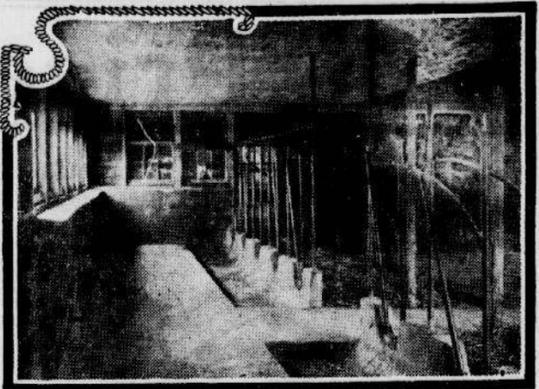
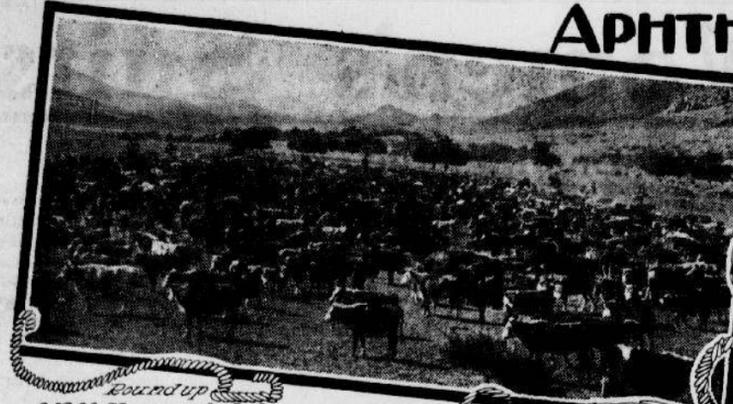


# APHTHOUS FEVER, SCOURGE of the CATTLE YARDS

By A. S. MARCH



Infected Stables are Cleaned by Government Health Officers



Round up of 1200 Steers infected with Foot and Mouth Disease



Cow with Distended Udder caused by Aphthous Fever. The udders often burst causing death.



Cow Affected with Foot and Mouth Disease

RECENTLY the United States authorities were called upon to combat and defeat apthous fever, the deadly and dreaded scourge of the cattle ranges and yards. All the tremendous resources of the national government were exerted to cut off in detail the mysterious forces of this unseen, yet remorseless enemy of our greatest single source of national wealth; for no other land of production equals in value the output of our livestock industry, including, as it does, over a dozen important branches of sub and by-products, any of them involving a trade amounting far up in the tens of millions.

The livestock trade of the United States in a single year runs close to a billion of dollars, and when all this has been devoured there yet remains an invested capital of over a billion more in the form of actual livestock or products evolved from the varied and various branches of industry, primarily depending on cloven foot animals. In this class are included, cattle, sheep and hogs, for each and every variety of animal that walks on a cleft or divided hoof is subject to the dread foot and mouth disease.

**Two Outbreaks Last Year.**

In 1908 two important outbreaks of foot and mouth disease (as apthous fever is called in the vernacular) were chronicled in the United States. The first was in the middle west and caused only local disaster and was promptly stamped out by sudden extermination of the cattle involved. The second attack occurred in the Middle Atlantic states and led to an embargo of exporting cattle from two great seaports and the destruction of thousands of dollars' worth of stock.

In both cases the United States authorities took immediate charge of the situation and the national treasury was called upon to pay the owners the value of the cattle infested and destroyed.

Before detailing the appearance of this dread cattle disease, which causes a constant standing expense amounting to several millions annually, the origin of this epidemic is especially interesting. The first outbreaks of foot and mouth disease were simply termed epizootics by farmers hundreds of years back, and the disease, like every other known scourge but two, originated in the crowded sections of Central Asia.

Cattle plagues were just as frequent in the middle ages as those frightful epidemics of diseases among men that frequently swept the entire known globe, starting in far eastern Asia among the crowded herds of the Mongolian steppe and swinging from nation to nation until it died out in the Arctic regions—not from the cold but merely from lack of more material to creep upon.

The foot and mouth disease, known likewise as apthous fever, epizootic apthia, infectious apthia, eczema epizootic, is so far as science today is concerned, a closed book, both as to specific germ or bacillus which causes the scourge and the cause or cure thereof.

**Science Can Do Little.**

All that modern science can actually do even to this day against foot and mouth disease is a primitive and brutal extermination of the victims of the fever before other creatures have become infected by it.

Loeffler, a celebrated scientist of Germany, and today perhaps the man most experienced in combating foot and mouth disease, tried inoculating healthy cattle with injections of infected material, and produced immunity in a great majority of his cases, but the animals thus treated are sources of contagion during their illness, and actually this inoculation would merely spread the disease and serve to trench it more firmly in infected districts.

Foot and branch, foot and mouth as it were, all cattle in these United States once infected, and indeed, when clearly subjected to infection, are

slaughtered, with no attempt to cure or alleviate.

In Germany, however, the disease has been epidemic for 30 years and has cost the empire \$100,000,000 dollars, enough money to duplicate Emperor Wilhelm's cherished and vaunted war navy. In Germany the disease is so widespread that slaughtering the animals would ruin the farmers of the nation, so that vaccination, which is what Loeffler's inoculation process practically amounts to, has been tried with fairly good results.

While such a dangerous foe to cattle, sheep, goats, hogs and every other animal that threads on cloven foot, the mortality of apthous fever is not as high as with some other diseases. It runs from 10 per cent as the usual figure, to as high as 50 per cent, where infection has occurred; for one attack of foot and mouth disease does not confer immunity on the sufferer from later attacks of the fever.

In Germany, in 1890, there were known cases actually located and identified so as to enter into the statistics of the empire 431,235 cattle, 230,560 sheep and goats and 153,808 hogs. During this year the foot and mouth disease was rampant in France, Italy, Belgium, Austria-Hungary, Switzerland, Roumania and Bulgaria. In 1883 in England alone, the losses from cattle infected with apthous fever ran as high as \$5,000,000, and compared to the United States, England produces so little cattle as to be not worth the comparison from a financial viewpoint.

The germ of the plague has been sought by many scientists and in every known manner. Numerous attempts have been made to cultivate the germ and stain it, so as to get a suitable culture for the microscope. Experiment has demonstrated that the bacillus will pass easily through all the standard germproof filters and even through some which, at enormous expense, were especially invented to catch and isolate the tiny and slippery germ of apthous fever. Its size must indefinitely minute. It is a Bacterium even among a class that can hang by the billion in a drop of fluid on the point of a needle.

**Human Beings Can Be Infected.**

While human beings do not get the disease from eating the meat of animals suffering from foot and mouth disease, they readily take infection from the milk. Unboiled milk will invariably convey the disease to human beings and especially to children. Regions where the fever prevails ha-

bitually show thousands of cases, especially in children, who naturally are greater milk drinkers than adults. There is in human beings a high fever and intense pain and difficulty in swallowing. Within two days the patient breaks out with blisters in the mouth and on the fingers. These sometimes cause dangerous ulcers, but death rarely comes to the human being from apthous fever. In fact, this disease follows up the findings of modern pathology, which has demonstrated that the human animal is best fitted to fight any and every germ of disease known to medicine. The vast majority of diseases common to both man and the brutes find a far readier prey in the lower animal.

**Government Works Swiftly.**

The work of the government, once the dread foot and mouth disease has been reported from any district, is swift and relentless. An advance guard from the veterinary department hastens to look the suspects over and make a pathological test as to the true nature of the trouble. If the verdict is in the affirmative the national government immediately promulgates a quarantine order that shuts up the

cell chamber until the completion of the present city hall in 1907.

The committee appointed to solicit funds for the horticultural society meeting next month has now an even \$300 on hand, to be used for the annual meeting, which promises to be the best affair of the kind ever held within the state. The sessions will be held in the Lucas opera house and the cooking exhibit will be held in the grocery department of the Valley Mercantile company on Wednesday afternoon.

**GERMAN SUFFRAGISTS IN EVIDENCE**

Women reformers make demonstration before the diet building.

**BATTLESHIPS ARRIVE IN HAVANA HARBOR**

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**CASE IS ADJOURNED.**

New York, Jan. 25.—The case against Broughton Brandenburg, the writer charged with grand larceny, in connection with the publication of an article which was alleged to have been written by the late President Cleveland, was adjourned in the supreme court today for a week.

**ALUMINUM IS NOW BEING ROLLED THINNER THAN TIN.**

Aluminum is now being rolled thinner than tin, which it is expected to replace by the reason of its being both lighter and cheaper to manufacture.

**MISSOULA BUSINESS MAN, IS IN TOWN TODAY.**

J. R. Daily, a Missoula business man, is in town today.

**STEELE RANCH IS A GRADUATE OF THE STATE AGRICULTURAL COLLEGE AT AMES, IOWA.**

He is succeeded on the Steele ranch by J. T. Moir, a graduate from a Scotch agricultural college. A new man is in charge of the dairy department. E. A. Wilson, formerly foreman of the Anaconda Copper Mining company's farm near Anaconda, has succeeded J. C. Button, who resigned to go to Michigan to engage in the dairy business for himself.

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suspected territory in a net through which no means of contagion can escape.

This is followed up by the speedy arrival of men, who, after killing the infected animals, sweep the stables, feeding places and suspected meadows with disinfectants. Into streams, thought capable of having been infected, formaldehyde is poured and not a vestige is left unburned of the hay, oats, corn or any other food which could possibly have been muzzled over by the diseased animals.

No especial hardship is worked by this slaughtering of infected animals and the stern destruction of every possible source of contagion. The national government has sensibly and justly taken the stand that what the constituted authorities decide must be destroyed for the common good of the nation should be paid for out of the common funds. So the disconsolate farmer or stock herder whose valuable animals have fallen a prey to apthous fever is not only protected from future infection, but is promptly paid a fair market price for the animals destroyed.

**Difficulties Are Tremendous.**

Tremendous difficulty is sometimes encountered in getting the diseased animals into such quarters that they can be killed. Even greater difficulty has been experienced in getting sufficient labor to excavate the vast graves which must be dug deep to hold the carcasses of the slaughtered animals and to put an effective layer of earth between the living and the infection that can so swiftly be absorbed from the dead.

It is only in rare cases in this country that the disease progresses to a stage where the animals froth at the mouth. Usually a high fever, sometimes as much as 106 degrees, has been encountered in foot and mouth diseases, but where the deadly inflammation of the germ has reached this

extreme high point recovery is out of the question, owing to serious chemical changes in the blood, among them a vicious tendency to coagulation.

The final thought in the pathological search after the germ and the nature of apthous fever is that the bacillus must be some infinitesimally minute vegetable parasite which defies the ordinary tests for germs like those of consumption, typhoid fever, etc. Its minuteness is probably the cause of the tremendous ease with which the disease can spread itself. Nothing known to medical science is so easy of propagation as foot and mouth disease.

**Carried Inside Doctor's Hair.**

It can be carried on the insides of the very clothing of the attendants employed to exterminate it, so that in recent epidemics the physicians and all attendants have been compelled to wear big waterproof cloaks and have themselves sponged off in formaldehyde to prevent carrying the disease to healthy herds under their inspection. It can linger in a farmer's beard or in his long hair for weeks and can cross the ocean in a diseased hide, torn months before off the steer which died sick of foot and mouth disease.

So that combating this, the smallest of all germs which has apparently the greatest ease for transporting itself and its deadly activity unimpaired, medical science confronts a task of tremendous difficulty. Herds in good shape apparently, with no signs of ill-

ness, speedily become ill-natured from what the average farmer and cattleman is disposed to term "distemper." Cattle are subject to many ulcers and foot diseases that closely resemble foot and mouth disease, and it is highly difficult for any layman, however experienced as a cattleman, to diagnose apthous fever. It is only after a certain amount of leeway has been obtained by the epidemic that suspicion is aroused, not so much by the nature and symptoms as the tremendous and rapid increase of the fever. Thus the fever always obtains a big start, and this more than any other feature of its course in the United States demands the stern weapon of complete extermination.

It is a war to the knife, bitter, bloody and unrelenting; that the scientists of Uncle Sam must wage on the scourge of the cattle yards, for there is at stake our enormously profitable and proud position as not only the world's granary, but also the supplier of the roast beef of old England and the meat stuffs depended on by half a dozen other nations.

The cost of the battle runs into millions, but the stake counts up far above the billion of dollars. So far science has kept the upper hand, but it would only take one serious mistake, only a slight exercise of hesitancy and indecision to prevent this dread disease from invading the vast herds that roam the cattle ranges of the United States. In this case eternal vigilance is the one and only hope of safety.

## FISHERIES TREATY PREPARED

**TROUBLESOME MATTER IS NOW TO BE PRESENTED TO THE HAGUE FOR SETTLEMENT.**

Washington, Jan. 25.—An agreement has been reached between Secretary Root and the British and Canadian and Newfoundland governments through their representatives on the Newfoundland fisheries boundary question to be submitted to The Hague for arbitration.

The treaty will have to be sent to the United States senate for ratification.

Like the waterways controversy between Canada and the United States the Newfoundland fisheries dispute has been the subject of diplomatic negotiations and treaties for many years.

Questions which The Hague will be asked to interpret arise under the execution of article one of the treaty of October 20, 1818, and in deciding the controversial points the tribunal will have to pass on a very broad and important question as to whether state or colonial laws or regulations may interfere with the terms of a treaty.

The latter question confronted the administration in a most perplexing way in the Japanese school question

and threatens to become an important factor in case the bills pending before the California legislature affecting the Japanese become laws.

**FOR SAKE OF ORPHANS.**

Washington, Jan. 25.—Prominent charity workers from all over the country gathered here today in response to an invitation from President Roosevelt for a conference on means looking toward the betterment of conditions of orphans or neglected children.

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Don't associate them with oysters you commonly buy. "Sealship" are packed without water in sealed, air-tight, steel containers. "Sealship" Carriers keep the oysters fresh and firm—not water-soaked. They retain all the incomparable tang of the sea.

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The genuine "Sealship" Oysters are always sold from a White Porcelain Display Case bearing the "Sealship" trade mark in blue. This is for your protection—look for it. The "Sealship" Carrier System is patented. Infringements will be prosecuted to the full extent of the law.

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No matter how many other remedies you have tried, Hill's Rheumatic Pills will positively cure you.

Try these pills at our expense. It costs you nothing to prove what they will do.

We send a trial box free to all sufferers from rheumatism.

If you have rheumatism, sciatica, neuralgia, lumbago, gout, kidney and liver complaint, blood poisoning, stomach trouble or constipation, we want you to take advantage of this free trial offer.

If your trouble is of recent origin the trial box of Hill's Rheumatic Pills should alone prove sufficient to cure you. But if your disease is of long standing, you will of course want an additional supply.

In any event this trial box of pills will stop the pain you are suffering, restore the organs of your body to vigorous health and make you feel so much stronger and better that you'll want to continue taking them until a complete cure has been effected.

Hill's Rheumatic Pills are made the same today as they were in 1835. There is a record of 73 years of successful cures behind them. Eighteen thousand people have written us that our remedy cured them of rheumatism and kindred uric acid troubles.

They could not harm the most delicate digestive organs. On the contrary, they will strengthen the stomach and bowels, put the liver and kidneys in perfect working trim, fill the arteries with new, red blood and tone up the entire system. They are an ideal tonic and body builder.

Write today for the free trial box of Hill's Rheumatic Pills and see if they do not do all we have said and more. Address: Belden & Copp Co., Dept. 100, Minneapolis, Minn.

HILL'S RHEUMATIC PILLS ARE SOLD BY GEO. FREISHEIMER.

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