

in my opinion, with those who attribute the distemper to flukes in the liver; whereas we know that these worms are found among all herbivorous animals, and even cause their death, without, however, any contagious disease resulting from it.

The field spider, the mould, which is only a cluster of air plants, the mildew, stagnant water, the hay, or such other corrupted fodder † can no longer be considered as the causes of the disease; seeing that they always exist, and that, in all times, the contagion depends upon a viciated atmosphere, and that it slowly spreads from place to place without its course being hastened or retarded by the wind. It was slow in coming from Italy into our country; from 1710 until 1714, and from 1741 until 1744. We can say the same of the contagion now prevailing, which spread itself very slowly in the small extent of our country. But, suppose that the causes of which I have first spoken took place, I will ask if, before the year 1714, there was not as much stagnant water, bad fodder, field spiders, mildew and flukes (*distoma hepaticum*) as at this period and why the disease was not noticed until after it had penetrated as far as us?

In short, to what must it be attributed that all these causes act only once upon horned cattle? whilst experience obviously proves to us that the cattle which have once had this disease and have been cured of it are never attacked again, although all the causes pointed out, and the impurities of the atmosphere, always have existence, and notwithstanding they permit them to graze in the midst of sick animals, and that they drink from the same vessels and eat the food which is found infected with the slaver (*F. bave*) of those which die.

You will then ask me what is this distemper? To what must be attributed its first origin; and although we may know that it came to us at first from Asia, and particularly from Persia, from what cause did it there take rise? I will answer, as it is to be wished that all naturalists had done, that I do not know, that it is beyond my understanding, and doubtless that of all men. All that we know of it is that the contagion came from some other place by the ambient air, and that it strikes our cattle with death; that it must not then be attributed to the cli-

mate of this country, nor to mould or mildew, neither to stagnant water nor food, nor to our way of pasturing the animals, or to any such other imaginary cause whatever this may be.

Some endeavour to make us believe that the Swiss, who, according to their way of thinking, know so much better than other nations, were the only ones who took the wise precaution to give to their cows, each time they milked them, a little salt and a certain mixture known among them under the name of "geleck," as do our farmers, whose cows certainly surpass in beauty, in abundance of milk and in cleanliness those of all other nations; and could teach them how to protect their cattle from the disease.

I have already shown that the contagion has prevailed in Switzerland as well as in this country; but this question is completely settled by a letter from Haller, of which this is the substance: "They certainly give here much salt to the horned cattle to lick; but I do not think that to this should be attributed their preservation. I have never noticed that medicines have done much good. But we take great care to prevent all communication with diseased animals. More than once we have experienced this ill-fortune; but then we have kept the stables shut, and prevented the animals from going out of them. Sometimes even, for the prevention of this contagious disease, we have killed all the cattle of a village which were found to be infected with it, and by this means we have preserved the remainder in health."

This is the testimony of an educated man of great reputation, and that in a matter which concerned his own country.

As long as we are not able to prevent this scourge, we must expect to see ourselves attacked by it, even if we should inhabit Arabia Felix, where our lands would be watered only by limpid brooks, and where sea salt would be found naturally mixed among the grass of our meadows.

(To be Continued.)

CATTLE DISEASE IN THE UNITED STATES.

Among the Parliamentary papers issued on April 5, was "Correspondence connected with the detection of Pleuro-pneumonia among Cattle landed in Great Britain from the United States of America." It begins with a telegram of January 30 last, from Lord Salisbury to the British Minister at Washington, notifying that pleuro-pneumonia had been detected in a cargo of cattle on board the ship "Ontario," from Portland, and that the Government were consequently considering whether they could retain the United States

under the exemption of Part IV. of the fifth schedule of the Act of 1878. A large number of communications from Sir E. Thornton, Mr. Archibald (our Consul-General at New York), Mr. Crump (our Consul at Philadelphia), and American agriculturists and others to whom they applied for information, give details representing the extent to which pleuro-pneumonia existed in the United States. The principal centre of the disease seems to be a cowhouse at Brooklyn, where as many as 800 cattle are housed at a time, and are fed with hot swill from an adjoining distillery to increase the production of milk. The cattle never get out of the place in a healthy condition, and but few alive, the pleuro-pneumonia killing them off at the rate of several per day. Professor M'Eachran, veterinary inspector for the Dominion of Canada, who discovered this nursery of disease, also found much pleuro-pneumonia in the State of Virginia. Agricultural officials in the State of New York express a strong disbelief in the existence of pleuro-pneumonia in that State, or anywhere in the United States, in the contagious form, though they believe that cases of the sporadic form of the disease have occurred. From Connecticut the report is to the effect that one herd of cows in that State is plainly affected with contagious pleuro-pneumonia, but the disease is not epidemic. One or two similar outbreaks previously have been controlled by slaughter and quarantine. A veterinary surgeon belonging to the Board of Health of New Jersey reports that in that State pleuro pneumonia has existed, and does exist to a more or less degree at the present time; but has never assumed the epizootic form, and usually occurs in isolated cases. The editor of the *American Agriculturist* says:—"We have occasionally a few scattered cases of pleuro-pneumonia occurring in ill-conducted dairies, but it is not of an epizootic character, and remains in the stables where it originated. Among grazing cattle there is now no disease reported in any part of the country." An official return from the health officer of the district of Columbia states that in October last there were cases of pleuro-pneumonia in farms near Washington, which were described in the papers as an outbreak of "rinderpest." The correspondence contains several remonstrances from the United States Government against the step taken by the Privy Council in withdrawing the States from the list of countries whence live cattle may be exempted. On February 1, Secretary Sherman issued an order making compulsory the examination of all live cattle shipped from any port of the United States, and prohibiting their embarkation until a certificate of their freedom from disease had been given by the inspector. In communicating this order to Lord Salisbury, the American

† M. H. J. C. Berger shows this very clearly in his "Gedanken von der Seuche des Rindviehes," etc., Königl. Großbr. Churfürstl. Landwirthschafts Gesellschaft nachrichten, vierte Sammlung, page 380, where it says: In one place where there were sixty-five cows, they removed from it seventeen at the time when the contagion broke out, to another stable two miles from thence. All had pastured in the same meadow and had eaten the same fodder. The forty-eight which were kept together, all died, and only the seventeen driven elsewhere remained healthy; evident proof that it is not to the food that we must attribute this disease.