MEANS OF PREVENTION. Knowing the cause, prevention is easy. All wounds should be disinfected as soon after they occur as possible. As a disinfecting solution, corrosive sublimate, one part to one thousand of water, or carbolic acid, one part to fifty of water, may be used. The wound should be kept wet with the solution for several minutes so as to effectually destroy all bacteria that may have gotten into it. All punctured wounds should be opened so that the solution can get to the very bottom of the wound. Punctured wounds of the feet require the most careful treatment. The opening in the sole made by the nail or other penetrating object should be at once enlarged sufficiently to allow the deep portion of the wound to be thoroughly disinfected. It should then be plugged with oakum or jute, and a bandage tied over the entire foot. If kept perfectly dry the wound will be well in a few days. Wounds treated in this way will never be followed by tetanus. This treatment applies to all animals, including man. By disinfecting all wounds, not only is tetanus prevented, but blood poisoning and suppuration are obviated. Wounds, after being disinfected and dressed in such a way as to prevent the entrance of bacteria, heal rapidly without suppurating. In regard to the treatment of tetanus, but little need be said. Most cases terminate fatally. Many drugs have the power of relaxing the contracted muscles, but as soon as the effect of the medicine passes off the spasms return with even greater severity. Mild cases sometimes recover if kept in a very quiet place and the strength kept up by giving such food as the patient can eat. The disease should be prevented instead of cured, and when the way of prevention becomes more generally known cases of the disease will be of much rarer occurrence.

HEMPHILL AND THE FARMERS. What He Thinks of the Sub-Treasury Plan—He Cannot Support it Because He Thinks it Hostile to the Farmers' Interest.

Congressman Hemphill, in his speech at Rock Hill, expounded his views of the sub-treasury scheme, of which the following is a meagre synopsis. His speech was said to have been eloquent and forcible.

The purposes of the sub-treasury bill is a good one and he endorses that purpose most heartily, but he thinks the result of the adoption of this particular measure will be anything but what is desired. After showing what the bill is he criticised the feature which allows deposits only of cotton, corn, oats, wheat and tobacco. Many farmers have other products that will not be admitted. Some have none of these. Of these five, the North grows four, while the South sells largely only one. We buy corn, meal and wheat from the North, and as consumers, would suffer if the prices of these articles were greatly advanced. It is answered that we can advance the price of cotton. That may be, but we are compelled to buy food, while the Northwest gets but little cotton, and can substitute other fabrics for cotton goods. We may therefore have to pay more than we get back.

But, if it is wished to put only cotton in the warehouse, such a bill would never pass, for the South is in a minority, and the majority will never consent to contribute solely to the advantage of this section. Again only one-third of the country in the Union produce \$500,000 worth of products, and so two-thirds would secure no direct advantage from the bill. There is little chance of persuading two-thirds of the country that are too poor to tax themselves to build warehouses for the richer third.

Even if the warehouse is built the

trouble is not over. The government can receive only such cotton as is free from lien. If the merchant waives his lien what advantage is it to get money from the government to pay him? But even cotton free from lien, the farmer who raises 500 bales will get twenty times as much advantage as the 10 bale farmer. Yet he doesn't need aid, while his poorer neighbor has to pay a greater proportion of the expense of the warehouse through the Federal system of taxation.

Again everybody who owns cotton can put it in the warehouse, and the rich factors of Charleston, Wilmington, etc., would ask no softer sum than to store hundreds of thousands of bales in the government warehouse free from insurance and storage and have the use of 80 per cent of the value at only 1 per cent.

These warehouses cost \$50,000,000. Few people can realize the magnitude of this amount. It is one-third the assessed property of South Carolina. We already pay too much to the Federal government.

But there is another very serious phase of the proposition. The Constitution requires that all Federal officers shall be appointed by the President. It is impossible to make a law that allows a farmer to choose a keeper of the warehouse. Senator Vance has been denounced for altering the original bill in this regard, whereas if he had not made it conform to the Constitution it would not have been in a form for consideration at all. Under the Constitution then the President would appoint a swarm of Federal officials who would certainly, for a while, be Republicans, and probably ignorant and corrupt. These men would be absolutely masters of the business of every man who puts his produce with them. If they did injustice the United States would be responsible. But the government cannot be sued without its consent, which is hard to get. Then you must go into a United States Court, and even if you get your judgment you cannot get the money until you have a special act of Congress passed. Congress is mighty slow in passing such bills, to say nothing of there being fifteen thousand bills ahead of it on the calendar. I would rather have a claim of fifteen cents against a tramp than one of thousands of dollars against the United States. There is at this time pending a judgment against the government for one hundred thousand dollars stolen from the people of the South over twenty years ago. We have ever since been trying to get a bill through to pay it to its rightful owners, but have never been able to do so.

If the government advances fifty cents a bushel of corn to a Western farmer, and the corn spoils as it sometimes does, the government sustains the loss and you pay your share of it as taxpayers. This is an extra burden. The farmer has to support many pretended friends just now. I could catch a great many votes by advocating this measure, but I will not ask for your vote if I must help you to do something to ruin you. I might promise to do so knowing that I would probably never get a chance. Many men have been sent to Congress on a single issue, say for instance the Blair bill, and they have sat through their whole term without ever seeing the bill brought up. I have no idea this warehouse bill will ever come up, and I could easily pledge myself to support it without danger to you or me, but I cannot pledge myself to such a measure.

The proposed warehouses have been compared to bonded whiskey warehouses. There are no more alkies than an elephant and a callow bird. The government has six times as much interest in a gallon of whiskey as the distiller. Government allows him to store it away until it "ages" in a house to which the government holds the key. After a certain time if he doesn't sell it the government does, pays its tax on the sale and turns him over any balance that may remain. It is just as the auditor assesses your property but allows you to keep the tax until the fall. If you don't pay then the sheriff sells the property. Government never advances a cent to the distiller.

As to national banks, any five men, whether merchants, farmers, or otherwise, can get a charter and establish one on purchasing a certain amount of government bonds at market price. The only advantage of national over State banks is that the national law is known, while States have different laws. Otherwise a State bank is much the best for you to found.

I am anxious to give relief to the country. We have passed a bill that will increase the currency \$54,000,000 a year. If this does not give relief it would be well to remove the Federal tax on State banks. If elected I shall vote to repeal this tax, and will support every other wise measure of relief. But I do not believe in the sub-treasury plan. I believe it will raise the price of bread and meat to the injury of every poor man and woman in this country. I do not believe any man who has your best interests at heart will do it. If we can't devise a better scheme than that we have not the brains we ought to have. I am not willing to go to Congress on a promise that would never be fulfilled, and if fulfilled I will state the best interests of the country.

The speech is said to have been well received and to have convinced many who heard it of the impracticability of the measure.

ONE CASE McALLISTER'S Mocking Bird Food.

ONE BARREL Glenn Springs Water ON DRAUGHT. G. A. WHITE.

MONEY TO LOAN. WE are prepared to negotiate loans on long time in sums of \$500 and upwards on improved farms. Parties having lands to sell will do well to address us. For full information address ALSTON & PATTON, 13 Law Range, Columbia, S. C., or N. W. BROOKER, Esq., 2-2656m Bridge Spring, S. C.

South Carolina Railway Company. COMMENCING March 30, 1890, at 1.30 p. m., the trains will run as follows (Eastern Time): MAIN LINE TO AUGUSTA. DAILY. Leave Charleston.....6.00 a m 6.00 p m Leave Branchville.....8.55 a m 8.25 p m Arrive Augusta.....12.01 m 11.25 p m AUGUSTA TO CHARLESTON. DAILY. Leave Augusta.....8.05 a m 4.40 p m Leave Branchville.....10.50 a m 7.58 p m Arrive Charleston.....1.15 p m 10.00 p m MAIN LINE AND COLUMBIA DIV. DAILY. Leave Charleston.....7.00 a m 5.10 p m Leave Branchville.....8.35 a m 7.45 p m Arrive Columbia.....11.45 a m 10.05 p m Arrive Camden.....11.30 am 10.50 pm *Daily except Sunday. COLUMBIA DIV. AND MAIN I. N. E. DAILY. Leave Camden.....5.50 a m* 4.45 p m Leave Columbia.....6.43 a m 5.25 p m Leave Branchville.....8.55 a m 7.45 p m Arrive Charleston.....11.03 a m 9.30 p m *Daily except Sunday.

CAMDEN AND COLUMBIA ACCOM. Leave Columbia.....9.00 a m 8.15 p m Arrive Camden.....11.30 a m 10.50 p m Leave Camden.....5.50 a m* 4.45 p m Arrive Columbia.....8.30 a m* 7.05 p m *Daily except Sunday.

Connections made at Columbia daily to and from Charlotte and the North, and to and from Asheville Hot Springs and the West. Daily except Sunday to and from points on the C. & G. Div., R. & D. R. R. Connects at Charleston Monday, Wednesday and Friday with Clyde steamships for New York and for Jacksonville, Fla. Connects daily at Charleston with C. & S. Ry. for all points in Florida. G. P. MILLER, U. T. Agt., Columbia, S. C. S. B. PICKENS, Gen. Pass. Agt. C. M. WARD, Gen. Manager, Charleston, S. C.

I AM BUYING UP ALL CLASSES OF HORSES AND MULES

I HAVE a few YOUNG MULES carried over from the spring season, which I will exchange for big, aged mules. I also have a couple of Mares I will exchange for old mules.

A GOOD SADDLE HORSE, gentle, and drives kindly to a buggy. Safe for a lady to drive. Persons wishing to make such exchanges would do well to call at my stables on Congress street.

A. WILLIFORD, PROPRIETOR. WINNSBORO, - - - South Carolina

FOR SALE. ONE 6 HORSE POWER GEISER Engine.

ONE 60 SAW ELLIOTT GIN AND Broth Condenser. All portable.

ALSO ONE BLUE GRASS SULKY Plow.

The above will be sold low and terms accommodating to good party.

U. G. DESPORTES. THE WINNSBORO WAGON WORKS

IS A HOME ENTERPRISE AND does as good work as the northern shops. What you spend with this establishment remains at home. If you want Buggies, Carriages, Wagons, Road Carts, Hardware, Oils, Paints, Pocket and Table Cutlery, Varnishes, Water Colors, Whips, Leather, and first-class Blacksmithing done, The Winnsboro Wagon Works

can surely accommodate you. Repairing of all kinds done at our shops. We employ competent workmen and guarantee satisfaction.

JUST RECEIVED. We have just received a beautiful stock of Summer Lap Robes, which will be sold cheap! Josh Berry Grain Cradle, Damascus Chilled Turn Plow, Buckeye Mower, Buggy Umbrellas, Sole Agent for the above Cradle, Plow and Mower.

NOTICE. THE undersigned, representing the Knoxville and other Insurance Companies, is prepared to take risks on dwellings, cotton, merchandise, grain, etc., etc. A share of the patronage of the citizen of the county and town is solicited. 9 12 W. H. FERR, Agent

The Best 5c. Cigar in the Market. THE FRENCH MARKET AND THE LA CAVATINA. FOR SALE BY F. W. HABENICHT, OPPOSITE POST OFFICE.

SHOES! SHOES! ARE ON THE RISE!

BUT WE SHALL NOT ADVANCE PRICE UNTIL our present supply gives out. We are still selling shoes at the same close margin as before.

GREATEST BARGAIN OF THE YEAR. Outing Suitings, worth 15c., at only 7c. per yard. H. LANDECKER, Proprietor of the New York Sacket Store.

CENTER TABLE BARGAINS!

WE HAVE PLACED ON OUR CENTER TABLE THIS WEEK SOME WONDERFUL JOBS. COME AND LOOK.

22 Pairs Ladies' Kid Button Philadelphia Shoes, worth \$3.00 a pair, for \$1.50. 40 Pairs Children's Opera Slippers, worth 75c. and \$1.00, for 50c. 10 Pairs Gents' Hand-made Shoes, worth \$5.00, for \$2.50.

6 Pairs Gents' Russet \$4.00 Shoes for \$2.50. McMaster, Brice & Ketchin.

SHOES. SHOES. SHOES.

WE BOUGHT AND WILL CARRY A LARGER STOCK THIS FALL than ever in every department, and especially would we call attention to our SHOE DEPARTMENT.

In commerce as in other things all gain wisdom by experience; the most successful take advantage of every item, however small, that can be turned into profit, and never defer until to-morrow what should be done to-day. Acting up to these rules, we not only placed our fall orders for shoes, but have already received a portion of them. We are firm believers in the practice of selling good shoes, and while we have very low priced ones, even they have good wearing qualities. And as we buy for cash only, and have at least 33 per cent less incidental expenses than houses doing business in cities, we can afford to sell for less profit, and do so sell in all lines which we carry. The most of our shoes are bought direct from the factories, thirty days net, consequently we get inside prices.

CLOTHING AND HATS. We will carry the largest stock we ever carried in the above departments. Respectfully, MACAULAY & TURNER.

MIN-NE-KAH-TA SPRINGS. DELIGHTFUL SUMMER RESORT.

THE Season of 1890 has fully opened at this justly celebrated health and pleasure resort. The curative properties of these waters, The White and Red Sulphur and Chalybeate, have been fully attested by eminent physicians and others.

The hotel accommodations are good, and no effort will be spared by the proprietors to give satisfaction. Hot and Cold Sulphur Baths. Telegraph, mail and express facilities in hotel. String Band engaged for entire season. Amusements of different kinds provided for guests. Close connections made at Charlotte and Lincolnton, N. C., and Blacksburg, S. C. For information, terms, etc., apply to WILKINSON & FORE, PROPRIETORS, 7-171f Shelby, N. C.

MOUNTAIN VIEW HOTEL AND COTTAGES. ELEVATION 2,000 FEET ABOVE SEA LEVEL. LOW RATES. SUPERIOR ACCOMMODATIONS. GOOD FOOD. PINE AIR. All amusements, and greatest variety of MINERAL WATERS. Send for Circulars and terms.

JOHN F. W. THOMAS, All-Healing, Gaston County, North Carolina. A COTTON STRIKE 'No, Boss—I'll work no more, 'less you weigh your Cotton on a JONES 5-Ton Cotton Scale \$60 NOT CHEAPEST BUT BEST.

Beam Box, Tare Beam, Freight Paid." For terms address, JONES OF BINGHAMTON, BINGHAMTON, N. Y.

