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Health of Horses
Cattle and Swine

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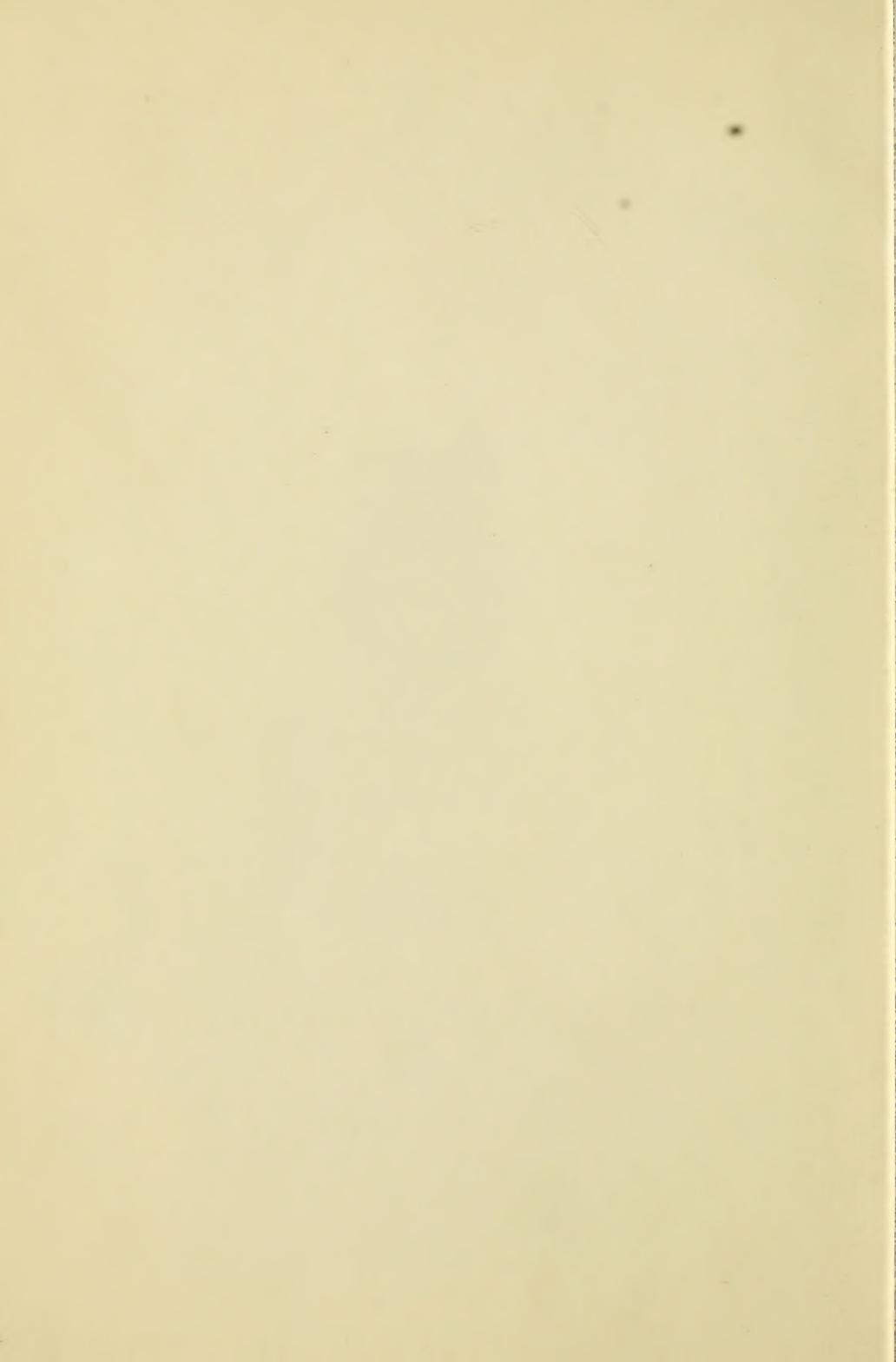


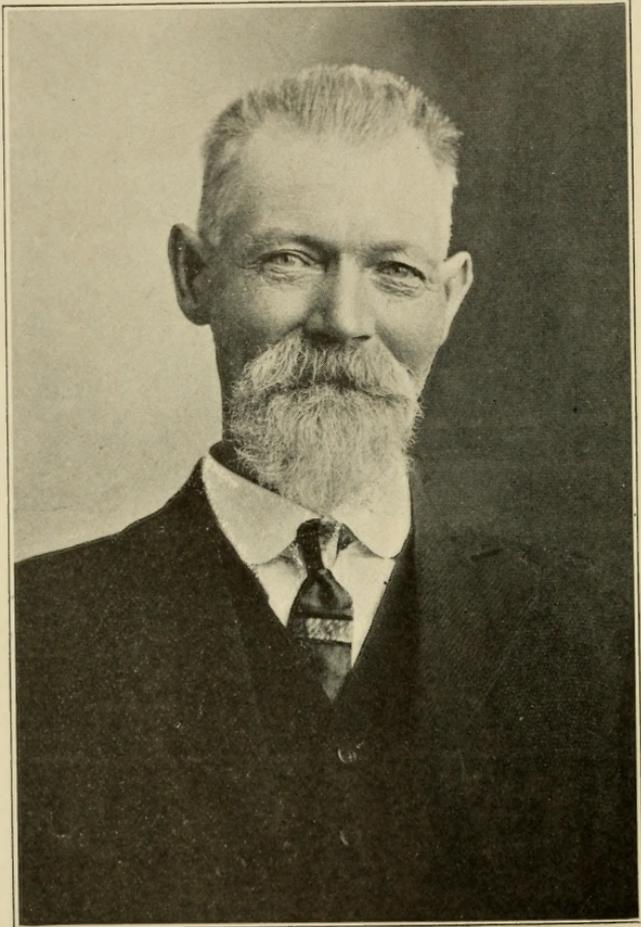
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H. A. SELLS

HEALTH
OF
HORSES, CATTLE
AND SWINE



By
H. A. SELLS
of
Weatherford, Oklahoma

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Foreword

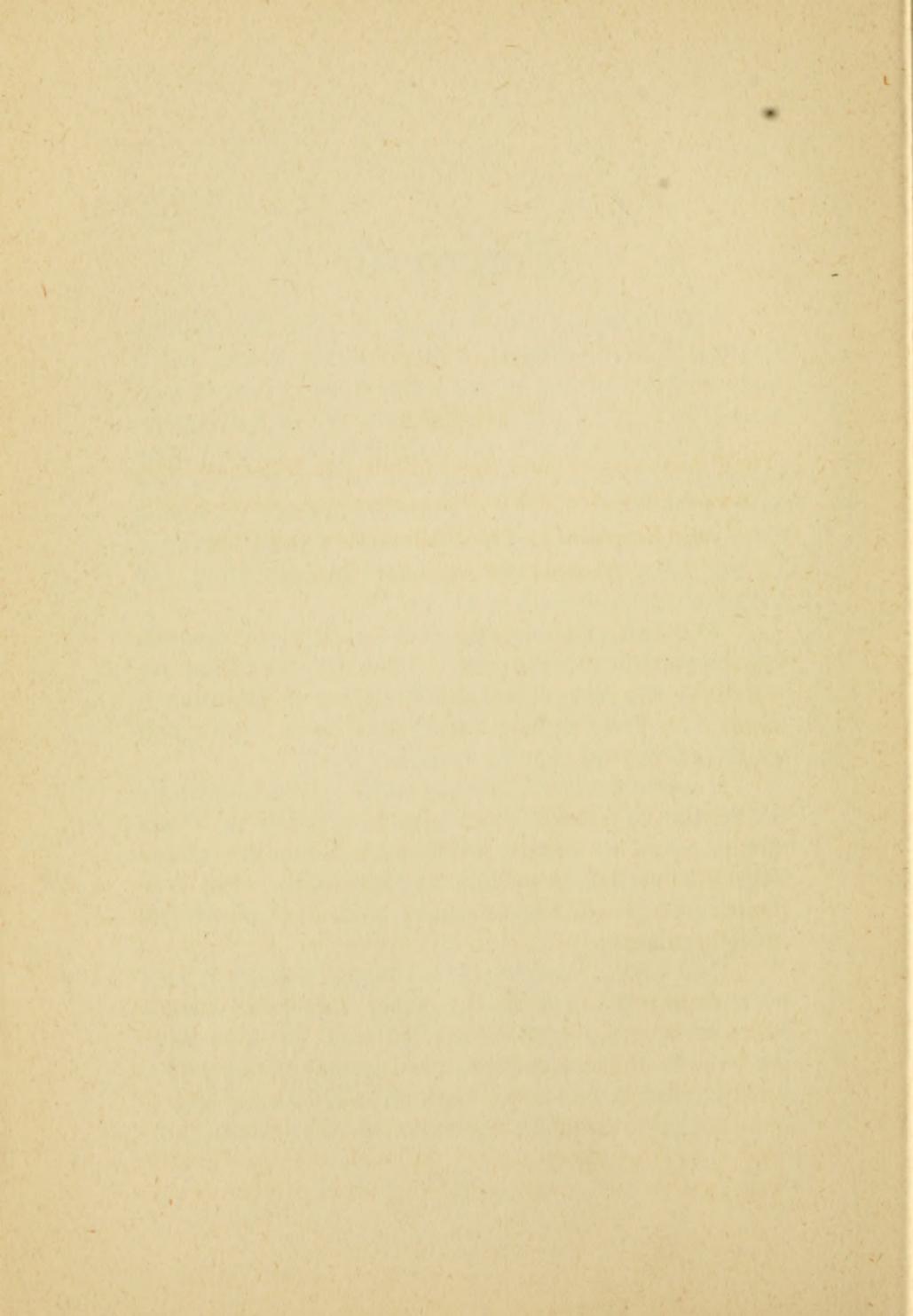
The object of this book is to give information relative to the treatment of diseases that horses, cattle and swine are subject to and suffer from. Another purpose is to suggest effective remedies for such maladies.

In this book it is my intention to tell my own personal experience in connection with such stock and their afflictions. This experience covers a period extending over more than fifty years. During that time I have been remarkably successful in combating and curing all such diseases as are curable.

This fact and this experience entitle me, through this book, to proper credit. They should secure for this book the favorable consideration and attention it deserves. They should invest this book with great weight among those to be benefited by it.

It particularly commends itself to the horseman, the farmer, and the stockman, and especially to raisers and breeders of horses, cattle and swine, for whose help it is purposely written and compiled. But it is of sufficient scope to be of general interest to all owners of such animals.

One of my reasons for writing this book is that I intend to retire soon from treating diseases of domestic animals and I wish owners of such stock to have the benefit of my experience by perusal of my book. I will be glad, if its readers have any criticisms to make, or suggestions to offer, for them to write the author.



CHAPTER I

HORSES

Their Anatomy—Their Susceptibility to Diseases—Diseases They Are Subject to—Remedies Applicable and Essential to Their Alleviation and Cure. Methods of Applying Cures.

Ordinarily the frames and bones of horses, like those animals themselves, are strong. While this is generally speaking, true, and is a wise dispensation of nature, their assemblage and junction are both delicate and intricate.

Approximately, there are two hundred sixteen bones in such animals, without including their teeth. It will not be necessary to separately enumerate them. They will be spoken of collectively according to their relations to different portions of the frame.

Commencing with the head, the bones include the cranial ones encasing the brain. The brain is the seat of intelligence of this species of animal, which is great, ranking high with that of any of the domestic animals, wherefore the derivation of the term: "Horse Sense." The upper part of the skull also contains the aggregation of bones encasing and protecting the

organs of hearing, sight, scent and breathing, while they, together with the lower, or jaw bone, form the opening for feeding. This aggregation of head bones directly connect with those forming the spinal system, which begins at the base of the brain.

The spinal bones form a series of joints beginning at the head, extending along the neck, connecting at the shoulders with and extending along the back until they end at the tail. Directly expanding from them are the ribs, whose functions are to protect the stomach, lungs, heart and other vital organs.

The two shoulder bones, or blades, the broadest of all of the horse's frame, form a foundation very helpful, a fulcrum for the draft lever, the collar, to which the harness traces are attached, the collar resting directly above those two bones. They also form protection for the horse's chest, of which they are a shielding portion.

The animal's front legs connect at the shoulder with the upper frame, extending downward, including, first, the fore arm; next, the arm; then the cup-capped knee; next, the shin or cannon; next, the two pasterns, upper and lower, connecting at the coffin joint with the foot or hoof.

The bones of the hind legs commence with the hip, include the pelvic, the thighbone connecting at the stifle with the long bone extending through the gaskin or lower thigh to the hock joint. There the junction is made with the hind shin, or cannon, and

major and minor pasterns and coffin joint bones, corresponding with such bones of the front legs and concluding at and connecting with the hoofs, or hind feet.

VITAL ORGANS

The vital organs of the horse commence with the brain, nostrils and tongue, whose seats are in the head. The brain extends throughout and forms the matter of the spinal canal.

The heart is the vital organ whose function is to pump and distribute the blood through the arteries and veins, keeping it in circulation.

Also indispensable to the animal's existence is its lungs, or breathing apparatus, which takes in and lets out the air necessary to life.

Of greatest importance is the feeding, or alimentary system, a mechanism commencing with the mastication in the mouth, by means of the teeth, extending along the tongue on through the neck, or throat, and through the stomach and intestines to final evacuation and expulsion at the anus.

In the horse there are two large intestines and many smaller ones. There are three stomachs, which latter, together with the intestines, aggregate in length approximately one hundred and twelve feet. In the ordinary acceptance of the term, the horse **has no paunch.**

The other organs are the liver, kidneys, bladder, genital organs and spleen. The function of the liver is

to aid in the digestive process, which is also the function of the kidneys, which likewise aid in separation and straining the water from the solids, the spleen aiding those organs. They all three aid in carrying it to the bladder, whose function is to secrete and contain the water in the form of urine until necessary to discharge it, which is done through the passage through one portion of the genital organs. The function of the latter is the breeding of the horse species.

CHAPTER II

DISEASES OF THE HORSE FAMILY

The diseases to which the horse family is subject are very many. In this work only the principal, or most serious ones, will be mentioned. After mention of such disease, the remedies and methods of treatment will be given.

Azoturia—This is a species of paralysis, particularly of the limbs, which usually appears after the horse has gone back to work and is worked violently after having rested for some time. In the very midst of its great activity the animal is suddenly stricken, the disease immediately rendering it entirely helpless. It falls and is unable to rise and can not move its head, its limbs, or tail.

It can eat or drink, however, when it has been raised or relieved so as to enable it to rise. To cause him to rise and stand, give him as a drench, one-half an ounce of tincture of opium, one-half a dram of extract of belladonna, and one ounce of sweet spirits of nitre in half a pint of water. Immediately after administering this dose and without waiting for its effect to be produced, it is necessary to rub thoroughly and vigorously externally his spine to his hips and across

his coupling with a liniment formed of one-half an ounce of corrosive sublimate, four ounces of spirits of camphor, and the balance of a sufficiency of turpentine to form a pint. The desired effect is generally secured in twenty minutes.

If it is impossible to form that kind of liniment, whose elements can be secured at a drug store, then a substitute can be applied, it being four ounces of ground mustard mixed with the balance of a quart of turpentine. It must be thoroughly mixed, which is best done in a bottle. It should be applied as directed for the first mentioned liniment and also underneath the fetlocks, back of the shoulders and to the front portion of the chest.

If, after regaining his standing posture, he should sink down again, permit him to lie quietly for a while, and as long as he is quiet. If he shows restlessness repeat which ever of these two liniments is available. If the disease is discovered before the horse is down, the remedies indicated will prevent his getting down. Before being worked again, the animal should be rested from three to five days. A week's rest is preferable. It should be worked gradually and not violently.

Abortion—This is the expulsion of the offspring artificially, where it is necessary to save the life of the female. Most veterinarians confound and confuse it with involuntary miscarriage. It is seldom necessary to produce abortion. When it is, the owner of the animal should never attempt to do so, but should send for a veterinarian, a graduate medical and surgical practitioner.

Miscarriages are apt to repeat at the similar period of gestation. They can be prevented by giving in feed, once a day for five successive days, one teacup full of raw flour.

Of course, it will be impossible to prevent miscarriages resultant from injury of the mare and attempts to do so will invariably result in her death. Therefore, such attempts should not be made. In all cases, either of abortion or miscarriage, the animal should be thoroughly sterilized and cleansed by washing out the genital parts. For such purpose an excellent remedy is zinc sulphate in the proportion of one ounce to two gallons of water. Another is Pearson's Creoline, one dram in one gallon of water. After natural foaling either or both of these aseptics are very serviceable. They frequently avert blood poisoning.

Birth—To complete natural birth where a mare has commenced to expel her foal and its escape is retarded by cessation of labor pains, they can be restored and labor continued until birth is completed to final delivery of the colt.

To enable this result to be accomplished, give her two ounces of fluid extract of ergot in half a pint of water as a drench.

Bleeding—This results from accidental injury or disease. The hemorrhage may be accidental, incident to disease or produced voluntarily for remedial purposes. In all cases it must be stopped. Most bleeding of accidental character is occasioned by cutting an

artery or vein, which must be stopped as soon as possible. Where such instrument can be secured, arterial forceps should be used to catch and hold the artery until it has been securely tied. If not, other pressure is to be exerted and a curved, or surgical needle should be put under the artery so as to enable the thread through the needle to be drawn around the artery and tied. The needle should be threaded with either silk thread or cat gut. The surgeon's method of tying is excellent. Each end of the thread is wrapped under twice and drawn sufficiently taut. Although there is no knot the thread will not slip if the loop has been properly made, but the artery can be tied with any convenient and simple knot familiar to the person arresting the flow of blood. A cork may be used, pressed and kept pressed against the artery by means of a bandage if the injury is located where bandaging can be done. A cork of suitable size is to be so used.

If one is in readiness, a hot iron is very serviceable for arresting hemorrhage, but no one should wait to heat an iron. Pressure should be constantly and continuously exerted until the wound is tied, where tying is possible, or until the flow has otherwise been stopped. After the blood has stopped flowing, Mensol's solution of iron is an excellent remedy to apply to the wound, which should be washed and thoroughly cleansed and sterilized.

Bleeding caused by barbed, or other kinds of wire, cutting arteries of animals, is often very serious in results. All such injuries, if not given timely attention, are apt to result fatally. After the bleeding has

been stopped and the wounds cleansed and sterilized, Sells' Liniment should be applied. This remedy of mine consists of one ounce of corrosive sublimate, two ounces of gum camphor, two ounces of oil of amber and turpentine to make a quart. It is to be lightly applied with a feather on the wound. Care should be taken to keep it from getting on the animal's hair or over any considerable area of the flesh.

This remedy is an excellent one also for what is known as Water Farcy, or swelling under the belly. It is also a good one for all cut wounds and an excellent one for preventing blood poisoning.

Bloating—This is another disease common to horses. It is generally caused by change of food, improper digestion and other causes. In all such cases, where it is impossible to give immediate relief, it is necessary to tap the animal, which is to be done with a trocar. It should be done on its right side, high up on the flank opposite the lower point of and midway between the hip bone and the last rib in the line of hair division. A very small cut through the skin should be made with a knife or lancet blade point and only large enough to admit the trocar needle point. The trocar needle and its tube should be pushed through the skin and into the animal until it reaches the air bloat. Then the needle of the trocar should be withdrawn and the tube left in the puncture. Through the trocar tube the air will escape very rapidly. It may be necessary to repeat the tapping process, and at frequent intervals if the gas forms rapidly. Tapping, properly done, is not a dangerous remedy, but is a life-saving one.

Bloating is one of the results of flatulent colic, which causes the sufferer restlessness and makes it roll considerably, and get up and down frequently. The treatment is my drench of one ounce of chloral hydrate and one ounce of sweet spirits of nitre, in one-half pint of water. If necessary repeat after an interval of an hour.

Where the first remedy is not at hand, a substitute can be made of sulphuric ether, two ounces; chloroform, half an ounce; sweet spirits of nitre, one ounce, and one ounce of tincture of Jamaica ginger in a pint of water, and also used as a drench.

Impaction of the stomach also causes bloating. Its principal cause is improper digestion. The cure is two ounces of fluid extract of aloes, one ounce of rhubarb extract, one ounce of fluid extract of buchu and one of fluid extract of dandelion, or the same quantity of sweet spirits of nitre, in a pint of water administered as a drench. It rarely has to be repeated, but if repetition is necessary only half of the quantity of the first dose should be given and not until an interval of at least eight hours after giving the first dose has elapsed, and not then, if the horse is easy. In all cases inject in the rectum from one to two gallons of soap-suds, or warm salt water.

Colic, caused by indigestion, is another cause of bloating. This kind of colic often is the result of faulty food mastication, or by decayed teeth. The animal so affected usually shows its presence by pawing, rolling and frequently looking around at its sides.

The treatment is one ounce of extract of aloes, two drams of extract of gamboge, one ounce of fluid extract of rhubarb and one and one-half ounces of sweet spirits of nitre, in half a pint of water given as a drench. Where the animal is suffering excessively also give him internally one ounce of chloral hydrate in half a pint of water as a drench. This should be followed by an injection consisting of one gallon of warm water soap-suds, which is to be repeated as often as necessary.

Bone Spavin—This is a leakage of the hock joint. It is located on the forepart of that joint, usually, and the lower part of the inside of the leg. Generally it is caused by a strain. If taken in hand in its early stages, it is curable. But it can not be eradicated after it becomes hardened. Then it can only be temporarily alleviated. The treatment is a liniment blister of my own. It is composed of equal parts of croton oil, aqua ammonia and spirits of turpentine sufficient to form a one-ounce aggregation. The limb below the spavin all the way to the hoof, must be greased with hog's lard. That portion of the leg should be thoroughly saturated with the grease to prevent the uninjured portion of the limb from being blistered and the hair removed by the liniment, which will run down the leg. This liniment is to be applied once a day for three successive days. The spavin, after the third day, should be kept greased until it heals. If necessary, the remedy should be repeated. The greasing should be kept up, both until the desired results are secured.

A second remedy is a salve or ointment, consisting of one-half ounce of corrosive sublimate, half an ounce

of pulverized cantharides, one dram of resublimed iodine, mixed in two ounces of lard, thoroughly, and permitted to stand for twelve hours before using. It is to be used like the first remedy.

Bog Spavin. Both of these remedies are applicable to and effective in the treatment of Bog Spavin, which is located in the front portion of the hock joint, and slightly to its inside. It does not as frequently nor to as great extent cause lameness as bone spavin does. It also is caused by a sprain from slipping, pulling, or in other ways. The lower limb in this malady should also be greased as indicated with reference to bone spavin. To keep the animal from licking the smarting surface, its head should be tied short. Its opposite lower limb also should be similarly greased to prevent injury by contact with the spavined leg and higher up.

Blood Spavin or Thorough-Pin—This is a leakage at the upper part of the hock joint and also caused by strain. The same treatment for bone spavin and bog spavin is applicable and excellent for treating blood spavin or thorough-pin.

The same remedy is also very efficient in the treatment of side-bone, splint and curb.

Ring Bone—This is another bone disease. It forms a ridge running either completely or nearly around and just above the hoof and into the hair below the ankle joint. It is always on the front and sides of that locality of the leg. It is caused, usually, by leav-

ing the shoes on too long, which makes the foot contract, forming what is termed "Narrow Heel." Before applying the treatment, the hair should be shaved from the surface covering the ring-bone, and the hoof below should be thickly coated, preferably with oil of tar, or other suitable oleaginous thick substance. The remedy for this disease is the same as used for Bone Spavin, Blood Spavin, or Thorough-pin and Bog Spavin. The remedy is to be applied once daily for three successive days. After this the sore should be kept greased until it is ascertained whether a cure has been effected. If this has not resulted, the remedy should be repeated at the intervals indicated until the affected part is cured.

Side-Bone—This is a disease similar to the other bony formations hitherto mentioned. It forms on the lower portion of the pastern bone. It is a bony growth that does not extend to the front or rear of the limb, such being its only difference from Ring-Bone. Side-Bone and ring-bones, both form on either the front or hind legs. The same medicine used for Ring-Bone is of the same service and benefit in the treatment of Side-Bone. It is administered in exactly the same way, the ingredients being identical.

Curb—This is a leakage of the lower hock joint, causing enlargement of that joint at its rear. It results from strain while pulling or slipping, or from other injury. It is treated with the same remedies of identical ingredients and proportions of them as those applied to the treatment of ring-bone and side-bone.

Splints—This is another bone disease. It is a growth on the bone below the knee on the inside of

the front leg. Generally this disease results from hard driving on hard roads, or so riding over such high-ways. The growth is at first gristly and easily removed in such incipiency. It becomes bony if neglected, and then much more difficult to eradicate. The method of treatment is exactly similar to that of ring-bone and side-bone, only requiring a smaller quantity. A second, or substitute remedy, for either Splints, Curb, Ring and Side-Bones, Bog Spavin or Thorough-Pin is a similar blister of equal parts of aqua ammonia, croton oil and spirits of turpentine. It, however, should be compounded in smaller amounts not to exceed an ounce in the aggregate. It is to be applied in manner similar to the ointments aforementioned.

Blind Staggers—This disease is caused by the animal eating rotten corn, mouldy, musty, dusty, or other unwholesome food, or inhaling dust or anything that obstructs the ducts of the eye canal connection with the brain. It is a disease that affects the spinal system. There are two sorts of staggers: Blind Staggers and Sleepy Staggers. The latter kind, also caused from stomach troubles, is both a stomach and a spinal disease, although the animal afflicted with the latter is not in so much pain as the one afflicted with the Blind Staggers.

Sufferers from Blind Staggers become very restless. They are unable to see. If untied and outside they walk around in a circle. Being crazed they go through a fence or over any object they encounter. They are quite hard to hold and to drench. When the head is held up the afflicted animal becomes spasmodic,

this condition being produced by the water going over the brain. The treatment for Blind Staggers is a drench composed of one ounce of tincture of opium, one ounce of sulphuric ether, one ounce of fluid extract of buchu, one ounce of sweet spirits of nitre and one dram of extract of belladonna, all put in water sufficient to make a pint to be used as a drench. Before applying this remedy use my own, called "Sells' Blind Staggers Preventive and Cure." It consists of two drams of chloral hydrate in eight ounces of aqua ammonia. It is to be injected into the nostrils and is to be repeated until the desired effect, that of opening the ducts from eyes to brain is secured. This is generally within from five to ten minutes. If not effected within ten minutes repeat this nose injection until these ducts are opened.

Both the aforementioned remedies must be given before a third, which is necessary, and which is to be given after the drench has been successfully administered. Its purpose is to open the bowels, which are likely to constipate by the influence of the opium element of it. This third remedy consists of two ounces of either fluid extract or powdered aloes in a pint of water and internally administered. If no aloes are available give internally a quart of either malted raw lard or linseed oil.

As a preventive of blind staggers my remedy, an injection into the nostrils, is composed of four drams of chloral hydrate to one pint of aqua ammonia, colored with a few drops of fruit coloring, preferably cherry. The coloring is not for remedial purpose but to make the medicine of distinctive color, so as not to be con-

founded with other medicines. It shows also when the medicine is weakening by the evaporation of the ammonia, as it will by being allowed to sit on the shelf too long. To use the remedy, which is to be used at any time, especially in the fall, when the horse is most apt to get into dusty and musty feed, it should be injected into the nostrils, half a dram into each nostril, about every two weeks. Besides blind staggers this remedy is used as a cure for distemper and a preventive of it, by injecting it into the noses of other horses that have been with distempered horses and before they have developed the disease. It also is effective in Pink-eye and Shipping Fever, both for cure and prevention. It can be used to open any stoppage of any head passage. The results are manifested within five minutes. It is to be repeated when necessary.

Sleepy Staggers—Horses affected by this malady stand sluggishly still, their heads drooping down, showing them to be in an inert or sleepy condition. They do not move unless forced to. The treatment of this disease is similar in remedies to that indicated in Blind Staggers, except that the opium, or narcotic element is to be omitted, the animal being sufficiently quiet without requiring an opiate in its drench.

Blood Poison—For blood poison caused by cuts, use Sells' liniment, composed of one ounce of corrosive sublimate, two ounces of gum camphor and two ounces of oil of amber in spirits of turpentine sufficient to make a quart, applying it to the infected part by the most convenient method, as often as necessary.

Catarrh of the Womb—This is a disease common to mares. It not only obstructs the vaginal passage, but frequently prevents breeding. If not cured in time it will cause the animal to become barren. The treatment, which is an injection, must be carried all the way into the womb cavity. To effect this the hand of the person administering the remedy must be greased with olive oil and belladonna. The hand, with the fingers and thumb extended and carrying the tube of the pump sending the remedy to the womb, must be gently moved along the vaginal passage until the anterior, or upper end of the womb is reached. It will then be necessary to expand the neck of the womb, first with one and then another finger until the tube can be carried into the cavity of the womb and the end of it held there until the remedy is pumped into it. The remedy consists of one ounce of sulphate of zinc in one gallon of luke warm water. If necessary this can be repeated after the mare has again been served by the stallion without becoming pregnant. She should not, however, be served until ten days have expired after application of this remedy.

This remedy also aids the regularity of the milk flow after the mare has foaled. It stops the fever or inflammation.

Choking—With horses, choking results from different causes, most frequently lodging of oats, corn-cob, hay, or other object in the throat. Relief is best obtained by causing the animal itself to create the necessary friction. To secure such accomplishment take two ounces of ground mustard, mixed with enough

spirits of turpentine to make a pint. Rub this first at the hollow where the chest and neck join. Then rub on the chest back of the front legs, on the fetlocks of those legs and on the back and coupling. The horse should be tied away from solid food. He should be hitched where he can get all the water he desires. Water is greatly essential for loosening and dislodging the obstruction. The remedy administered, as mentioned, generally will cause the horse to exercise so as to make the obstructing object detach and pass onward, especially with the aid of the water. Absolutely, the animal must not have any food until relieved, especially forage or rough food. The owner or person treating the animal is particularly warned against rubbing the throat or neck of the animal, except as directed in administering the remedy, because rubbing only aggravates the soreness and inflammation in the throat, which will cause the obstructive object to be held firmer where lodged. No attempt at use of a probang should be restorted to and no other artificial means of pushing the object inward. A drench, however, of half a dozen raw eggs, or half a pint of raw lard can and will be beneficially applied after the external remedy has been administered, or even before.

The animal should be kept for five or seven days from dry food, and only given soft nourishment, such as gruel, slops or other liquid. The reason for this is because the interior of the throat will be sore for some time.

Colic—Spasmodic colic, which is generally caused by over-eating, being worked too violently, or other-

wise over exerted, is another disease in which the animal has very frequent pains, with short intervals of ease. While so suffering he is very convulsive and restless. The cure for this affliction is half an ounce of tincture of Jamaica ginger and one ounce of sweet spirits of nitre, half an ounce of tincture of opium, and an ounce of sulphuric ether, in a pint of water. It is to be given as a drench and if necessary to be repeated in an hour. The substitute remedy for this, where the aforesaid remedies are not at hand, is one ounce of chloral hydrate, half an ounce of Jamaica ginger, and one ounce of sweet spirits of nitre in a pint of water, as a drench and repeated in an hour, if necessary.

Colic—Another kind of colic is a poisoning occasioned by the animal eating frosted Kaffir corn, or sorghum, a disease in some localities quite frequent. The symptoms are: The animal at first has but slight pain that increases; it also is slightly bloated at first, the bloating increasing, if relief is not obtained early; there is inflammation of the stomach and considerable scouring. My treatment is two ounces of tincture of opium in a half pint of water given as a drench. It is to be followed up with two ounces of sub nitrate of bismuth in a pint of water, also given as a drench and administered half an hour after the first remedy is taken. If these two remedies do not control the case, or stop the scouring, use two ounces of powdered white or red oak bark, put in one quart of hot water and steeped slowly for thirty minutes, after which strain off the fluid, let it cool and use as drenches in one pint doses, three hours apart. This latter remedy should

be repeated until the animal is relieved and the scouring stopped.

Antidotes for poison. If the poison is occasioned by aconite, give as a drench one quart of strong coffee. If the poison is from weeds or cane, gave ammonia diluted in water, two ounces as a drench. Six or eight raw eggs, and one quart of raw lard, either to be used as a drench, are both good remedies for such poisons.

Corns or Quittors—These are bruises on the bottoms of the feet. They are usually caused by faulty shoes, or other means. They are usually at first red but pressure enough on them will aggravate them until they become sores. They are very painful to the horse. Treat them with applications of from five to ten drops of butter of antimony directly on the affected spots. Applications may have to be repeated several times. Follow up with the hoof liniment mentioned in connection with Thrush, applying it to the bottom of the affected foot until the corns, or quittors, disappear, as they will usually do within about a dozen days.

Cords and Muscles—After track horses have raced or exercised violently they have excited and made sore their muscles, or cords. Other horses also, after running or trotting, or pacing rapidly for any considerable distance, have made their cords sore. The very best remedy is my own liniment, which is composed of one ounce of oil of sassafras, one ounce of tincture of aconite, one-half an ounce of oil of hemlock, one-half an ounce of oil of cedar, one-half an ounce of oil of origanum, one ounce of spirits of camphor, half an

ounce of tincture of myrrh, half an ounce of spirits of turpentine and one-half an ounce of chloroform thoroughly mixed in one quart of grain alcohol. Be sure not to use wood alcohol. One ounce of this liniment should be used in one quart of warm water, which should be applied to the legs of the race, or other horse.

A good liniment for the nerves and muscles is one ounce of crude carbolic acid, one ounce of benzine, two drams of oil of tar, two drams of oil of spike, one ounce of spirits of camphor, one ounce of tincture of capsicum mixed in one pint of spirits of turpentine. When mixed it is ready for immediate use. This liniment is also an excellent remedy for rheumatism, rubbed on the affected parts.

Canker of the mouth, or soreness of the tongue or mouth. This is caused by the animal eating frozen Kaffir corn or other frosted food, or by holding frozen bits in the mouth. The treatment is to take equal parts of pulverized alum and borax, mix them and give doses of a teaspoonful in feed night and morning until the soreness is cured.

Condition Powders. General condition powders for purifying the blood consist of my own remedy's ingredients, which are two ounces of iodide of potassium, two ounces of subcarbonate of iron, two ounces of powdered aconite root, two ounces of fenugreek, two ounces of nux vomica, two ounces of saltpeter, two ounces of ginger root and two pounds of flax seed meal,

well mixed and given in one tablespoonful doses in feed night and morning.

Condition Powders—Condition powders for kidney troubles. My remedy is two ounces of Buchu leaves, four ounces of ground juniper berries, one ounce of saltpeter, two ounces of sub carbonate of iron and one pound of flax seed meal. Mix well and give in tablespoonful doses in feed three times a day until fed out.

Cuts—Cuts caused by barbed or other wire, or any other cuts accidental or otherwise, should be treated with Sells' liniment, composed of one ounce of corrosive sublimate, two ounces of gum camphor and two ounces of oil of amber mixed with spirits of turpentine sufficient to make a quart. It is to be lightly applied on the cut with a feather, so that the remedy will not run down on the surface below.

Disinfection or sterilizing of all wounds is best done with one ounce of zinc sulphate to one quart of water, washing the wound twice a day.

Another which is both a disinfectant as well as a healing agency, is Pearson's Creoline, two drams to one quart of water. It is applicable both as a wash or an injection into a wound.

Another sterilizing wash is composed of permanganate of potassium, one ounce to a quart of water. It is to be used on the wound.

Dislocation of the stifle cap. A disease that has been caused by the animal slipping or straining, or by some other cause, is best treated with the same liniment used for cuts of barbed wire or other cuts. It should be applied on the dislocated cap with the hand daily until a cure is effected. To prevent injury to the hair the parts should be greased.

Distemper—Horses of both sexes and all ages are subject to distemper, which is a contagious or infectious disease. An animal afflicted with it infects the troughs for food and water and other horses using them become infected with it. It can be, and often is, carried in the clothing of those attending the afflicted animal. The disease produces a swelling of the neck and glands. It generally affects the head, particularly the nose, eyes and throat. It produces hard breathing and strangulation. Mucous runs from the nostrils and water from the eyes. Often considerable fever is a characteristic. The first relief desirable to be obtained is opening of the obstructed ducts from the eye to the brain and from the nostril to that organ. To obtain this first relief I especially commend my own exclusive prescription, Sells' Distemper Cure and Preventive. Its elements are two drams of hydro chloral and eight ounces of aqua ammonia, a half a dram of which combination should be injected into each nostril with a syringe of one dram capacity. This treatment is to be repeated at necessary intervals until the desired relief is secured.

In the event that the glands and throat are greatly inflamed and sore seriously, it will be necessary to use a liniment of mine, which is made of one-half an ounce

of croton oil, three ounces of olive oil, three ounces of aqua ammonia and an ounce and a half of spirits of turpentine to make the contents of an eight ounce bottle. This is to be applied, if necessary, under the throat and glands. Resultant fever should be allayed with from ten, and not to exceed twenty, drops of tincture of aconite. By all means do not either smoke or steam under the nostrils of the affected animal, which has been a most mistaken practice. If possible keep the horse from dampness and inclement weather exposure. Give only soft or green food. Separate the horse until it recovers so that other animals may not become infected from association with it.

DISEASES OF THE EYE

Pink Eye—One of the most frequent maladies to which the horse is subject is what is termed "Pink Eye." It is a contagious disease and becomes epidemic where many horses come in contact with it or are shipped in cars where animals so afflicted have previously been transported. It originates from a cold and is contracted in many ways. It is invariably accompanied by fever. It affects the eye in particular and the head, spine and kidneys. It causes the eyes to water and it blinds the animal while suffering from it. It also produces soreness of the throat. The first remedy to be applied as a drench, is composed of three drams of iodide of potassium, one dram of sweet spirits of nitre and one-half of a dram of tincture of belladonna in half a pint of water. The next is to allay the fever by giving from ten to twenty drops of tincture of aconite, which is to be administered on the tongue.

To open the ducts of the eye and brain I use my own patented medicine: Sells' Blind Staggers Cure and Preventive. It is compounded in eight-ounce aggregations, the proportions being two drams of chloral hydrate to the balance of the eight ounces of aqua ammonia. One-half dram of the remedy should be injected in each nostril, the injections to be repeated if necessary, three times a day during the existence of the malady. Besides the treatments mentioned, the eyes of the infected animal should be treated with an eye water of mine, consisting of half a scruple of zinc sulphate and half a scruple of saltpeter in four ounces of distilled water, to be applied three times a day every day for several days. The afflicted horse should be kept on soft feed and should not be worked until it has entirely recovered. It should also be separated from other animals.

A substitute for this eye water is made of half an ounce of tincture of opium, a scruple of sulphate of zinc, and a scruple of saltpeter in eight ounces of distilled water. This last is also an excellent remedy for other diseases of the horse's eyes. Inflammation of the eye is frequently caused from injury or otherwise produced. The treatment is to bleed by cutting at the intersection of the two veins that cross about two and one-half inches below the eye. To do this, use a very sharp knife or lancet lengthways with the vein. Make a very small incision and a very slight one. Allow only a table-spoonful of blood to escape. To stop this flow press a silver dollar coin firmly against the wound until the blood has ceased flowing and for some moments thereafter. If the wound has been made larger than can be stopped with the silver coin, insert two pins one

above and the other below the artery cut. They should be drawn close together, closing the cut by means of a horse hair wrapped about the two pins. Great caution should be taken not to cut and make an incision larger than absolutely necessary.

After bleeding administer an eye water consisting of one-half of a scruple of zinc sulphate, and one-half a scruple of saltpeter in four ounces of distilled water. This is to be applied in the eye as often as is necessary. A splendid substitute for this eye water is another of my own. It is composed of half an ounce of tincture of opium, one scruple of zinc sulphate and one scruple of saltpeter in eight ounces of distilled water. It is to be applied two or three times a day, or as often and as long as necessary, also in the eye.

Fistula—Fistulas form on several parts of the animal, one of the most frequent of such formations locating on the withers. This species of the disease is from bruises on the shoulder generally produced by the collar, which cause the withers to swell. It is accompanied by fever at its first appearance. After remaining for some time, pipes or passages are formed through which a discharge of pus flows. As the disease continues it becomes progressively aggravated, for which reason it should receive attention and treatment as soon as possible after discovery. When taken in hand in its incipiency and before the formation and outbreak of pus takes place, and to prevent which, the first treatment is to be given, to effect a cure. This first remedy is an external application of one ounce of croton oil, two ounces of olive oil, two ounces of spirits

of turpentine, and three ounces of aqua ammonia. These are to be mixed thoroughly before using and so as to form a liniment. Before application all below the affected parts all the way from the shoulder to the feet of the front legs, should be well greased to prevent the liniment causing the loss of hair. The liniment should then be put on once a day for three successive days. After the third application grease and keep the affected parts greased. Continued applications must be made if the first ones do not prove effective.

Always this should be done before the pus forms. After it has formed it will be necessary for it to escape which it will through the pipes, or tubes formed by the disease for such discharge. It will be necessary to wait for the discharge after the pus has formed, in order to locate the tubes. No artificial opening should be made with a knife or with any kind of instrument. If such opening is made an unnecessary cavity will be formed and sore made. After the pus breaks through and the openings are located a probe should be passed to the ulterior of every tube or pipe. Having thus explored the tube or tubes to their inner extremities make capsules containing two grains of corrosive sublimate which should be inserted into and with the same probe pushed to those bottoms. This must be done to every pipe of discharge developed or discovered. The effects will be the expulsion of the pipes and curing and closing the passages.

When this is done and meanwhile the wound at the surface and wherever open should be sterilized and kept clean by repeated washings with disinfectants, such are indicated under that heading. The next remedy is

a liniment to be applied where any of the openings have not been closed by the effects of the capsules. Frequently several of the holes or pipes connect. Wherever they do the capsule and the liniment remedies both should be applied. The liniment is made of one-half an ounce of corrosive sublimate, two ounces of spirits of camphor, three ounces of spirits of turpentine and one of oil of amber. This remedy should be injected until every opening closes and heals.

A small sized syringe should be used for injecting this remedy. Previous to using the liniment remedy the parts below the fistula down the shoulder and fore-leg should be greased and kept greased so long as the injection remedy is being used. Where the parts are greatly inflamed yellow ointment in one-grain capsules can be substituted for the two-grain corrosive sublimate capsules. They are to be inserted similarly into the tubes with the same kind of probe. For washing the surface of the fistula apply Pearson's Creoline, one dram to half a gallon of water.

Poll-Evil—This is another form of fistula. It is caused by bruises at the poll, or junction of the head and neck. Its symptoms are similar to fistulas on the withers. The treatment is exactly the same. Care must be taken to grease and keep the parts greased below the portion affected by the disease. Grease well all the way around the neck and for about a foot under the throat and under jaw.

Fistulas Generally—Fistulas form on various portions of the horse's body. All of them are treated as above indicated.

Founder—There are several different ways by which horses founder. Generally it results from over-eating or over-drinking while too hot, by standing in cold air after over-eating or over-heating by being ridden or driven too hard. The symptoms are very great stiffness, the animal being averse to moving and only doing so when urged. The animal stands with its hind feet placed together and as far forward and as near the front feet as it can, so as to relieve the front limbs of the weight as much as possible. Water founder is one kind and grain founder is another kind, and there are road founder and chest founder. The latter form is acquired by the animal getting to growing or green wheat or other grain. Water and grain founder are similarly treated, their treatment being by giving two ounces of oil of sassafras in a pint of water as a drench. Let the animal stand three or four hours in water, neither too warm nor too cold. This removes the effects of the disease from the feet. If the horse has fever give it from fifteen to twenty drops of tincture of aconite on the tongue, every three or four hours, as long as the fever lasts.

If it is not better in twenty-four hours repeat the sassafras remedy. If it still remains stiff, keep it in or put back in water. If it needs a laxative I would suggest an ounce of extract of aloes and an ounce of extract of rhubarb, both in a half pint of water as a drench. Do not use oils because they aggravate fever.

Road Founder—This sort of founder is generally caused by hard driving, or riding of barefoot horses over hard roads. Its symptoms are similar to the previously

mentioned form of founder. It is treated with a drench composed of one tablespoonful of alum in one pint of water, repeated after three hours. Then stand the horse in water three or four hours to take the fever from the feet. If the fever is high treat it with tincture of aconite to an amount not exceeding twenty drops placed on the tongue, every three or four hours as long as the fever lasts.

Chest Founder—This is a species of founder caused by the animal eating green corn, wheat or other grain in sufficient quantities to cause swelling of the stomach and inflammation of the chest. The horse belches sour gases and it sometimes scours. It is also somewhat stiff, but not so much as in some other founder forms. The treatment is a drench of two ounces of extract of aloes in a pint of water. Twenty minutes after, give it a drench of one ounce of sulphuric ether, one ounce of sweet spirits of nitre, and one ounce of tincture of Jamaica ginger, in a half pint of water. If the horse scours too much give it a drench, also, of two ounces of powdered sub-nitrate of bismuth in a pint of water.

Farcy—This is caused by the animal after being overheated going suddenly into cold water and also by overheating while the blood is out of proper condition. It is a swelling under the belly, extending to the chest. A watery, or dropsical formation accumulates under the wall of the stomach and between it and the animal's hide. Its treatment is by making incisions in the skin about six inches apart all along the swollen

area. Care should be exercised to avoid puncturing any vein. The incisions should be made with a sharp lancet or small knife. Their length should not exceed the width of the blade of the instrument used and only deep enough to pierce through the skin and not to extend deeper than a quarter to half an inch. These incisions will release a yellowish, gluey liquid, sometimes bloody. The treatment for this disease is externally with a liniment consisting of one ounce of corrosive sublimate, four ounces of spirits of camphor, two ounces of oil of amber, and the balance of a quart of spirits of turpentine, to be applied twice a day, or night and morning, until the swelling subsides, the horse being permitted to enjoy rest during the treatment. My General Condition Powders, elsewhere described, are the internal remedy to be used as indicated in connection with their mention.

Glanders—This is an incurable, highly contagious and very dangerous malady to which the human family should not, except unavoidably, be exposed. It is one that I do not care to treat of, or even speak of otherwise than to advise the immediate sending for a state veterinarian and inspector and reporting the trouble to him as soon as it is discovered. The animal, immediately on indication of the affliction being noticed, should be separated from all other animals of whatsoever kind. When destroyed the carcass should at once be incinerated completely to reduction to ashes and burial of all remains should follow. Proper and thoroughly effective disinfectant measures, as defined by law and common sense, should at once be pursued. Personally I would not attend to such cases.

Gravel—This results from kidney trouble. The gravel stones form in the bladder. The symptoms are interference with the flow of urine and straining by the animal in expelling the water. To be relieved and removed the gravel must be absorbed. To effect this two ounces of fluid extract of buchu, two ounces of fluid extract of dandelion, two ounces of sweet spirits of nitre and one and one-half drams of fluid extract of belladonna thoroughly mixed and given in two-ounce doses in a pint of water as a drench, should be given at six-hour intervals.

Heaves—Heaves is an inflammation of the throat and lungs. It is caused by inhalation of dust and lime and also from feeding on dusty and musty food, also over pulling on a full stomach. Its symptoms are: Panting, shortage of breath, coughing, hacking and drawing in or bellows action of the flanks. To be cured it must be taken in hand at first appearance. If neglected only temporary relief can be secured. The treatment is two ounces of elecanipane, two ounces of powdered aconite, two ounces of lobelia, two ounces of licorice root, pulverized, two ounces of tartar emetic, one-half ounce of powdered arsenic, all mixed in three pounds of flaxseed meal. The dose is one tablespoonful at night and in the morning, placed in wet food, the sufferer being kept from hay or other dry forage during the treatment until it recovers. For relief, but not permanent cure, equal parts of Fowler's solution of arsenic and tincture of iron, the dose being one dram in wet food, or injected in the mouth with a syringe as indicated. The animal never at any time should be given musty or mouldy

food. In fact, no animal at any time should ever be given such food.

Another excellent remedy for heaves is eight ounces of sodium sulphate, eight ounces of elecampane, eight ounces of lobelia, two ounces of nux vomica, four ounces of fenugreek, four ounces of gentian root, one ounce of tartar emetic, two ounces of saltpeter and one pound of flaxseed meal. The dose is a tablespoonful three times a day in soft feed.

Hide Bound—This is contraction of the skin, or hide, over the entire frame. Its general causes are bad teeth, poor feed, abuse and exposure, lack of food, and sometimes worms. The only treatment for hide bound animals that I would recommend is my own remedy, Sells' General Condition Powders, made of two ounces of sub-carbonate of iron, two ounces of powdered aconite, two ounces of powdered gentian root, two ounces of fenugreek, two ounces of nux vomica, two ounces of cream of tartar, two ounces of ginger root powdered, and two ounces of saltpeter, all mixed with three pounds of flaxseed meal, the dose being a tablespoonful three times a day in feed until a cure has resulted.

HOOF DISEASES

Hoof Evil or Thrush is a disease of the foot or hoof. It is usually caused by the animal standing too long in dirty stalls. It is also produced by the shoes being kept too long on the horse, or the shoes being off too long and the frog pressing too long on the ground. The symptoms are contraction of the hoof and frequently a very offensive mucous discharge. The

treatment is a liniment made of two ounces of spirits of camphor, one-half an ounce of corrosive sublimate, four ounces of olive oil and spirits of turpentine sufficient to make one pint. It is applied by lifting the old frog up and permitting the liniment to penetrate the part around the frog.

After hoof evil or thrush has been treated as aforementioned, a hoof liniment made of equal parts of oil of tar and spirits of turpentine and neatsfoot oil, in any quantity desired, usually a pint, is used at the bottom and above and around the foot. Its purpose is to expand the foot when contracted, and to ease it. It is to be applied once daily until the hoof has been restored to normal condition. This same remedy is serviceable in grease heel effects on the hoof and is applied after the remedy for that malady has been administered.

Grease Heel—It is a disease of the hoof located around and above the hoof and extending up the leg, sometimes to or nearly to the hock joint. It is a swelling and a leakage from beneath the skin from which a very offensive mucuous watery discharge escapes. The same remedy for hoof evil or thrush is applicable, the application being made above and permitted to run down into the affected parts.

Jack Sores—These are sores on jacks that are results from such animals standing in dirty stalls, lack of proper and sufficient exercise, thrush and other disturbances of the feet, as well as causes that produce stagnation of the blood and poison it. Flies also contribute considerably and frequently to causing this mal-

ady. The poison secreted and accumulated in the jack's system seeks outlet through the skin, which it infects, forming sores thereon. Internal treatment for the blood impurities is four ounces of iodide of potassium in a pint of water. It is administered in doses of two drams each, administering being done with a syringe of that capacity, the injections being given in the mouth. This medicine is so given until the entire quantity is exhausted, unless the jack begins to slobber, when its use is to be suspended for a period of ten days. The external treatment is a liniment of two ounces of croton oil, two ounces of spirits of turpentine, two ounces of aqua ammonia and two ounces of olive oil, which is to be applied to the sores until they disappear.

General Condition Powders of mine can also be given in the food, according to the directions on the package.

Kidney Troubles—Troubles of the kidneys are produced by different causes. Some result from the animals slipping, or straining from over-loading, bad food and water, as well as numerous other causes. The general treatment is given as a drench containing two ounces of fluid extract of buchu, two ounces of extract of dandelion, and two ounces of sweet spirits of nitre in a pint of water. It is administered at intervals of twelve hours. As a substitute for the liquid a powder remedy equally efficacious can be given in the animal's food. It is formed of two ounces of buchu leaves, four ounces of ground juniper berries, one ounce of saltpeter, and two ounces of sub-carbonate of iron, mixed with a pound of flaxseed meal. The dose is a tablespoonful three times a day as long as desirable.

Kidney trouble involving the stem of the bladder is caused by strain, bad feed, and overloading. The treatment for it is one ounce of tincture of opium and half a dram of fluid extract of belladonna in water, as a drench.

Lampas—This is a disease inflaming and swelling the roof of the animal's mouth just back of the front teeth. It is sometimes called Lampers. It is most prevalent with colts before they have shed their front teeth. With a colt the treatment before it has shed those teeth is by bleeding the roof of the mouth in front of the third bar. This is done with a very sharp knife, or lancet, incisions being only sufficient to draw blood and should, therefore, be very slight. After the colt sheds his front teeth the lampas are very apt to disappear. Before they do, the bleeding is resorted to as a temporary relief. In old horses the disease is caused by sharp teeth or diseased and defective teeth. Removal of the defective and smoothing the sharpened teeth is the permanent cure. Temporary relief is secured in the same way as with the young animals. Lampas should never be burned, because burning injures the horse and ruins its teeth. It is not only unnecessary but inhuman and subjects the animal to a torture it does not deserve and one of no benefit to it.

Lockjaw—This is a very serious disease and frequently fatal. It is often caused by the animal stepping on a nail that remains in the foot until discovered and removed. It can be caused by almost any prick on any nerve in any part of the body. It is also caused by driving a barefoot animal too long without water. Mares

with suckling colts, whose udders become too full when kept from their colts are subject to it. They should be milked out when kept from their colts. After effects from castration sometimes cause it. If caused by a nail the first thing to be done is to remove the nail, or any other object causing it. Then the animal should be quieted. It is to be done by hypodermically injecting into the side of the neck six grains of morphine dissolved in a dram of water. The entire quantity is to be injected at one time. Commencing on the top of the head cool the brain by pouring ice water, or very cold water, just over the brain. Spray the entire body with cold water until the muscles relax. If it is possible to do so, stand the animal in water that is cold and keep it so standing until relaxation occurs. In case the morphine remedy does not quiet the horse in two hours and its muscles do not relax within that time, inject in the side of the neck under the skin, three grains of morphine dissolved in half a dram of water. If after the second dose of the morphine the horse does not relax, it will then be necessary to give equal parts of chloroform and sulphuric ether, as an inhalation, by saturating a sponge with it, placing the sponge in a nose-bag or sack and put the horse's nose into it so it will be bound to breathe and inhale the fumes. If the horse shows weakness, or staggers, take off the sack. This treatment is the most successful. I have used it many times. The wound which has caused the trouble, wherever located, should be sterilized and kept clean. This can be done by the use of peroxide of hydrogen. Pearson's Creoline is a disinfectant for dressing and keeping the wound clean after the peroxide has been used.

Liniments—For any inflammation of muscles or cords relief is obtained by my liniment for such trouble. It consists of two ounces of chloroform, two ounces of aqua ammonia, two ounces of spirits of camphor and two ounces of olive oil well mixed and applied at any time when needed.

Liniment for Enlargements—For removal of enlargements, such as those of capped hocks, shoe boils, or bone enlargements of any kind, my remedy is one ounce of croton oil, two ounces of turpentine, two ounces of olive oil, two ounces of spirits of camphor, which is to be applied once a day for five consecutive days to the affected part by rubbing. It can, if desired, be repeated after an interval of five days. The parts should be greased after it has been used.

This remedy is to be used in Sweeny, which is an atrophy of the muscles of the shoulder, or any other muscles of the animal, it being a perishing of the part or shrinkage thereof. It is usually caused by bruises or other injuries from the collar of the harness, or otherwise. This remedy is to be applied once a week, the part affected to be greased afterwards. The remedy is to be repeated, if needed, at weekly intervals. Sweeny can be treated hypodermically with another kind of remedy or liniment. It consists of equal parts of spirits of turpentine and olive oil. Take a one-dram syringe and inject under the skin five drops promiscuously about five inches apart all over the part affected. It is seldom necessary to be used more than once. It is sometimes necessary, where pus forms, to make an incision through the hide and lower extremity of the injury.

Lice—Horses often become afflicted by the presence of these parasites. To remove and destroy lice take four ounces of oil of sassafras and one gallon of warm water. Commencing at the animal's head cover the entire skin surface of the horse. After having done this, grease around the eyes and nostrils. If there are any lice left alive they will go to the eyes and nose for water. The grease they will encounter will stop them and they will become stuck in it. This will enable their being plainly seen. One dose of this application is usually sufficient, but if necessary, it can be repeated.

Loco—This is a disease caused by the animal eating a green weed called "loco," which grows in some countries. It grows from six inches to a foot high, has leaves somewhat like a squirrel's ear and the leaves are very thick. This weed has a pink blossom. After the bloom a pod of peas form. The disease produces a delirium. The animal becomes very fond of the weed, preferring it to any other food. It leaves grass to hunt for the "loco" weed. As soon as it is ascertained that an animal is eating "loco" weed, it should be taken off the range, kept up and fed on entirely different food that is not mixed in any way with it. If a horse is given grain daily it is not apt to be affected by the "loco." Its effect is generally produced by the horse feeding entirely on it. The disease in its early stages can be cured. It can be prevented by taking the animal away from the weed causing it and keeping it away. It is incurable and causes death where the animal is permitted to be sustained entirely on it. The medical remedy for it is one ounce of spirits of ammonia mixed with one quart of warmed lard, or linseed oil, the entire quantity to be

administered as a drench. If the animal is not cured with a single dose, an interval of ten days should pass by before the next dose is given. This treatment should be kept up at such ten-day intervals, until an entire cure if possible is effected, or it is discovered that the case is incurable.

Lucorhea or Whites, is a disease of the mare's sexual organ. From it is discharged a white or yellow mucous, frequently very offensive. It often causes considerable weakness of the animal. The treatment is a powder of Oregon grape-root, a half a pound given in doses of a tablespoonful in ground food once a day until a cure is obtained.

Lump-Jaw—It is a swelling on the upper or the lower jaw bone. It is generally caused from decayed or defective teeth, but often from injury. Where it is caused by a tooth or teeth, it or they should be extracted. If an abscess has been formed and has broken it is to be treated first by probing the channel of the abscess, after which take a stick of lunar caustic and press it to the bottom of the opening, and repeat at ten day intervals until a cure has been effected. Before the abscess breaks, apply my spavin blister to the exterior of the injury, or on the outside of the jaw, being careful to grease all over the jaw and particularly below, before applying the blister, which should not be used over five times. The lumps are rather slow to disappear. The sore and surrounding parts should be kept greased to prevent scarring the animal.

Lung Fever, or Pneumonia — This is caused generally by the horse catching a cold in the spring

or fall of the year. It is brought on by sudden chilling after the animal has been overheated. The horse breaks out in a clammy sweat. Its legs and ears are cold. It droops its ears, seldom offering to lie down. Fever always follows the chill. To break the chill, which is the first thing to be done, apply four ounces of mustard mixed in the balance of a quart of turpentine on the breast, back of the forelegs and coupling. After the remedy has been applied the horse will be very fretful for ten minutes. When it becomes calm, and before the fever sets in, the animal should be covered with a blanket. The spots where the medicine has been applied should be covered with grease or light oil, to prevent loss of hair. After the chill has thus been broken, it becomes necessary to begin with the treatment for the fever. This is done by giving the horse twenty drops of tincture of aconite on the tongue. This can be repeated at intervals of an hour until the fever stops or the horse begins to slobber. It is time to stop giving the aconite when the horse slobbers. If the fever has not ceased after the horse slobbers do not repeat the aconite until a three hour period has elapsed, decreasing the dose to ten to fifteen drops. In case of relapse, treat chill and fever as first indicated. If the animal is greatly distressed from the lungs after the first treatment, give one dram of gum camphor rubbed fine in four ounces of olive oil as a drench. This, if necessary, can be repeated at an interval of four hours. The animal should be kept in a clean and comfortable place that is neither too hot nor too cold. It should be given water with the chill taken off, or tepid water. It should only be fed on soft food. It should never be bled nor given severe purgatives for

this disease. It should be kept from exposure to wet weather and given rest for at least ten days after being cured.

Mange, or Itch—This is a breaking out of the skin on any part of the body, or all over it. It is a contagious disease, and infects the stalls and stables where an infected animal stays. The horse itches a great deal. To relieve itself, it rubs against any object it can form contact with. It is caused by germs forming in the skin at the surface. The treatment should be with the object of destroying the germs. The first thing to be done is to put half an ounce of corrosive sublimate in four ounces of spirits of camphor with four ounces of turpentine in a bottle and shake well until all ingredients are thoroughly mixed. Take another bottle, a one-gallon one. Put in it four ounces of sulphur flour, two ounces of pulverized blue vitriol, and fill the bottle half full of coal oil. Pour from the first bottle into the gallon bottle the first ingredients, mixed. Having done this, fill the gallon bottle up with neatsfoot oil. Take a brush or cloth and apply the aggregate remedy on the entire surface of the infected animal's body. This seldom has to be done more than once, but sometimes another or several other applications may be needed. Repeat, if necessary, after ten days. This will destroy all the young germs as well as those originally destroyed.

Proud Flesh—This is a fungus growth formed on an old wound. It is cured by equal parts of powdered sulphate of zinc and sugar of lead, which are to be mixed and applied on the wound. If the case is an

aggravated one and a rapid cure is desired, use yellow ointment. Scratch off the scab and apply dry. This will cause the injury to disappear.

Snake Bite—Bites by snakes and all poisonous reptiles or insects are to be treated with aqua amonia, but if there is none of that remedy at hand, coal oil or kerosene can be substituted. If the bite is on the face or head, usually the wound swells greatly, sometimes closing the nostrils and causing suffocation. After using either of these remedies, keep pouring cold water on the wound on the head or wheresoever located, except on the lower leg or foot. If the animal is bitten on those parts, it can be led into and stood in cold water. It sometimes requires two days to take the swelling out. The ammonia, or coal oil, should be kept for at least half an hour on the bite. If it can be held there by means of a cloth or bandage on the wound, this would be preferable. If there be no flowing water on the premises, water may be placed in a barrel and permitted to flow through a hose. If there be flowing water, the water may be permitted to flow gently on the wound by means of the hose.

Sore Neck—Several causes produce soreness of the horse's neck, but oftenest, collar boils are results of that sort. The best remedy is equal parts of sugar of lead and zinc sulphate finely powdered and mixed together. The sore should first be washed clean before this preparation is applied. It should be put on at night, allowed to remain on all night, and be brushed off next morning. The applications should be kept up daily until the disease disappears. Never

use grease or oil on any kind of collar sore on a horse's neck, as the grease catches all of the dirt and aggravates the trouble.

Tumors, or Set-Fasts—To remove tumors or set-fasts that have formed on the shoulders or back, or elsewhere on a horse, or any such growth anywhere about the animal, take a two-grain capsule and fill it with yellow orpiment. Make an incision into the tumor, or other object to be removed, and push the capsule to the bottom of it. Let it remain until the object dissolves and is removed. This usually follows within a few days. If it does not disappear within that time, repeat the capsule dose at weekly intervals until the object is removed or dissolves and disappears.

Warts—These formations, of any size or kind, can be removed with my ointment of yellow orpiment, two drams to one ounce of vaseline, or fresh lard, the lard preferred. This is to be applied direct to the wart. The orpiment can be used dry as a powder. It should be properly applied and treated every five days until the wart has entirely disappeared.

Another excellent remedy for warts or corns is one ounce of nitric acid and one ounce of quicksilver. They must be mixed in an uncorked open-mouthed bottle, else they will explode. The bottle should not be corked until the two liquids quit smoking and boiling. They should be mixed in the open air. They are to be applied with a feather or swab. Where this mixture is to be used in the horse's feet for corns, the places on the corn should be scarified and a few drops dropped

into the cuts. This application has to be used several times at daily intervals until the desired cure is effected.

Worms—Horses frequently suffer from worms. To remove them, use one ounce of tartar emetic, two ounces of powdered aloes, three ounces of ginger root, and an ounce of salt petre in a pound of flaxseed meal. The dose is one tablespoonful three times a day in feed. Another, or substitute remedy for ridding the horse of worms, is two ounces of fluid extract of pomegranate in half a pint of water used as a drench. Repeat if necessary.

Screw-Worms — Screw-worms, or maggots, are best removed with chloroform injected into the hole below the flesh where the worms are deep under it. Apply with a syringe. Where the worms are near the surface, it can be applied with a piece of cotton saturated with chloroform. Repeat until all worms are destroyed. Treat the wounds with wire-cut medicine until they are cured.

To Increase Speed—To sustain trotters and pacers, so that they will last through heats, the remedy to be given between each heat, and optional before the first heat, is two ounces of fluid extract of cocoa, two ounces of aqua ammonia, and three ounces of whisky, the dose being one ounce as a drench in half a pint of water.

For running horses only, there are two remedies. The first is twenty-five grains of cocaine, four ounces of acetic acid and four ounces of rose water, the dose

being forty drops injected with a hypodermic needle under the skin of the neck. The other remedy, similarly injected, is five grains of cocaine, one-half a grain of morphine, one-half a grain of strychnine, and forty drops of distilled water, all administered at a single dose. Neither of these two remedies should be given to trotting or pacing horses. It is very important to remember this.

Urinary Discharge—To check the too free discharge of urine, use one ounce of spirits of camphor, two ounces of alum, two ounces of white-oak bark, eight ounces of juniper berries, and one pound of flaxseed meal. Give a tablespoonful three times a day in feed.

CHAPTER III

DENTISTRY

To enable the horse to properly masticate, or chew, and mascerate its food, the animal's teeth should be cared for properly. This is essential to the digestion and assimilation of its food and therefore to its health and well-being, and for it to secure and maintain its strength and energy. Unfortunately many owners of very valuable animals neglect their horses' teeth, which should always be given attention. Many evils result from such neglect, among them diseases and disorders of the stomach and digestive apparatus. Malnutrition always is produced from improper mastication of food.

Diseased teeth should either be saved by proper dentistry, or where too badly decayed should be drawn. The horse is subject to toothache, which causes it intense pain and renders it unfit for service. Humanity demands and economy requires the removal of such teeth as soon as it is discovered that the animal is suffering from their aching.

In all cases where the teeth of a horse need attention, it is best to employ a veterinary dental surgeon, as very few owners of horses understand dentistry or have the appliances necessary for removing decayed horse teeth.

TO DESTROY AN ANIMAL

Where a horse, or other animal, is to be destroyed, and it is impossible to shoot the animal, use one dram of prussic acid put on the back part of the tongue. It can be administered while the horse is down. If it is standing it is best to have the person administering it stand in front of the animal instead of at its side, as the action is so instantaneous that the animal is apt to fall on the one giving it the dose. It is really preferable to give prussic acid to shooting, as the best shot cannot kill the animal outright, and it will suffer from pain for some moments when shot, while it does not from prussic acid, which produces immediate paralysis. Its heart may beat for two minutes, but it does not suffer after the dose is given.

CHAPTER IV

PULSE

Pulsation of the horse normally is that of from 38 to 42 beats per minute, that of the young animal being 42 beats.

The pulse of the cow runs from 40 to 45 beats normally.

The pulse of either animal can be felt with the finger, by placing it on the large artery on the lower jaw. The pulse of an animal may run high and the animal recover. But the temperature's range should not be allowed to go much above normal, where it is possible to prevent its going up.

The normal temperature of a horse is 99 degrees Fahrenheit. If it ever goes to 110 degrees, the horse dies.

Normal temperature of the cow is 100 to 101 degrees Fahrenheit.

The temperature of the horse and the cow should be taken by inserting the thermometer in the animal's rectum.

Temperature is controlled by aconite. Give from fifteen to twenty drops on the tongue until the temperature drops back to normal.

Where the heart-beat and action is below normal, it can be restored by giving one dram of Fowler's solution of arsenic on the tongue with a syringe. Instead, if desirable, inject under the skin at the side of the neck one dram of extract of digitalis.

In all cases where remedies are given any animal by injecting on the tongue squirt the remedy as far back as possible.

CHAPTER V

DOSE REGULATIONS—FOR HORSES

In all of the doses I have mentioned in this portion of the book that relates to treatment of horses, I have indicated the quantity for an adult, or full grown animal. The doses, however, should be proportionate to the ages of the animals. A colt up to two years of age should be given only one-fourth of the amount of a dose for a full grown animal. A two-year-old should be given half as much as a full grown and a three to four-year-old should only be given three-fourths as much as the adult's full dose.

CATTLE DOSES

The general dose for cattle is larger, usually, than for horses, but the proportions of such larger doses are the same for cattle as the proportions of them are for horses. These are 25 per cent of the dose for full grown to be given to calves, or yearlings. The two-year-olds should have 50 per cent of the quantity prescribed for the adults, while three and four-year-old cattle should be given 75 per cent of the dose for the full grown cattle.

DOSES FOR HOGS

In the doses in slop for hogs, the proportion of the remedies I have mentioned should be a teaspoonful for each ten hogs. This can be put in each five gallons of swill. This applies to hogs of all ages. Pigs will only eat or drink the slop in proportion to their sizes. The slop containing the remedy should be thoroughly stirred and permitted to stand for twelve hours, to enable it to thoroughly dissolve.

CHAPTER VI

CATTLE

Their Importance to Mankind — the Diseases They Suffer From and the Remedies to Be Applied Therefor

Of as much benefit to mankind, if not more than the horse, is the cow species. The cattle family furnish man food while the animal is alive, this food being milk and butter. Its flesh, after the animal has been slaughtered, is eaten and gives sustenance and strength to the human. Sometimes, but seldom of recent years, it is a servant in the field, pulling a plow, harrow, or scraper. Oxen sometimes are employed as draft animals yoked in pairs for hauling heavily laden wagons over rough and difficult roads.

It is, therefore, of very great importance to care for the health and general welfare of this valuable species of domestic animal family.

Cattle are subject to many diseases, some of which are similar to those from which the horse suffers.

Fortunately, cattle do not have as many diseases as horses do. In this book I intend to only mention a few of the principal and most important ones that they are subject to.

Fevers — Most kinds of cattle fevers are thus treated: Mix thirty drops of tincture of aconite, sixty drops of cinchona, and sixty drops of extract of belladonna in half a pint of water and use as a drench, to be repeated if necessary. For relaxation of bowels give one pound of flaxseed mixed in a quart of hot water as a drench.

Milk-Fever—In cows, this disease is commonly caused from neglecting to thoroughly cleanse the female immediately after calving. Sometimes it is caused by large quantities of milk remaining too long in their udders before the animals freshen. Generally, cows that have had two or more calves, should be milked out before coming in. This fever is worse in the spring and summer, when green feed is plentiful, than it is in winter, or when the cow is on dry feed. When you commence to treat your cow see that she has been cleansed. If she has not been she will strain and this will indicate she needs being cleansed. To do so inject half an ounce of Pearson's Creoline mixed with two gallons of warm water into the vagina, or birthplace. Wash the sack, or udder, three times a day with warm water, and apply a liniment consisting of four ounces of tincture of arnica, four ounces of witch-hazel, six ounces of spirits of camphor, one ounce of tincture of iodine and one ounce of olive oil mixed together and ready for use, on the udder.

Where this mixture cannot be had, use lard, coal oil and camphor spirits in equal parts and apply this remedy on the bag.

Teat Tumors—Cows are subject to tumors, or groggy teats, which become very painful to the animal and very sore. They also obstruct the flow of milk from the udder and should be given early attention. The treatment for this trouble is to remove the accumulated milk by the use of a milk syphon. After having done so, use a pair of very slender forceps, and with them remove the tumor. After it has been removed, use the liniment mentioned in connection with milk fever, applying it as directed therein.

Bloating in Cattle—Cattle suffering from bloating endure great pain and the left side is swollen. The cow grits its teeth. Its nose is dry and feverish. Fermentation may set in and worse conditions occur. The treatment where the gas has formed is to remove it by the use of the trocar, which is to be inserted on the left side between the lower point of the hip and the last rib. The trocar used for cattle is larger than that used for tapping horses.

If the food is too coarse to pass through the trocar, to move it out cut the hole large enough to take out the accumulated mass through the side where the tapping is done. I use a smooth No. 10 wire two and half feet long. Bend it in the middle so it is half the length. Then I turn a hook at the middle, one inch or more. With it you can rake out the obstructing food. Do not sew the wound up. In proper time it will heal of itself and close up.

Keep the wound clean and use one ounce of Pearson's Creoline to one quart of water. After the bloat

is out and if medicine is to be used, give two quarts of raw lard, or two pounds of salts in three pints of water, but very often, after tapping, no medicine is required.

Cough—For a cough caused by the cow eating dirty or musty food, give one dram of equal parts of Fowler's solution of arsenic and tincture of iron by injection in the mouth with a one dram syringe night and morning.

Lumpjaw — In cattle, lumpjaw is produced in different ways. Bad teeth is one cause, while another is bruises or other injuries inflicted on the jaw. If the disease is the result of the animal having decayed teeth or defective ones, they must be extracted before any other remedy is applied. Where the lump has been formed, but has not broken and pus begun to discharge, use my Bone Spavin Blister indicated for horses. If it has broken and the discharge has begun to flow, use a two-grain capsule of yellow orpiment, which takes away the enlargement. The same cure for the wound that I use as a liniment for wire cuts in horses, and so applied, is the one I use for the wound of cattle having lumpjaw.

Pink-Eye—In cattle, for pink-eye, give sixty drops of extract of belladonna and thirty drops of aconite on the tongue. Then use as an injection in the nostrils with a dram syringe in each nostril Sells' Stagger Medicine. Do not hold the animal's head sufficiently high to cause the remedy to run down the animal's throat. For treatment of the eyes, take one scruple of zinc

sulphate and one scruple of salt petre, and dissolve in eight ounces of distilled water and apply to the eyes two or three times a day. By so doing you will get the desired result.

CHAPTER VII

DISEASES OF HOGS

I have had a great deal of experience both in treating sick swine for others and raising them for myself. My own herd has numbered all the way from 150 to 300, and I have seldom lost any of them. I have been able to prevent infection by properly safeguarding against it through cleanliness. Naturally, the hog is a filthy animal, but if properly cared for it can be kept reasonably clean. It pays, too, to keep it so. It by all means should have a clean pen when it is to be kept in one.

Next, great attention should be given to feeding it to prevent diseases. To do this the most desirable food for swine is green feed, as much as possible. Both for health and profitable nourishment, I believe strongly in alfalfa and plenty of it to feed on. There are many other good foods for hogs.

As far as it is possible to do so, the little ones should be kept separate from the larger ones. This mainly can be done by having separate pens which the small ones can get in but the larger ones cannot. This will prevent them feeding together, which, to a considerable extent, will prevent disease.

I keep and recommend to all others having hogs the keeping of dry salt, sulphur and copperas mixed where the hogs can get to it and eat as much as they will. I also burn all bones, cobs, and wood, making a charcoal. I dry salt the charcoal and let them eat as much of it as they wish to eat. I also feed two tablespoonsful of powdered arsenic in a barrel of slop once a week, and one-half a box of merrie-war lye in one barrel of slop once a week, stirring it well. I give both the large and small hogs all of it that they will drink.

Thumps—Sometimes hogs have thumps. When they do, I give ten drops of turpentine spirits to shoats weighing 100 pounds and twenty drops to grown hogs. I take the affected ones from the drove and put them where they can be treated separately when being attended to. They will not, while so affected, come up to feed, as they are more or less weak. Hence I look after them carefully until they are cured.

I feed some grain all the time and full feed with grain when I am fattening my hogs and putting them in condition for the market. By so doing I get much better results.



INDEX

| | Page |
|--|--------|
| Abortion, or Miscarriage..... | 10 |
| Anatomy of Horses..... | 5 |
| Applications, Methods of..... | 30, 42 |
| Antidotes for Aconite..... | 45 |
| Antidotes for Snake Bites..... | 47 |
| Antidotes for Other Poisons..... | 24 |
| Author's Portrait..... | 1 |
| Azoturia..... | 9 |
| Bites of Poisonous Snakes, Insects, etc..... | 47 |
| Birth, Assisting..... | 11 |
| Bleeding of Horses, Method of..... | 11 |
| Bleeding, to Stop..... | 11 |
| Bleeding or Hemorrhage..... | 11 |
| Bloating of Cattle, to Remove..... | 59 |
| Bloating of Horses, to Remove..... | 13 |
| Blood Poison..... | 20 |
| Bones of Horses—See Anatomy..... | 5 |
| Bone Spavin..... | 15 |
| Bone, Side..... | 17 |
| Bog Spavin..... | 16 |
| Blood Spavin..... | 16 |
| Cattle, Their Diseases and Treatment..... | 57 |
| Canker, of Mouth or Tongue..... | 25 |
| Carcass of Dead Animals; How to Dispose of Infected One..... | 35 |
| Catarrh of Womb..... | 21 |
| Choking..... | 21 |
| Colic..... | 14 |
| Colic, Spasmodic..... | 22 |
| Colic, from Kaffir Corn..... | 23 |
| Charcoal, to Make of Bones, Cobs, Wood, etc..... | 63 |
| Cords and Muscles..... | 24 |
| Corns, or Quittors..... | 24 |
| Curbs..... | 17 |
| Copyright..... | 2 |
| Cough, in Cattle..... | 60 |
| Cuts..... | 26 |

| | |
|--|----|
| Condition Powders, General | 25 |
| Condition Powders | 26 |
| Diseases of Cattle | 57 |
| Diseases of Horses | 9 |
| Diseases of Hogs | 62 |
| Dentistry | 51 |
| Distemper | 27 |
| Disinfection | 26 |
| Dislocation | 27 |
| Dose Regulations for Cattle | 55 |
| Dose Regulations for Horses | 55 |
| Dose Regulations for Hogs | 56 |
| Drenches | 9 |
| Farcy | 34 |
| Foreword | 3 |
| Fistulas | 32 |
| Fistula, Poll-Evil Form | 32 |
| Fistulas on Withers | 30 |
| Feet, or Hoofs | 37 |
| Founder | 33 |
| Founder, Chest | 34 |
| Founder, Grain | 33 |
| Founder, Road | 33 |
| Founder, Water | 33 |
| Frog, Disease of | 37 |
| Fungus Growths | 46 |
| Fevers | 58 |
| Fever, Lung, or Pneumonia | 44 |
| Glanders | 35 |
| Gravel | 36 |
| Grease Heel | 38 |
| Heaves | 36 |
| Hock | 15 |
| Hoof, or Foot | 37 |
| Hoof Evil, or Thrush | 37 |
| Horses, Diseases of | 9 |
| Horses, Anatomy of | 5 |
| Heats, Trotting and Pacing Animals; To Sustain Them Through | 49 |
| Hide Bound | 37 |
| Impaction | 14 |
| Intestines | 7 |
| Injections | 14 |
| Injections, in Nose | 19 |
| Injections, in Mouth | 36 |
| Injections, in Rectum | 14 |
| Injections, in Neck | 41 |
| Injections, Hypodermic | 41 |

| | |
|--|----|
| Jack Sores | 38 |
| Kaffir Corn Colic | 23 |
| Knots, Surgeons' | 12 |
| Knots, to Tie Threads to Stop Bleeding | 12 |
| Kidney Troubles | 39 |
| Killing an Animal; Best to Destroy with Prussic Acid | 52 |
| Lampas, or Lampers | 40 |
| Liniments | 42 |
| Lock Jaw | 40 |
| Lump Jaw in Cattle | 60 |
| Lump Jaw in Horses | 44 |
| Lice on Horses | 43 |
| Loco in Horses | 43 |
| Loco Weed | 43 |
| Legs of Horses—See Anatomy | 6 |
| Lucorhea | 44 |
| Lung Fever | 44 |
| Mange | 46 |
| Methods of Treatment, By Washes | 26 |
| Milk Fever | 58 |
| Neck, Injections Hypodermically in | 41 |
| Neck, Sore | 47 |
| Organs, Vital | 7 |
| Pink Eye, in Cattle | 60 |
| Pink Eye, in Horses | 28 |
| Poll Evil—A Form of Fistula | 32 |
| Poisons from Aconite | 45 |
| Poisoning from Kaffir Corn | 23 |
| Poison from Bites of Snakes, Insects, etc. | 47 |
| Pneumonia, or Lung Fever | 44 |
| Proud Flesh | 46 |
| Pulse, of Horses; Normal and Fever | 53 |
| Pulse, of Cattle; Normal and Fever | 53 |
| Pulse, How to Find | 53 |
| Pulse, How to Feel | 53 |
| Quittors, or Corns | 24 |
| Race Horses, How to Increase Their Speed | 49 |
| Ring Bone | 16 |
| Sweeny | 42 |
| Screw Worms | 49 |
| Side Bone | 17 |
| Spavin, Bone | 15 |
| Spavin, Blood | 16 |
| Spavin, Bog | 16 |
| Splints | 17 |
| Staggers, Blind | 18 |
| Staggers, Sleepy | 20 |
| Stomach, Anatomy of | 7 |

| | |
|--|----|
| Stomach, Impaction of | 14 |
| Swine | 62 |
| Speed, to Increase That of Running Horses in Races | 49 |
| Teats | 59 |
| Teats, Tumors | 59 |
| Tumors | 48 |
| Thrush, or Hoof Evil | 37 |
| Thumps | 63 |
| Temperature, of Cow; Normal and with Fever | 53 |
| Temperature, of Horse; Normal and with Fever | 53 |
| Temperature, Take with Thermometer in Rectum | 53 |
| Urine, to Check Too Free Flowing of | 50 |
| Veterinary, When to Send for | 35 |
| Vital Organs | 7 |
| Warts | 48 |
| Weed, Loco | 43 |
| Worms | 49 |
| Womb, Catarrh of | 21 |
| Wire Cuts | 12 |



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