

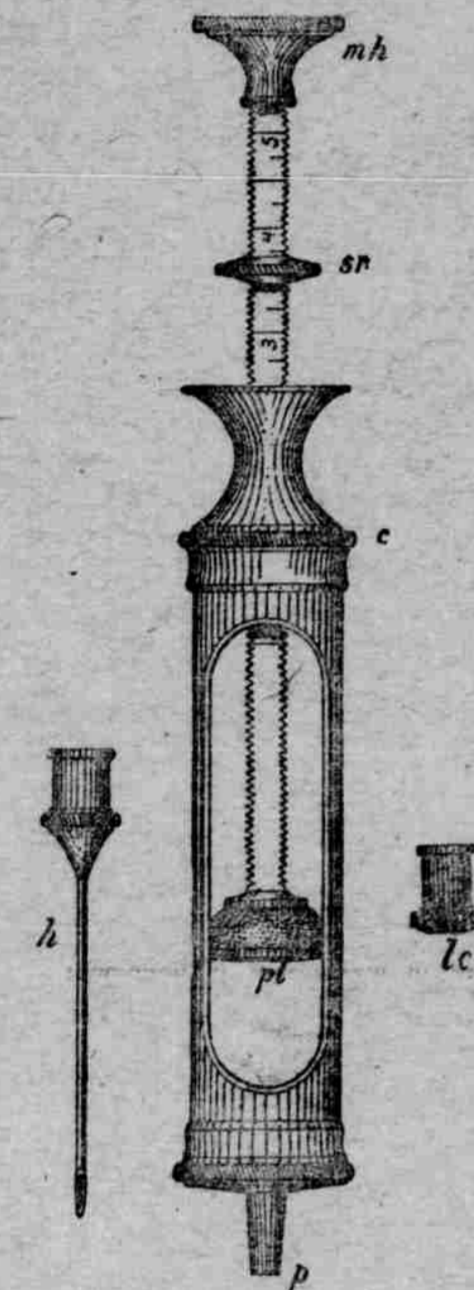
# LIVE STOCK

## Blackleg.

The disease commonly known as blackleg in this country is identical with the quarter-evil or black-quarter in England, charbon symptomatique (symptomatic anthrax) in France, and rauscnbrand in Germany. The fact that it is sometimes called symptomatic anthrax is liable to lead to its confusion with anthrax, but it should be remembered that these are two totally distinct diseases arising from different causes, exhibiting different symptoms and requiring different treatment.

Blackleg most frequently attacks cattle, rarely other species, man, horses, swine, dogs, cats, and fowls appearing to be immune or proof against it. Sheep and goats are sus-

ceptible, though the writer has heard of but one outbreak in this state among sheep. As to susceptibility among cattle, age plays an important part, inasmuch as the disease is known to exist more commonly among cattle between six months and one and one-half to two years of age. Calves under four months and cattle over two years old are seldom attacked, though the disease has been observed in very young calves and adult cattle. This condition may be accounted for as follows: It has been proved experimentally by artificial inoculation that young calves are less susceptible naturally, and besides, while they are being fed on milk they are not exposed to the germs—as is the case the moment they are turned into an infected pasture.



BLACKLEG SYRINGE.

Cause: The organism of blackleg is a bacillus, exceedingly small, measuring one twenty-thousandth (1-20,000) of an inch in length. As stated above, these small bacilli may, in some way, get into the system of the animal and produce the disease. The usual mode by which the animal becomes inoculated or infected is through a wound of the skin or mucous membrane. Wounds of the skin, or external wounds, may be caused by barbed wire fences, stubble, and the like. Wounds of the mucous membranes, or internal wounds, may be caused by cattle partaking of foreign substances that are liable to scratch the mucous lining of the alimentary canal, and Kitt observes that infection may take place through wounds caused by cattle shedding their teeth. The scarcity of internal wounds, compared with external ones, may possibly account for the fact that it is almost impossible to infect animals experimentally by way of the alimentary canal, even when the individual selected for the experiment is very susceptible. However, this same virus, when applied to an abrasion of the skin, would almost invariably produce the disease in a susceptible animal. Hence, it is generally believed that cattle become in-

fectured through skin wounds more often than by any other method.

After these blackleg germs enter the animal system, they find lodgment and at once begin to multiply in vast number, producing the blackleg disease generally within two days from the time they enter the system. By the process of reproducing in this way, they generate a gas, which collects beneath the skin, where the so-called blackleg tumor is found. It is this gas that causes the crackling sound when the hand is rubbed over such a tumor.

Symptoms: The symptoms of blackleg are very characteristic, and for that reason the disease can be easily recognized. One of the first indications of the disease that may be observed is lameness in any one of the four limbs, or a general stiffness of the gait. The animal appears dull, and if the temperature be taken at this time it will be found above the normal. Very soon rumination ceases, the appetite is lost, and there is a marked depression in the actions of the affected animal. Usually a swelling appears either on the lame leg or some other part of the body, but never below the hock or knee joint. At first this swelling is very sensitive, but otherwise presents no special characteristics. Soon, however, gas collects at this point, as previously mentioned, and then the tumor presents the characteristics described above. At this point the tumor loses its sensitiveness and may be cut without producing any pain to the animal. The fluid that escapes from the incision is a frothy, dark-red exudate, having the odor of rancid butter. It may happen that a fatal case occurs without the development of the characteristic tumor, though such cases are rare. The usual length or duration of the disease is from a few hours to a day, or sometimes longer.

Post mortem appearances: On account of the ease with which blackleg may be distinguished by the ante-mortem appearances, and on account of the necessary scattering of infection resulting from the holding of an autopsy, little space will be given the topic of post-mortem appearances, except to enable the farmer to distinguish between the disease in question and anthrax. The following characters generally suffice to distinguish the two: In blackleg the tumor contains gas, while that of anthrax is solid. The muscles involved in a blackleg tumor have a peculiar odor resembling very much that of rancid butter, which is never the case with the anthrax tumor. In blackleg the blood forms a firm clot, while in anthrax the clot is absent. The spleen is normal in blackleg, while in anthrax it is considerably enlarged, and possessed of the property of gravitation, that is, if the spleen be suspended by one end, the contents will flow to the lower end like fluid in a bag.

Treatment: It is admitted by all who are experienced in this line that there is no agent known that will cure blackleg. Some medicines seem to have been used with success in a few cases but so soon as they were given a thorough trial it was found that they were of no avail. In the western part of Nebraska the stockmen often make deep-seated incisions into the tumor and apply strong caustics or disinfectants to the wounds thus produced, but it is stated by men who have tried this treatment that it is of little or no value. And even if it were of some value, it should be practiced with the utmost care, if at all, as the fluid which must necessarily escape from the open wound would infect the soil wherever it happened to drop.

Preventive treatment: The blackleg

vaccine, as prepared by the bureau of animal industry consists of a brownish powder, which is put up in packets containing either ten or twenty-five doses each. To prepare this powder in such a way that it may be injected hypodermically, it is necessary to obtain certain implements, which, together with the hypodermic syringe, are known as a vaccinating outfit. This consists of a porcelain mortar with pestle, a small glass funnel, and a measuring glass. For filtering the vaccine, we have found absorbent cotton to be most suitable. Figure 1 is an illustration of the vaccinating outfit recommended by the bureau.

Animals to be vaccinated: Calves, as a rule, should not be vaccinated until they are six months old. Under this age they are practically immune from blackleg, and it has been claimed that when vaccinated before they are six months old they are liable to lose the artificial immunity induced by means of vaccination and become susceptible again. Animals more than two years old are seldom affected, and the mortality among them is so small as to make vaccination unprofitable. It is the animals between six months and two years old which should be vaccinated.

Vaccination has no ill effect on calves under six months old, but it should be a rule that when very young animals are vaccinated they should be revaccinated before the beginning of the following blackleg season.

The time to vaccinate depends largely upon circumstances. In nearly every part of the country where blackleg is known there is a distinct blackleg season, and the proper time to vaccinate is just before the arrival of this season. Every practical ranchman and farmer, as a rule, knows when to look for blackleg, and as the disease may appear a little sooner or later, according to climatic conditions, it is always better to vaccinate two or three weeks before the beginning of the blackleg season. In some parts of the country it is not unusual that the calves commence dying when only four months old, while in others they seldom become affected until they are eight months old. It is, therefore, much a matter of judgment when to vaccinate and what should constitute the minimum age at which the calves should be treated.

A. T. PETERS.

# \$5,000 Reward

Will be paid to any person who can find one atom of opium, chloral, morphine, cocaine, ether, chloroform, heroin, alpha and beta eucaine, cannabis indica, or chloral hydrate or any of their derivatives, in any of Dr. Miles' Remedies. This applies to goods in original packages, unopened, and not tampered with. Certain unscrupulous persons are making false statements about these remedies.

"I have been troubled with a terrible headache for the last ten years; the doctors could do me no good, I saw Dr. Miles' Anti-Pain Pills advertised in the Sunday magazine, so I thought I would try a sample. I did so, and they helped me wonderfully. I had headache so badly I could hardly see to work, so I sent to the drug store and got a box. In a couple of hours I was all right, it was the first medicine to do me any good."

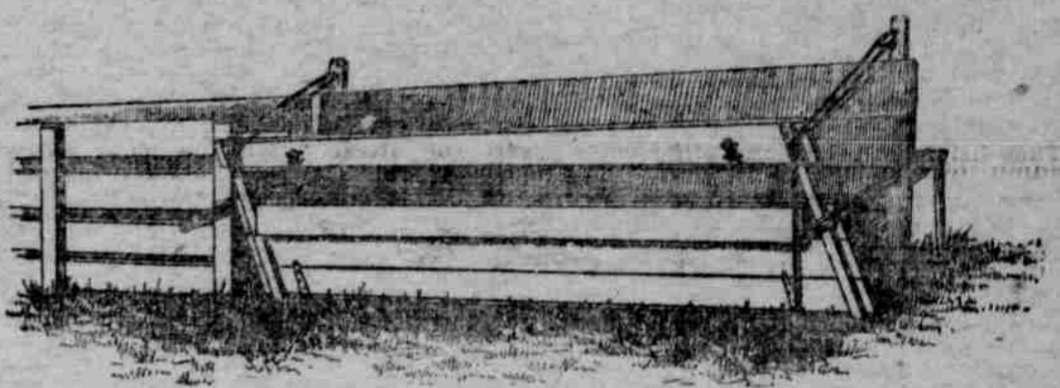
A. A. ILLIG, Philadelphia, Pa.

5362 Tacoma Street.

Dr. Miles' Anti-Pain Pills are sold by your druggist, who will guarantee that the first package will benefit. If it fails, he will return your money. 25 doses, 25 cents. Never sold in bulk.

Miles Medical Co., Elkhart, Ind

wrote and said he had found a spider in his paper. Was this good or bad luck? I replied to him in our 'An-



VACCINATING CHUTE.

## SOME STRAY HUMOR.

THE fish were not biting very lively that morning as they sat under a shady tree on the bank, and they turned to conversation.

"What," asked the man who was deeply interested in his country's welfare, "what do you consider the most important question before us today?"

"Well," replied the man who was perfectly willing to allow politicians to run the country, "just at this moment the rebate question is by far the most important," and he turned the jug upside down to show it was empty.

"It pays to advertise," said Mark Twain, at an advertisement writers' banquet.

"When I was editing the Virginia City Enterprise, writing copy one day and mining the next, I tried to force this truth home in many ways.

"A superstitious subscriber once

swers to Correspondents' column as follows:

"Old Subscriber—The finding of a spider in your copy of the Enterprise was neither good luck or bad. The spider was merely looking over our pages to find out what merchant was not advertising, so that it could spin its web across his door, and lead a free and undisturbed existence forever after."

The letter "F" on the typewriter of a well known novelist recently went wrong. The author was equal to the occasion, as will be seen from the following portion of his MSS.:

"Phairest oph the phair," sigher her lover, "phancy my pheling when I phoresee the phearphul consequences oph our phleeing phrom your phather's phamily. Phew phellows could have phaced the music with as much phortitude as I have, and as phickle phortune phails to smile on our love I must phorego the pleasure oph becoming your husband. Phairest Phrances, pharewell phorever!"

"Hold, Phranklin, hold!" screamed Phrances; "I will phollow you phorever!"

But Phranklin had phled, and Phrances phainted.

Delineator: Many fathers stand aloof from the common domestic



BLACKLEG OUTFIT.

## Old Trusty

Incubators and Brooders

The really automatic incubator—start it and it runs itself. Regulator so perfect that you might throw away the thermometer, if you wanted to. Sold on

**40, 60 and 90 DAYS' TRIAL and 5 YEARS' GUARANTY**

More sold in 1906 than any other make and every patron satisfied. You will be, too.

**SEND FOR FREE BOOK.**

Johnson's Chicken Book—strong and better than ever. Full of information—chicken talk, 200 pages. It will save you money. Write today.

E. S. JOHNSON CO., City Center, Ill.