

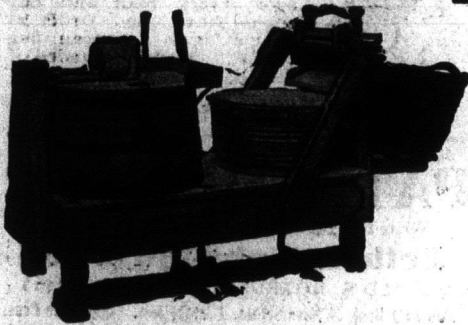
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About the Farm.

Glanders in Horses.

A Stock Farmer writes:—
"I have something wrong with one of my brood mares and a yearling filly. Last August, while suckling a mule colt, she came down with a cough similar to distemper. She ran down very thin, and this cough has stayed with her up to now. In October she had large spots raise all over her right hip and along the backbone. Since then these spots have grown in size to half a dollar and a nickel. They raise up and the hair all comes off with from one-half to two drops of matter. Now the hip is a sight. Nearly one-third of the hair is gone. She is in foal, and I can not heal these sores or get the mare to fatten up. I have tried stock food and everything I have been told to do, but with no apparent good. I am feeding as much grain now as I do when she is suckling and at hard work. She came down a year ago, only not so bad. When she has no colt, she is the best looking horse in my lot. The filly also has the same raised spots, but no cough and no matter. The hair does not come out on the filly. Another brood mare has a cough but no sores, and is as fat as can be. I do not believe the disease is distemper, as all of my horses and mules had distemper three years ago. Can

you tell me what the trouble is and what to do? I have tried stock food until I am tired of it, and want to try something else."

The symptoms point to that most dreaded of all horse diseases, glanders. Possibly we may be mistaken, but our correspondent will make no mistake if he separates at once all horses affected with a cough and sores and described in the above, from the other horses on the place; if he disinfects the stalls thoroughly, and if he calls in a veterinarian at once, to make a definite diagnosis for him. Glanders is not only incurable, and extremely contagious, but it may affect man. For these reasons no one should take halfway measures when there is the slightest chance that there may be glanders on the place. The most common symptom of the disease is a cough accompanied with a discharge from one or both nostrils. At first it is thin and watery, but later becomes thick and yellowish, and may be streaked with blood. The glands of the jaw are often swollen, and in some forms of the disease swellings break out just under the skin in other parts of the body. These swellings are especially likely to break out just as our correspondent has described them along the hip and thigh, the side of the neck or the shoulders. About the only thing that can be



A Peaceful Scene.

done with glanderous horses is to kill them so as to prevent the spread of the disease.

How Soils are Built Up.

Every farm boy ought to know something about how soils are made in the first place. He should not be allowed to believe that the earth is quite now as it came from the hands of the Creator. He should know better. He should know that the work of fitting the soil for the abode of man was a very, very long process, dating back perhaps millions of years before there was a man upon the face of the earth. The Good Book describes this process: how life began in the sea; how gradually grass began to grow, and plants, the plant yielding seed and the tree yielding fruit, each after its kind; the process covering five or six long periods (no one knows how long), until at last the earth was fit for the abode of man. Ever since the earth cooled off processes have been at work to fit it for the abode of man; and we can conceive it at one time to have been simply rock and water. The Almighty covered the rocks with moss, which clung to it and began the work of disintegration. Then came lichens, then small trees and coarse grasses, until the rocks were crumbled by frost, by heat, by growing plants or trees whose immense roots found their way into the crevices, prying off and actually splitting the rock. We did not intend to go back that far.

Speaking broadly, there are three kinds of soils in the United States—one the non-glaciated soils, where the character of the soil is determined by the character of the rock from which it was formed. Where the rock was limestone, a rich soil was formed; where the rock was sandstone a thinner soil; where there was too much iron in the soil, a still less productive soil.

In the glaciated sections the hills were planed down and the valleys filled up, and the soil picked up and carried by the glacier and deposited after the returning heat melted the ice. In the river of ice, really packed snow, a point was finally reached where the ice melted off as fast as it shoved down; for ice moves just like the river, but very, very slowly. Wherever it melted off, as fast as it was pushed down, a moraine was formed, in which there would be large deposits of rock and very likely lakes or lakelets. The character of the soil so far as fertility is concerned would depend on the character of the soil carried by the glacier, and that will depend upon the source from or over which the glacier moved. Hence some glaciations are rich in every element of fertility; others lack phosphorus.

Then we have all over the United States what are known as alluvial soils, which are made up of the wash from higher lands that have been deposited in ancient lakes or along the beds of rivers. Usually the river or branch is the natural drain of the lake, and it is subject to high water and overflow. In this overflow the heavier particles in the muddy water are dropped at the first opportunity, and therefore near the bank of the river. Hence the land is always lower back next the hill than it is next the stream.

In any case, whether in the non-glaciated, the glaciated or alluvial soils, plant growth followed, the plant growth being determined by the character of the soil. The object of the plant growth was evidently to supply vegetable matter to these soils, which are from 90 to 95 per cent. rock, except in peat beds, which are the remains of old lake beds. That's the reason why weeds grow so luxuriantly everywhere. That's the reason why grass grows on the prairies. The timber soils are supplied with vegetable matter by the falling leaves and the decay of dead trees.

Then earth-worms take up their work and literally eat the soil, passing it through them, leaving it in casts about the ground. Boys have often seen them. Darwin has told us how many years it takes the earth-worm to pass through the whole upper portion of the soil. We don't remember how many; but that does not matter. Then the ground dwellers—mice, moles, shrews, squirrels, and sundry others—dig in the soil, in-

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