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GREENVILLE, MICH.

Horse Ailments

(From the Biggle Horse Book)

The majority of horse ailments may be traced, directly or indirectly, to improper feeding and watering, careless management in the stable and in harness. A careless driver is a very frequent cause of loss.

There is no reason why a first-class team, six to eight years old, should not serve continuously and satisfactorily for a term of twelve to sixteen years, if properly protected, fed and looked out for.

If, from improper care or feeding, or from some unavoidable cause, your horse is out of condition, you should dose him with little medicine and much common sense.

The horse that allows himself to be caught lying down may be considered out of condition or lacking sufficient nutritious food. A quart of linseed meal divided into three feeds and added to his grain daily will do him much good and help a quick shedding of the coat.

BLINDNESS.—Consult a skilled veterinarian at once.

BOTS.—The bot-fly resembles a honey-bee in size, and in late summer deposits eggs of a yellowish color on the hair of the horse's breast, legs, etc. In trying to bite at these eggs, the animal gets some of them in his mouth and throat. The eggs soon hatch and the larvæ attach themselves eventually to the lining of the stomach, and are then called "bots." They remain in the stomach until the following spring. Of course, the presence of these pests causes more or less irritation, but, as a rule, no serious harm is done in ordinary instances. Contrary to popular belief, bots do not eat holes through a horse's stomach. We do not know of any treatment that will remove bots. *Prevention* should be the horse owner's main reliance. Kill the flies whenever possible; hang pieces of red cloth from the halter throat-latch, so that the shaking of the head when a horse is in pasture may serve to frighten the flies away; and scrape off, from time to time, any eggs which are found on the horse.

BROKEN-WIND.—See Heaves.

CAPPED HOCK.—May be reduced in the same manner as Wind Galls (which see).

CHOKING.—Horses that choke thrust out their heads, bend and stretch the neck, while there is a copious flow of saliva from the mouth. In some cases

there is distention of the gullet on the left side of the neck, if it has descended so far. If it be in the upper part of the gullet a man accustomed to giving balls may be able to reach it with his hand. Obstructions that have got lower down may be moved upward gently from the outside. Sometimes an obstruction is soft and may be crushed small enough for the animal to swallow it. A mass of meal or other impacted food is sometimes removed by frequent drinks of water, and a drench of olive or cotton seed oil can do no harm. The plan of reaching a whip or heavy piece of rope down the gullet to push the substance into the stomach is risky, in the hands of one not accustomed to the anatomy of the horse.

CHOKING DISTEMPER.—This disease prevails at times in many parts of the country. It is sometimes called spinal meningitis or putrid sore throat. The animal often falls down paralyzed, cannot arise, and if left prostrate is almost sure to die. He must be got upon his feet, and if he cannot stand must be swung. A majority of cases are fatal. It is caused by some specific poison taken into the system with food or drink, mostly the former. Dirty mangers, rotting roots or meal, and mouldy hay, especially meadow hay, are usually the media by which the disease is acquired. The moral is to have everything sweet and clean that the animal eats and drinks, and have no decayed matter in the entry or in any other part of the barn. (See Distemper.)

COCKED ANKLE.—See Knuckling.

COFFIN-JOINT LAMENESS.—Same as Navicular Disease (which see).

COLIC, SPASMODIC.—This begins suddenly. The horse stamps impatiently, looks backward, soon paws, and then rolls. After an interval of ease the pains return with increased severity. Give chloral hydrate, one ounce, in half a pint of water as a drench; or ether and laudanum, two ounces each, in linseed oil, half a pint; or sulphuric ether and alcohol, two ounces of each in eight ounces of water. If nothing else is handy, give of whiskey half a pint in hot water. If not relieved in one hour repeat any of the doses prescribed. The body should be warmly clothed and sweating encouraged. Dip blankets in hot water containing a small quantity

of turpentine, and hold them in place under the body with dry blankets, or rub the abdomen with stimulants or mustard water. If cramp is due to irritation in the bowels, a cure is not complete until a physic of aloes, one ounce; or linseed oil, one pint, is given. Soapy or salt water aids the cure when used as an injection.

COLIC, WIND.—Is caused by feeding after a long fasting, or when the animal is exhausted by driving, or by new grain or hay, too much grain fed, or by sour or indigestible food. The horse seems dull, paws, and the pains are continuous. The belly enlarges, and when struck in front of the haunches sounds like a drum. If not soon relieved, difficult breathing, sweating, staggering and death follow. Give alkalines to neutralize the gases formed. No simple remedy is better than common baking soda, two to four ounces. If this fails, give chloride of lime in half-ounce doses, or the same quantity of carbonate of ammonia dissolved and diluted with oil or milk, until relieved. Chloral hydrate is particularly useful in both wind and spasmodic colic. Horsemen would be wise to keep it ready for emergencies. Physic should be given in flatulent colic, and turpentine, one to two ounces, with linseed oil, eight ounces, frequently, to stimulate the motion of the bowels. Colic should not be neglected nor the patient left, until you are certain of cure or death.

COUGH.—If a horse coughs, dampen his hay, wet his mixed feed, keep him out of a draught; after exercise blanket him. (See Heaves.)

CRIBBING OR WIND-SUCKING.—This is a bad habit, rather than a disease. The horse bites his manger or other convenient object, sucks air and makes a peculiar grunting noise. Prevention aids a cure. Iron mangers and stable fittings are a great help; or box stalls containing no projecting wooden objects.

CURB.—A curved, unnatural condition of the back part of the hock. Lameness, enlargement and more or less inflammation are symptoms. Liniments, iodine ointment, blisters, and, as a last resort, firing, are all recommended.

DISTEMPER.—Keep hot poultices of bread and milk or oil meal on the neck of horses with throat distemper; change them often. In severe cases, rub the glands and muscles with spirits of turpentine and camphor. (See Choking Distemper.)

DYSENTERY.—If this trouble exists, place the horse in a dry, well-ventilated stable, rub the surface of the body frequently, and keep it and the legs warm with blankets and bandages. The food must be light and easy to digest, the water pure and in small quantities. Give first, castor oil, one-half pint, and laudanum, two ounces. The strength must be kept up by milk punches, eggs, beef tea, oatmeal gruel, etc.

EYE.—See Hooks, Pink-Eye and Blindness.

FARCY.—A form of glanders which attacks the skin. (See Glanders.)

FETLOCK.—If this be sprained and the injury slight, bandage and apply cold water frequently. Where the lameness is intense, and the swelling and heat great, the leg should be kept in a constant stream of cold water. When the inflammation has been subdued, the joint should be blistered. (See Knuckling.)

FITS.—See Staggers.

FOUNDER.—The front feet are usually affected, the delicate laminae being inflamed. Acute founder, if not cured, develops into chronic founder, and no sure cure is known for the latter stage of the disease. The trouble may come from any one of several causes: Long or hard driving, hard pavements or roads, feeding or watering a horse while he is exceedingly warm or tired, etc., etc. Lameness, pain and heat in the fore feet, are common symptoms. For an attack of this kind, the best things to do are about as follows: Get the shoes off, put the horse in his stall, and soak or pack his feet in cold water, moss, or whatever is handy; give a tablespoonful of saltpeter as a drench three times a day; send for a veterinarian.

GALLS.—See Shoulder and Wind Galls.

GIDDINESS.—A horse which is frequently or occasionally overtaken with this trouble is dangerous to use. It is hard to cure. It indicates the need of moderate driving, especially in hot weather, and that a small amount of hay should be fed.

GLANDERS.—Whenever a horse is seen to bleed or emit offensive matter from the nostrils, glanders may be suspected and home treatment should not be attempted. It may be a dangerous case, which is fatal alike to man and beast. A veterinary surgeon should be called.

GORGED STOMACH.—This results when a horse has been fed after a long fast. The small stomach of a horse is so dis-

tended that it is unable to contract itself upon its contents, a motion which is necessary in digestion. The horse becomes stupid, slight colicky symptoms are observed, and he carries his head low and extended. As he grows worse he paws, becomes delirious, is covered with cold sweat, trembles, slobbers, staggers and drops dead. Treatment is difficult. A purgative of Barbadoes aloes, one ounce, should be given at once, followed by Cayenne pepper, one-half ounce, or Jamaica ginger, one-half ounce. If the bowels can be stimulated to act, they will in a measure relieve the stomach. For this purpose, use turpentine, two ounces, and linseed oil, eight ounces.

GREASE HEEL.—See Scratches.

HEAVES.—A peculiar movement of the abdomen and flank, points to heaves; a cough usually accompanies it. There is no cure for the established disease. Careful dieting will relieve the distress, but this will appear as bad as ever when the stomach is overloaded. The best quality of food lessens heaves. Food that is too bulky and which lacks nutriment, has much to do with the disease. Feed affected animals only a small quantity of hay once a day, and invariably water at least fifteen minutes before feeding, and never directly after meal. Work right after eating aggravates the symptoms. Carrots, potatoes or turnips, chopped or mixed with oats or corn, are a good diet. What bulky food is given should be in the evening. Medical treatment is worth less than dieting. A predisposition to the disease may be inherited.

HIDEBOUND.—A symptom, not a disease. The trouble comes because the horse is out of condition, or because he has worms, bad teeth, indigestion, or some chronic disease.

HOCK.—See Capped Hock, etc.

HOOKS.—There is a widespread delusion that hooks, so called, is a disease affecting the horse's eye. A barbarous custom among cruel men is to forcibly destroy the membrane which keeps the eye free from foreign substances, but the cruelty does not accomplish the desired result, though it may injure or destroy the eye. The obstinacy of the membrane simply shows something to be wrong in the anatomy of the horse, just as the tongue will indicate to the observing physician when the stomach of his subject is out of order. To cut or disturb the hooks in the eyes is as

absurd as to doctor the tongue instead of the stomach in the human case.

INDIGESTION.—Some horses, although having a good appetite, remain gaunt and thin from indigestion. They should be given some strong purgative, like Barbadoes aloes, combined with powdered ginger, one-half ounce; Glauber's salts, one-half pound, dissolved in a quart of water. When the intestines have been thoroughly cleaned by this process, give daily the following powder: Sulphate of iron, three drachms; sulphate of soda, two ounces; nux vomica, ten grains; ginger, one-half ounce. This powder may be continued daily for a month. Give all the rock salt the animal will lick.

ITCHING SKIN.—Wash the skin thoroughly with carbolic soapsuds, and give the horse a half pound of Glauber's salts daily for a week. Do not feed him any grain but wheat, scalded bran and linseed meal, three quarts of the former and one quart of the latter, for two weeks. There will speedily come a change. Card him daily. Scald his oats and give him salt daily. Feed oats, bran and linseed after the two weeks and scald the whole mess. When horses are covered with bunches or lumps, their blood is out of order. Give doses of Glauber's salts daily and hot bran mash. Give salts a half pound daily. A gill of raw linseed oil every day will be good, mixed with the bran.

KNUCKLING OR COCKED ANKLE.—A condition of the fetlock joint which resembles partial dislocation. The trouble is not considered unsoundness, but it predisposes to stumbling. Foals are quite subject to it, and no treatment is necessary, as the legs straighten up naturally in a few weeks. It is caused in horses by heavy and fast work, and is produced sometimes by a disease of the suspensory ligament, or of the flexor tendons. This should be relieved by proper shoeing. The toe must be shortened and the heels left high, or the shoe should be thin forward with thick heels or high calks.

LAMENESS.—May be due to founder, navicular disease, faulty shoeing, sprains, spavin, etc., etc.

LAMINITIS OR FOUNDER.—See Founder, LAMPAS. — Usually an imaginary trouble. Very rarely does the membrane directly beneath the upper front teeth congest and swell enough to interfere with feeding. When this trouble is feared there is no quicker nor surer

MONTCALM COUNTY

cure than feeding a little corn in the ear. When biting off the kernels, the horse naturally compresses the membrane or forces it back. The burning of the lampas is cruel and unnecessary, and if the swelled parts are cut, the cut should not be deep, or danger will result.

LICE.—Remove these by rubbing the horse with a solution of sulphate of potassium, four ounces, and water, one gallon; or with strong tar water; or dust with Persian insect powder; or the skin may be sponged with benzine or quassia chip tea. Any of the applications must be repeated a week later to destroy the lice hatching in the interval. All blankets should be boiled, and the stalls painted with turpentine, and littered with fresh pine sawdust.

LOCKJAW.—This is caused by cuts, nail in the hoof, etc. Nothing is so common from wounds in the feet and from docking. The horse is unable to open his jaws to the fullest extent, and mastication is impossible. Various muscles twitch, the head and tail are elevated and the nose protruded, and the anus is compressed. The animal swallows with difficulty; saliva flows from the mouth. Of course, in this disease the necessity of calling in a skilled veterinary surgeon is indicated.

MEGRIMS.—See Giddiness.

MENINGITIS. SPINAL.—See Choking Distemper.

OVERWORK, OVERHEATING, ETC.—An experienced horseman, if humane, will not push his horse beyond his strength. An indiscreet driver will sometimes bring an animal to the verge of extinction. The symptoms are plain in the audible breathing, staggering gait, exhausted appearance and heaving flank. The girths must be removed and the face turned toward the wind, the animal being protected from the sun meantime. The head must be left free and the limbs and body well rubbed. The movement of the ribs should not be hindered in any way. A few swallows of cold water may be allowed, and, in hot weather, the mouth, forehead and face may be sponged with it. When sufficiently revived, the horse should be slowly led to a comfortable box-stall and heavily blanketed, woolen bandages being wound about the legs as well. If the horse has fallen he must not be allowed to lie until he voluntarily gets up, but must be propped up on his breast and not allowed to lie flat on his side. Heat exhaustion is somewhat

similar in symptom and demands similar treatment, with the addition of throwing cold water over the animal, particularly wetting the head, and causing a current of air to pass over him that evaporation may take place.

PINK-EYE.—A species of influenza which causes inflammation of the eye. It is contagious. Isolate the patient; disinfect his old stall; blanket him and feed him warm mash and laxative food; bathe the eyes occasionally with hot water. Boric acid (one dram diluted with three ounces of water) makes an excellent solution for dropping into sore eyes, at intervals of three or four hours.

RING BONE.—An osseous exudation or bony deposit at the crown of the hoof. When its presence is first detected the place should be severely blistered once or twice, or red iodide of mercury applied. If this fail, firing with the hot iron in the hands of a competent surgeon will be necessary.

ROARING.—A disease of the muscles of the larynx and a vocal cord. Causes a roaring or whistling sound when the horse is exercising. This trouble may come from straining the respiratory organs, it may be an after-effect of distemper, or it may have been inherited. Treatment is of little benefit, although a surgical operation sometimes brings relief.

SCRATCHES OR GREASE HEEL.—This trouble is frequently the result of carelessness in cleaning and ventilating the stable. Many a horse is ruined by allowing the legs to go dirty. It takes only a few minutes to wash them clean and rub them dry. If the skin begins to crack it must not be left or it will become almost incurable. The skin must be kept clean and soft. The disease may result from the condition of the blood, from unwholesome fodder, or work in irritating mud or dust, especially of a limestone character. It has been brought on by using caustic soap on the legs, clipping the heels in winter time, by debilitating disease, etc. The first step in a cure is to remove the cause, and if there is much local heat, administer a laxative, like a pound of Glauber's salts. Highly-fed animals should have their rations reduced, or replaced by bran mash, flaxseed, fruits, roots, and other non-stimulating food. Bitter tonics are essential also, and may be continued six weeks to two months. If the skin is unbroken, bathe with

water, one quart, in which sugar of lead, two drachms, is dissolved; or anoint with vaseline, one ounce, sugar of lead, one drachm, and carbolic acid, ten drops. To clip the hair from the horse's heels and poultice them with grated carrot, night and morning, is sometimes beneficial. Free exercise is important. Rub the heels dry and apply equal parts of glycerine and compound tincture of aloes. Or try this: Cut the hair off short and paint it over with chloride of zinc and water—thirty grains to one pint of water. Put this on once a day and rub with glycerine.

SHOULDER.—Have properly fitting collars. If the surface galls under the collar, wash with salt and water at night and with clear water in the morning, and protect the spot with a pad under the collar. If the skin breaks, use a lotion of one drachm of carbolic acid to one quart of water twice a day, and relieve the horse from work for a day or two. It is cruel to work a horse with a raw, sore shoulder. Various forms of shoulder lameness exist. (See Sweeny, Navicular Disease, etc.)

SKIN.—See Itching Skin.

SPAVIN.—If you have a suspicion of a spavin coming on your horse, employ a good veterinary surgeon. Heroic treatment is the only thing in such cases. Judicious firing, strong blistering and perfect rest for at least six weeks or two months, and good nursing will, in most cases, arrest the disease and cure lameness. It is the result of too great exposure in draught or speed, or from slipping and kindred causes.

SPINAL MENINGITIS.—See Choking Distemper.

SPLINT.—This may be rubbed off and the work aided by putting on a liniment, but few would persevere in the rubbing long enough to make a cure. A blister will do it.

SPRAINS.—See Fetlock, etc.

STAGGERS OR FITS.—Horses liable to this trouble should have harnesses that are carefully adjusted, and should not be pushed in hot weather. No heavy feed should be given them at any time, oats and sweet hay or grass being the best. Such animals should not be driven when it can be avoided. When indications point to an attack, the horse should be stopped, his harness loosened, some cold water given him to drink and his face sponged at the same time. Rye is a bad feed for sleepy staggers.

STRING HALT.—Cures are difficult and rare. Consult a veterinarian.

SUNSTROKE.—See Overheating.

SWEENY.—This is often called shoulder lameness, and it causes the wasting away of some muscles on the outside of the shoulder blade. The trouble, as a rule, is brought about by extra-hard work or pulling when a horse is young. More or less lameness is a symptom of sweeny. Easy work; perfect-fitting collars; rubbing with liniment; light blisters, etc., are recommended, but a cure is difficult and tedious, as a general thing.

TEETH.—A twenty-year-old horse was not doing well. Upon examination his front teeth were found to be so long that his grinders were kept from coming together, and he could not masticate his food. His teeth were filed off, and the sharp points evened with a float, and he is now doing as well as any of the younger horses. Watch the teeth of the old horse. (See Lampas.)

THOROUGH-PIN.—An enlargement between the point of the hock and the front of the hock joint. Treatment should be the same as for wind-puff.

UNNATURAL APPETITES.—The horse which eats its own excrement, dirt, etc., does it for the acids and salts found in such substances. Give such a horse a pinch of copperas, bone dust, salt, ashes and saltpetre mixed in its meal once a day. A few days of pasturing will prove beneficial.

WHEEZING.—Horses often snort and wheeze because of an enlargement of the glands in the nostrils. A skilled veterinarian can remove the trouble by cutting it out. Doctoring will not cure snoring or wheezing horses. The air passages are stopped. Wheezing may also be caused by a form of asthma called Heaves (which see).

WIND GALLS OR PUFFS.—The treatment consists in pressure by means of bandages and by cold lotions; also, hand rubbing and iodine ointment.

WIND-SUCKING.—See Cribbing.

WORMS.—Horses having greedy appetites, rough coats and poor condition may be suspected of worms. Such animals often pass long, round worms. Copperas or tobacco will clear the worms out of the stomach of a horse. A tablespoonful of copperas for two days and then stop for two. A handful of tobacco dried and made into powder and mixed with the grain. Give this for

three days and then omit it for a few days. For worms in the rectum a syringe must be used. Salt and water are good; or, carbolic acid diluted fifty times in water; or, what is better, thymo-cresol, diluted one to fifty parts of water.

PUNCTURE.—It is dangerous for a horse to step on a nail, as it is likely to result in lockjaw. Have the blacksmith cut out the puncture down to tender flesh, then fill the opening with a 5 per cent. solution of carbolic acid and pack with cotton to keep out dirt, and repeat daily, soaking the foot in clean warm water before dressing.

NAVICULAR DISEASE is indicated by a shrunken shoulder, and a contracted foot that is placed several inches in advance of the other while at rest. This is an inflammation or ulceration of the pedal sesamoid at the point where the tendons play over it. The symptoms are often very obscure, according to the stage of the disease, and the lameness is attributed to some difficulty in the shoulder. This, however, is a mistake. It is due to the wasting of the shoulder muscles from disease. The cause is usually fast work on hard roads or pavements, causing slight inflammation, which being unnoticed or neglected, increases and ends in ulceration. The best treatment is to remove the shoe, pare down the hoofwall and round the edge to prevent splitting, then fire deeply in points around and above the coronet, follow up with one or more blisters of red iodide of mercury, one part, lard, three parts, and when the effects pass off, turn out the animal to pasture for six weeks. It is always best to consult, in this disease, a competent veterinary surgeon.

CORNS originate in simple bruises. There is later an increased production

of hoof, and the formation of a horny tumor which presses on the quick. If of recent formation apply a bar shoe and rasp down the bearing surface of the afflicted heel and avoid pressure. Soak the feet. A horny tumor must be pared to the quick and packed with tar. Shoe with a bar shoe and place a leather sole between it and the hoof. If the corn be further advanced the foot should be soaked in a bucket of hot water for an hour, and then poulticed. Any matter that has formed should be liberated, and if grit or dirt has got into the heel this should be cleaned out. Poultices should be kept upon the wound until it is healed and free from soreness. If the cause is so serious that matter has burst out at the top of the heel, only a veterinary surgeon is competent to manage it.

THRUSH is a disease which shows an excessive secretion of unhealthy matter in the frog, and is detected by its vile odor. A common cause is foul stables. The cure consists in cleanliness and the removal of the cause. The diseased and ragged portions of the frog should be pared and scraped and the foot poulticed for a day or two with oil meal and water, to which may be added a few drops of carbolic acid, or some powdered charcoal. The dressing should be changed daily, and after every vestige of decayed substance is removed, the cleft of the frog and grooves on its edges should be cleaned and packed with oakum, held in place by leather nailed on with the shoe. Before packing, cover the place with a good coat of sulphate of zinc, pressing well in. Horses especially liable to thrush may need to be protected in the stable by the use of boots. Sometimes other diseases combine with thrush, making a cure seem impossible.

the calf in hand. Lay him gently on his side. Spit on the little bump and rub it in with your finger, till a place is wet as big as a silver quarter of a dollar. Don't wet anywhere else. Take your knife and lift out dry the powdered lye, as much as two grains of corn. Press it down on the wet place. It will stick there. Treat the other side in the same manner. Let the calf go. It won't hurt him much, or long. A scab forms; do not touch it. It will peel off after a time, and the hair will grow over the place; you will have a fine, smooth head, equal to a natural polled head.

Cow Ailments and How to Treat Them

(From the Biggle Cow Book)

Let sick or maimed animals lie still. Do not torture them by trying to get them up. Rub their limbs every day and keep a soft bed under them. They will get up when they are able.

If a cow look poor and weak, put a blanket on her, keep her in a warm place, and feed her some corn meal and middlings, and some oats. Give her warm drink, and stir a little cheap flour in it. Do not let her run clear down. Look ahead.

If cows are accidentally left out in a rain and seem cold, put them in the stable as soon as possible and rub them well. If they shiver, put blankets on them until they are dry. If there is inflammation or hardness in the udder, bathe it thoroughly for at least half an hour, and rub gently until thoroughly dry.

If this does not effect a cure put a warm flaxseed poultice on the udder, which can be held in place by means of an eight-tailed bandage. This should be changed twice a day until the hardness and soreness are gone. Of course, the cow should be milked out two or three times each day.

If a cow get a foreign body in the mouth turn her head towards the light and remove it.

When chaff or other dirt gets into the eye syringe or sponge the eye frequently with clean cold water containing sulphate of zinc one grain to each ounce of water. Keep stable darkened.

For **CHOKING**, examine throat and neck; if offending object is felt, attempt to force upward into the mouth by pressure of hands below the object. Give one pint linseed oil or melted lard. May sometimes reach with hand by holding tongue aside. Do not push a stiff stick or fork handle down the throat; a piece of rubber hose, well greased, is less likely to ruin the cow.

If a cow has **BLOAT** or **HOVEN** there will be a drum-like swelling on left side in front of hip, caused by green food, wet or frosted clover, overfeeding, choking. Give one-half teacupful table salt in water, as drench. Exercise. If not relieved give aromatic spirits of ammonia, two ounces, well diluted, every hour.

Where there is great danger of suffocation a puncture of the paunch may be made with a knife at a point, equally

distant from the point of hip and last rib, on *left side of cow*.

IMPACTION OF PAUNCH is caused by overeating, and the symptoms are failing appetite, solid or doughy swelling on front of left hip. Give one to two pounds Glauber salts dissolved in water; follow every three hours by drench of mixture of equal parts common salt, nux vomica powdered and capsicum. Dose, one tablespoonful.

In **COLIC** the symptoms are uneasiness, striking belly with hind legs, lying down and getting up. Cause, change of diet, rapid feeding. Give Glauber salts, one pound in water; warm water enemas. Give every hour one ounce each of laudanum and sulphuric ether, diluted.

CONSTIPATION caused by dry, coarser food and lack of exercise, is treated with green food, linseed meal and exercise; give pint of raw linseed oil. **DIARRHŒA** is treated with starch gruel or flour and water and dry food.

SCOURS in calves is caused by overfeeding, bad food or drink, damp stables, dirty surroundings. Remove cause and withhold food the best remedy. Give once daily twenty grains potassium permanganate in tincup of water; also use same for enema.

Cows are subject to **FOUNDER**, showing sudden tenderness in two or more feet; feet hot and may crack around top of hoof. This comes from overfeeding. Give Glauber salts one pound, twenty drops tincture aconite every two hours. Keep feet moist by wet pasture or wet cloths.

GARGET or **SWOLLEN UDDER**, due to cold, injuries, overfeeding or heating food. Bathe frequently with warm water; dry, and apply warm lard. Milk often. Give internally two-drachm doses salicylic acid and one drachm soda bicarbonate in one pint of milk four times daily.

DISCHARGE OF MUCUS from nostrils indicates catarrh from exposure, dust, or pollen of plants. Allow animal to breathe steam from water containing pine tar.

In **SORE THROAT** there is difficulty in swallowing, food returns through nostrils. Steam as in catarrh, give tincture belladonna one-half ounce every six hours. Rub throat with equal parts turpentine and sweet oil.

In **BRONCHITIS** there is dry cough first,

then loose, and discharge from nostrils; rattling sound in windpipe. Steam as in sore throat and give tincture aconite twenty drops every two hours and two drachms muriate ammonia in one pint of water three times daily. For bronchitis in young stock due to worms in windpipe, which sometimes occur in autumn where they are pastured late, give one ounce turpentine and six ounces sweet oil well mixed three times a week. Take from pasture and feed liberally.

In PNEUMONIA there is loss of appetite, animal standing, rapid breathing, pulse frequent, extremities cold. Cause, exposure or neglected bronchitis. Place in a warm, dry, well-ventilated stable, apply to chest equal parts turpentine and alcohol and cover with blanket. In beginning give tincture aconite twenty drops every hour. If not better in two days discontinue aconite and give one ounce tr. digitalis every eight hours.

In PLEURISY there is fever with rapid pulse, animal stands, grunts on moving or when chest is struck, has a short painful cough. Treat same as for pneumonia; give also one drachm iodide of potash twice daily.

SORE TEATS are caused by scratches from briars, bites of insects, dirt exposure, also from the contagion of cow pox at milking. Remove cause and use milk tube if necessary; apply to sores after milking small quantity of mixture glycerine four ounces and carbolic acid one drachm. In cow pox milk affected cow last and apply to sores mixture glycerine four ounces, water eight ounces, chloride of zinc twenty grains.

WARTS on teats or other parts are generally easily removed by sharp scissors; dress wound as advised for sore teats.

MANGE causes great itching and generally starts at root of tail or top of neck; cause, a minute parasite. Wash with soap and water and dry, after which apply lard which destroys the parasite.

For LICE and TICKS apply daily a tea made by adding one pound quassia chips to three gallons of boiling water. Ordinary sheep dip is also effective. Carbolic acid is one of the most effective agents against parasites. It should have a dilution of about one hundred times its bulk of water. Kerosene emulsion is good for lice on cattle, killing both adults and eggs. To make, dissolve one-half pound hard soap in one gallon hot water and while still near the boiling

point add two gallons kerosene oil. Churn or agitate until emulsified. Use one part of this emulsion to eight or ten parts of water and use as a spray, wash or dip.

In RINGWORM there are circular spots of baldness covered by gray or yellow crust; caused also by a parasite. Wash with strong soap and water and apply pure creolin once daily for a week.

FOUL CLAW or HOOF DISTEMPER causes lameness in one or more feet, swelling and heat around top of hoof, and bad smelling discharge around edge of hoof and between the claws. Cause, dirty stables, standing in stagnant water or mud. Trim off all loose horn, clean by wiping with dry rags, wet sores twice daily with mixture chloride of zinc one ounce, water one pint.

OVERGROWTH OF HOOF from standing in stable should be filed off with rasp.

SPRAINS (generally below knee or hock), causing heat and lameness with tenderness at point of injury, should be bathed with warm water or with laudanum three parts, lead water one part.

WOUNDS, if bleeding much, fill or cover the wound with clean cotton dipped in cold or quite warm water, and secure firmly with bandage; examine for foreign bodies, as splinters, nails and dirt. Do not fill wound with cobwebs to stop bleeding. Remove the bandage before swelling takes place; one application of bandage usually enough. Keep animal quiet first day, then allow exercise. Keep wound clear and apply carbolic acid water 5 per cent. or creolin and water 1 to 10. Do not apply grease to wounds. If proud flesh forms apply daily enough powdered burnt alum to cover.

For an ABSCESS or cavity containing pus caused by bruises, etc., open freely and syringe with 10 per cent. creolin solution.

LOCKJAW, a constant muscular spasm involving more or less the entire body, is caused by the entrance of tetanus germs through a wound. There is stiffness of whole or part of body, more frequently the jaws, making eating difficult or impossible. If animal can drink give one-half ounce doses bromide potash five times daily; dissolve and place on food or gruel or in water given to drink. Do not drench, and keep quiet.

INVERSION OF VAGINA most frequent in springers, caused most frequently by stalls too low behind. Treat displaced parts with warm water and replace them.

Place cow in stall eight inches higher behind than in front until after calving.

INVERSION OF WOMB occurs after calving, same cause as above and treatment the same; get womb placed well forward.

STERILITY in bull is sometimes caused by high feeding and lack of exercise. Give nux vomica one drachm and capsicum one-half drachm once daily. In cow may be temporary, following abortion; if from other cause, seldom recover. Try same remedy as for bull.

ABORTION is a frequent and troublesome malady, occurring generally at about seventh or eighth month. Cause may be due to injuries or to contagion. Separate at once when suspected; after calf is born syringe the womb with one gallon of warm water containing one ounce creolin. Repeat daily as long as any discharge is seen. Afterbirth should be removed about third day after calving. Disinfect stables thoroughly. Do not let cow take bull for at least two months after aborting.

RETAINED AFTERBIRTH is generally due to premature birth; should be removed on third or fourth day. Blanketing, warm stable, warm drinks may help. If necessary to remove by hand, should only be attempted by qualified person, otherwise it is advisable to allow it to remain.

INFLAMMATION OF THE WOMB is indicated by fever, loss of appetite, straining. Caused by injuries in calving or to attempts at removal of afterbirth, and is generally fatal. Give two drachms salicylate of soda every four hours and syringe womb with warm water and two ounces creolin to the gallon.

MILK FEVER or PARTURIENT APOPLEXY is usually treated by inflation of the udder with air. Doubtless a regular "milk fever outfit," costing about \$3, is best to use, as it precludes the possibility of infecting the sensitive interior of the udder. But in emergency, or in case the outfit is not procurable, the udder may be inflated by using a bicycle or automobile air pump, taking pains to be sure the air used is pure. If in a stable, ventilate it well.

Attach a milking tube to the tubing of the pump, first dipping it in a carbolic solution (carbolic acid three teaspoons, water one pint). Wash each teat carefully with this antiseptic, before inflating it, so as to prevent infection. Insert the milking tube carefully. Work slowly.

Of course the udder must not be inflated unreasonably. After inflation, remove the tube and leave the udder full of air for five to eight hours. Then the air may be worked out gently, and, if necessary, the inflation may be repeated.

Cows so treated usually show marked signs of improvement within two hours.

ACTINOMYCOSIS (LUMP JAW) is a contagious disease due to a germ known as "Ray fungus." There are well-defined swellings about the jaw, head and throat, or may be on the tongue or in the lungs. These soften and open after a time and discharge matter; appetite good until well advanced. The treatment is, remove by surgical means; late experiments indicate iodide of potash two to three drachms daily to be a cure. Advanced cases should be killed at once. The meat should never be used for food.

MILK SICKNESS (TREMBLES) is a disease of cattle communicable to man and other animals by use of meat or milk; dry cattle most commonly and far more severely affected. Milch cows may transmit this disease through the use of their milk and yet show no trace of the disease themselves. The symptoms are trembling upon least exertion as walking, great prostration and delirium. Treatment is only prevention; do not use pastures known to produce this disease; unbroken land of certain districts unsafe.

RHEUMATISM is shown by hot, painful swellings at the joints, generally the hocks, stiffness in walking or may be unable to rise. Bathe joints with camphor and alcohol and give internally two drachms salicylate of soda every three hours until four ounces have been given; keep warm and dry and give laxative food.

TEXAS FEVER, a disease of Southern cattle which, when transmitted to Northern cattle, is generally fatal in a few days. The spread of the disease is generally due to ticks; those from diseased animals contain the germs of the disease and by their bites transmit it. The indications are a high fever, staggering gait, urine of reddish brown to black, great prostration, unconsciousness, death. Most common in summer months; unknown in the north after heavy frost. Prevention, avoidance of cattle from Southern fever districts; dipping of Southern cattle to destroy the ticks.