

dar I noticed the date, July 10th, 1999. When informed that the date was correct, and being unable to explain to myself how I had lost or gained 100 years, I gave up the conundrum. After supper the farmer questioned me much about the 19th century methods and then described the age in which he lived.

"A HUNDRED YEARS AGO,"

said he, "thoughtful men were warning farmers that unless they adopted rational methods of restoring the soil to a condition of fertility approaching that in which they found it when they broke up the prairies and forests for agricultu-



A Fur Market in the Far North.

tural purposes, that nature would destroy them in self-defence. It was pointed out that the land which was originally rock ground up by natural forces through many centuries, had been gradually, through subsequent centuries, organized by natural forces until a considerable depth of it became in a condition of fit food for various species of plants. The original or first plants to grow were of a comparatively low order and were mostly of the family described by scientific men as beginners, which were atmospheric nitrogen gatherers. As they died in successive seasons their bodies decomposing in the earth left a condition of organized food for higher types of plant life.

MAN COMING ON THE EARTH

found it a garden abounding in many kinds of plants which reproduced themselves in a natural way. On better acquaintance he found them useful as food, or fashioned them into implements of trade and material to shelter and keep him warm. Gradually he noted that by selecting the seed of the best of the most useful ones, and planting them in the rich soil by themselves, keeping them free from the encroachments of other plants (termed weeds), they improved year by year, until they gave not only more useful produce but were even quite changed in character from the original wildlings. And so the cultivator's art went on, moulding these wildlings during successive centuries, until we can no longer recognize them in the plants we till.

AS MAN MULTIPLIED

on the earth, and also took means to herd together and domesticate types of animals which he found useful for his purposes, he pre-empted portions of the globe's surface which he found yielded most easily to his labors, and dividing them into farms, subtracted the organized plant food from them. He depleted the soil of what was called its fertility, only returning to it such portion as he found most convenient, casting the balance into the sea or destroying it by fire. The time came, as described, one hundred years ago, when

THOUGHTFUL MEN BECAME ALARMED

for the future sustenance of the race. Man had at that time taken up nearly all the sections of the earth where vegetation could thrive sufficiently for his wants, and the people were multiplying so rapidly that the natural sequence of affairs suggested a depletion of population by starvation. No man knew how many times during the thousands of past centuries the races of men had been practically destroyed by natural forces to allow nature to recoup herself.

Our earliest record of such an event was of

A DELUGE.

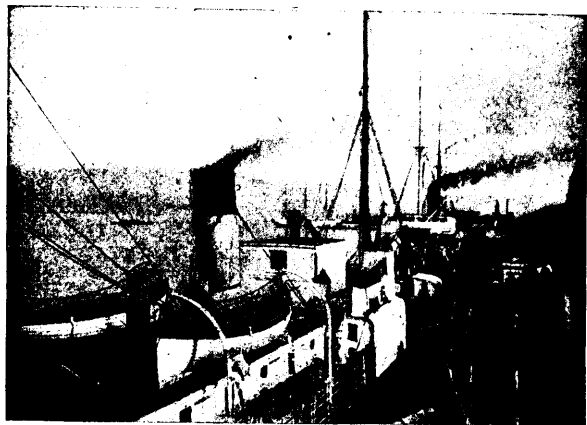
And even that, told in ancient language, gave but a vague idea of race destruction. Many famines had occurred in the older settled lands, but as methods of locomotion and carrying were devised they were relieved from newer lands. It was evident, however, that some great effort must be made to restore the soil, from which we were extracting vitality, to something approaching the pristine fertility, or disaster would follow. Already the diseases of man and beast were occupying the attention of a vast army of doctors who labored with tireless energy to discover and apply palliatives, and devise methods of sanitation. The struggle between man and nature was getting severer year by year.

FIFTY YEARS PREVIOUS

Liebig had written his chemistry of the farm and directed attention to the necessity of returning to the soil at least the most essential elements of plants in forms of easy absorption. Gradually schools of agricultural science were established in all civilized countries, and soil and plants were studied. People were beginning to talk of scientific and modernized farming, but up to that time the work of scientific agriculturists seemed largely to be narrowed in the lines of, producing the best from what already existed, selection of seed and stock, methods of manipulation in practical farming, the feeding and breeding of domestic animals, the destruction of injurious insects and the stamping out of the continuously recurring diseases.

ABOUT THIS TIME,

too, a noted scientist, president of the British American Society, but not specially a student of agriculture, in his inaugural address at Bristol, England, pointed out the impending danger of widespread famine, and consequent typhoid, which he thought threatened the world within half a century. Agricultural scientists disagreed with this eminent man in fact, but generally admitted the correctness of the principle involved. Governments were appealed to, and strenuous efforts were made to awaken the farmer to a realization of the state of affairs. Unfortunately the farming communities had never given any special attention to edu-



A Steamer at Vancouver, B.C., loading for the Klondike.

cation, except in merely teaching the children the ordinary branches which fitted them for the circle of society in which they moved.

THE ATTEMPTS TO TEACH FARMERS

better cultivation, then, took the form of experimental exhibits, and was practically a system of empirics or quackery. The professors employed to teach considered this the only possible plan, in view of the farmer's want of education, to fit his mind to receive and understand the teaching of scientific principles. Here and there a practical man with a gift or aptitude for making the principles very plain in such language as farmers could grasp readily labored among them, and awakened much earnest thought. Gradually it dawned upon the educational authorities that the

AGRICULTURAL EDUCATION OF THE FUTURE

generation was more important than the enlightenment of the farmer of the day, whose energies were already sufficiently taxed in providing a living for himself and his family. The