

PRactical FARMING.

PLOWING AND HARROWING.

The plow in principle may not have changed much in 2000 years, as has been stated, but individual plows have been greatly improved, so that the draft is much less and the labor for the operator greatly reduced. Scientific principles have been studied, and the plow has been so constructed that the resistance is reduced to a minimum, while doing the work most effectively. The most recent improvement is the self-sharpening plow point, consisting of layers of edges, so that as one wears off a new and sharp edge is presented instead of a dull surface. This makes the draft much easier and saves the bother and expense of re-sharpening. A great variety of implements have been tried as substitutes for the plow, but they have not proven satisfactory under all conditions.

The depth of plowing has been the cause of almost endless controversy. In the corn belt, as a rule moderately deep plowing has given most satisfactory results, all things considered. It is obviously unwise to make any great variation in the depth of which any one field is plowed during one season, for by suddenly lowering the plow two or three inches, a cold raw earth is thrown out on top. This is unsuited to the best development of the plant, and until the air and sun have affected it for a couple of years, it will not be in the best condition. The object of plowing is to get the upper layers thoroughly loosened and pulverized, so that the plant roots can readily penetrate them. The loosened surface acts as a sponge for absorbing and retaining the moisture until needed by the growing crops. It does not matter whether the upper surface be turned or not, nor does it make much difference by what means this breaking or loosening up is accomplished. If shallow plowing and subsoiling will answer the purpose, follow that practice. If, however, this condition cannot be secured except by deep plowing, it usually will pay to plow deep. On very wet low grounds deep plowing is obviously unnecessary, as the retention of moisture does not have to be looked after so carefully. In sandy or very loose soil deep plowing is not essential, as the roots can easily find a passage and the land is in a condition to retain large quantities of water. The above applies more particularly to the preparation of land for wheat and corn. Shallower plowing will answer very well for oats and grass seeds. Three inches is usually sufficient for these later crops, while for corn and wheat six and seven give best result.

At one time the various riding and wheeled plows were not universally liked, as they were considered horse-killers. This heavy draft feature has been eliminated somewhat, and as the work is done better and as horses are so cheap, it is certainly advisable to buy them. Human strength is so much more valuable than that of the horse that it would pay to have an extra animal or two rather than exhaust the farmer or his hired man.

The preparation of the land just before planting demands more and more attention, as the soil becomes less productive and drouths more frequent and severe. Ordinarily the cornfield is harrowed, until the surface is level, little attention being given to the condition of the soil more than two inches below the surface. With several seasons of severe drouth, however, it has become necessary to so pulverize and compact the plowed portion that large air spaces do not remain, allowing the excessive penetration of air and consequent detrimental evaporation. This thorough preparation is best accomplished by means of disk or acme harrows, ordinary toothed harrows and drags. The first named harrow breaks up clods and eliminates air spaces. The field is disked once or twice, then harrowed with a heavy smoothing or straight toothed harrow, it will usually be in first-class condition. A drag will do much to pulverize clods on the surface and compact the soil, but it does not pulverize the lower layers of the plowed portion. Rolling has much the same effect and is a valuable aid when the weather is quite dry, but during the wet season it may do injury by compacting the surface and causing the top layer to bake. Evaporation then takes place very rapidly and the crop is seriously injured at the outset. As soon as the grain, if it be corn, appears above the surface, cultivation must begin and the upper layers be kept in a finely pulverized condition, so that they may act as a mulch.

It has been demonstrated during the past few years that the more complete the preparation the better the crop. The cultivation then can be greatly reduced, and the results more satisfactory. Many a farmer will say that he cannot spend so much time in preparing his soil, and that such attention to the more scientific methods cannot be given. This is a fallacy which must be abandoned as the years go by, for the changing conditions demand more thorough work and greater attention to details. During the great drouth of '94, the farmer who thoroughly prepared his soil and had a fair crop and in many cases a good one, while the man who neglected thorough preparation reaped a small harvest.

SEEDING TO CLOVER.

Herds Dairyman gave a correspondent some advice on seeding to clover, first, without a nurse crop; second, with oats; third, on fall rye.

The amount of seed required will be the same in either case, and this will vary according to quality of seed, from twelve to twenty pounds per acre. It is a most excellent plan to test the seed before sowing, by putting a (counted) hundred separate seeds in fine earth or between flannel cloths, keep moist and warm and note how many seeds grow. If 90 per cent. of the seed sprout, eight pounds to the acre will probably

suffice, but more will do no harm. The best way to sow clover seed is to get one of the inexpensive broadcast seeders, that are carried from the shoulders and are worked by hand, either with a crank or bow. These are usually kept in stock by dealers in agricultural implements and frequently by hardware merchants. Sow clover early in the spring, as early as the ground can be worked. Sometimes a good catch is obtained, on ground seeded to rye or wheat in the fall, by sowing the clover on a light fall of snow, or in the early morning of those spring days, when the ground is alternately freezing and thawing, but it is surer to wait a little, until the surface will bear dragging, and then sow the seed and go over the ground once or twice (according to circumstances) with a slanting toothed harrow. When sown with spring grain, or by itself it is better to use the harrow for covering than to depend upon a rain storm. When sown without a nurse crop, (robber-crop would be a more appropriate name) there is a probability that the quicker growing weeds will spring up and check the clover. If this should be the case, go over the ground with a mower, having the cutting bar raised high enough to miss most of the clover and clip the greater part of the weeds. If the weed crop is so prolific that when left on the ground, it will smother the young clover, it must be raked off.

METHODS OF MILKING.

To get good results from a cow it is necessary to keep her in a quiet, contented condition at the time of milking. This end is accomplished best by always feeding the cow at that time.

Many do not want cows to eat then, claiming they will give attention to giving down milk better if not fed, but if they give attention I think they are more likely to give in the wrong direction, towards holding up the flow. But, whatever plan is followed, a constant and regular method will prove more satisfactory than irregularity.

Rapid milking may be as injurious as slow milking. A moderate, careful person will get all the milk there is. In cases of, disease of, or accident to, the udder, great care must be exercised not to worry the cow, and with this care, and not allowing double time for milking, the worst case of ordinary udder troubles can be handled. Always speak to a cow before sitting down to her, as if she is startled, her only refuge is to jump or kick.

GOOD ADVICE.

Our advice first, last and all the time is to go into no wild-cat creamery schemes without first having given the matter a good and intelligent sifting. We are continually hearing of jobs of this kind being put upon farming communities by irresponsible parties who care nothing for the success of the undertaking beyond getting a good fat rake-off for their own pockets. Where there is any doubt as to the proper course to pursue in matters of this kind there should be no hesitation about getting the counsels of reliable men who are in position to give advice that is worth something. It is said that talk is cheap, and so it is. It doesn't cost the fellow much who does the talking, but it is often a very dear commodity to the people who listen too long and well.

PROFITS OF DIAMOND MINING.

The Net Income From the De Beers Mines in South Africa \$11,222,840 Last Year. The South African diamond mines of the De Beers Consolidated Mines Company yielded last year a clear profit of \$11,222,840. The diamonds taken from the mines sold for \$15,530,790. The expenses of operating the mines for the twelve months, including a liberal allowance for deterioration of plant and for interest on debentures, were about \$8,525,000. Money received for rents, profits on various investments, and miscellaneous sources of income brought up the year's profits to the sum mentioned.

Dividends at the rate of 25 per cent. per annum were paid, which disposed of about \$5,000,000 of the profits, and an equal sum was set aside as a reserve and invested in consols and other sure things, thus assuring another year's dividend in advance. From all of which it will be seen that diamond mining comes about as near to what it is cracked up to be as anything does in this world of disenchanted things. The average yield of diamonds was 0.85 carat in each load of clay. The average value of the diamonds mined was 25c. 6d. a carat, say \$6.12. At the close of the fiscal year the company had 3,360,256 loads of clay on its floors ready for the shifiting process. This was taken into account as being worth, in diamond possibilities, 1s. 6d. a load, although the clay has usually averaged 2s. 6d. a load. This would make the real profits, realized or in sight even more than stated in the figures given above. And last year's results showed an increase in revenue from diamonds produced and sold of \$1,428,955 over the previous twelve months.

An increased price was received for diamonds last year over the previous year, and the directors believe that the present high rates will be fully maintained if the output is carefully regulated. There is a good deal of skill necessary in the manipulation of an output of \$15,000,000 worth of diamonds a year. The company's future is comfortably assured for some time at least, as a diamond syndicate has purchased the output of the mines up to Dec. 31 next at a price equivalent to \$18,000,000 for the twelve months of this year. This is an increase to the company's profits of about \$2,500,000 over last year. The syndicate bought the product of the mines from July 1, 1895, to Dec. 31, 1896.

CAUSE AND EFFECT.

Mr. Henpeck (meaningly)—Ella Wheeler. Mr. Henpeck (meaningly)—Ella Wheeler Wilcox says all girls should be sunny. Mrs. Henpeck—Huh! Most girls are sunny. It's after they become women and begin living with a husband that they lose the sunshine—see out of their life. Mr. Henpeck—Subsides.

MYSTERIOUS CONTINENT.

IS THE NORTH POLE REGION INHABITED AND BY WHOM?

Animals That are Supposed to Exist There—Birds Peculiar to the Arctic Region—A Strange Tale From Point Barrow—A Fresh Water Floeberg That Gen. Greely Saw.

What is the North Pole like? It is situated on land; that seems to be almost a certainty. There is land bare of ice in that part of the world, and clear water too. Good and scientific reasons lie back of these assumptions. That the region in question is inhabited by various animals is an undisputed fact. It can not be asserted with human confidence that human beings do not live there.

It is known that several species of birds live and breed in regions so far to the north of any point as yet reached by explorers. They are seen migrating toward the pole, their flocks vanishing into the unknown beyond. Obviously, they cannot lay their eggs or rear their young on ice floes or bergs, and so it must be taken for granted that they find bare land suitable for the purpose. The rosy gull, most beautiful of all its fleet-winged tribe, spends summer and winter within the mysterious and unexplored area. Its species is actually restricted to that area, only occasional specimens being seen outside of it, driven to the southward by storms. Only once has a flock of rosy gulls been seen; it passed Point Barrow, the most northerly point of Alaska.

There must be no small extent of land in a region that exclusively maintains a whole species of animals. Open water there must be all the year around, else the rosy gulls would starve. Doubtless the birds skirt the ice fields in winter, looking for fish. Two species of sandpipers breed in the unexplored area. The same may be said of at least one species of goose. Every spring brant are seen from Point Barrow, flying northward, whether no human being has yet been able to follow.

If there be a polar continent, there is no reason for picturing it as devoid of animal or vegetable life. In its surrounding waters are

PLENTY OF FISHES.

doubtless, as well as numerous species of crustaceans; in its bays seals disport themselves perhaps, and possibly walrus are not absent. As for the flora, there is apt to be as much of it as is found on Spitzbergen—that is to say, plenty of mosses and lichens, with even a few flowering plants, such as the yellow arctic poppy.

The most interesting question about the north pole is as to whether human beings are to be found in its vicinity. Such a notion is not as absurd as might be imagined. From decade to decade further explorers have ventured further and further toward the northern extremity of the earth's axis, but, however high the point reached, people have always been discovered dwelling there. A short time ago Nansen outlined the north coast of Greenland, proving it to be an island. Yet, at the north end of the island he came across a colony of Eskimauz, pursuing a contented and fairly prosperous existence by the means of hunting and fishing. The man who is lucky enough to discover the north pole may well feel somewhat discouraged if he finds a lot of people living there. Yet, why not? The climate can not be so dreadfully severe; it is certainly not nearly so cold as north latitude 68 degrees. On that coldest latitude is situated the town of Werkojansk, in Siberia. And just here may as well be told a remarkable story that rests on the authority of Capt. Herendeen, formerly engaged in the arctic whaling service. The event he describes occurred in the winter of 1885, which he spent at Point Barrow.

There is an Eskimauz village at Point Barrow, and also a whaling station. One day there was a great commotion, and Capt. Herendeen saw half the people of the village running, evidently much excited. They came to him and told him that three strange-looking men had been seen on the ice off the Point. They were dressed peculiarly—not in deerskins, but in a white fur which was supposed to be that of the polar bear. They acted as if very tired, and it was noticed that they had no guns. This last point was particularly surprising, inasmuch as nobody in that part of the world ever goes out

WITHOUT A GUN.

Now, the Eskimauz are proverbial for their hospitality and amiable inclination towards strangers, and they were astonished when the three men took fright on seeing them and ran away over the ice to the northward. This was what had caused the excitement. The Eskimauz declared positively that the three men were not of their people. Their dress and actions made this a certainty. If so, whence did they come? The only tenable theory seemed to be that they had drifted on an ice floe from an unknown land far to the north, the existence of which was asserted by a tradition among the Eskimauz. They say that some of their people were once carried away by a storm and reached the land subsequently returning. One of the natives was so confident of the truth of the story that he begged Capt. Herendeen to secure for him a passage on a north-bound whaler, in order that he might go with the ship as far as possible and then leave it to complete the adventurous journey in his little boat.

The Arctic Ocean is very shallow, and it is natural to suppose that there would be areas of land uplifted above its surface. So much may be taken for granted as a fact; but nobody can say with certainty whether the land is a continent or an archipelago of islands. Gen. Greely, the famous explorer, believes that it is a continent. He says that immense masses of land-made ice are seen floating southward through Kane Sea and Smith Sound under such circumstances as render it certain that they must come from a land area far

to the north. The very size of the bergs proves that the land area must be of great extent. On one occasion he saw in Smith Sound such a floeberg that was 500 feet thick and that must have required something like 2,400 years for its formation.

Such a floeberg is quite different from an iceberg of glacial origin. The latter is a piece broken off from the end of a stream of ice that flows from the land into the sea. The floeberg, on the other hand, was stratified deposit originally formed on land by the snows of successive winters. Eventually its weight became so great that it

SLID INTO THE SEA.

Seen in sections, the strata composing it could be counted. Each of them representing a year; the winter's snowfall was followed by the summer's partial melting and a layer of dust from the air. Thus the layers of snow were marked by corresponding layers of dirt, the strata averaging about 5 inches in thickness, so that it was easy to reckon the age of the berg approximately. The fact that it was fresh water ice proved that it came from the land and not from the sea.

The old notion of a Palaeocretic sea, or a sea of ancient and never-melting ice around the pole, was long ago exploded. It was originated by the explorer Nares, who believed that the water in that part of the world was frozen down to the very bottom of the shallow ocean. On the other hand, the idea of an open polar sea, as conceived by Kane, is no longer entertained—that is to say, of an over-extended sheet of water surrounding the pole. The fact seems to be that there is always more or less water in that region, though where there is ice in one winter there may be no ice in another. In other words, the conditions vary. One of the most promising suggestions for arctic explorations thus far made is that several nations should combine for the purpose of reaching the pole. Suppose that the United States, Great Britain, France, Germany, Russia and Japan should each furnish a ship. Then let these ships start at the same time to enter the arctic circle at as many points around the world. Each vessel should have orders to go northward as far as practicable, and then to pause for the winter, build a house and wait for summer to come again. At least one of the ships would be pretty sure to find an open waterway, though the others might be stopped by ice, and so the goal might be obtained. If not, the ships would proceed the next summer on the same plan.

The certainty that there is a good deal of open water toward the pole affords the best promises for the success of future attempts to reach it. In 1884 Wrangle started on a sledge journey northward from the north coast of Siberia, but was compelled to turn back by finding

OPEN WATER AHEAD.

Nordenskiold spent a winter at Pitekiak on the north coast of the Chukchee Peninsula, and all through that season he saw water reflected in the sky to the north. If Nansen does not reach the pole, somebody else will do so before long. The greatest successes in arctic exploration have been made within recent years. During the eighteenth century nothing worth mentioning was accomplished in that direction. It remained for the nineteenth century to accomplish the northwest and the northeast passage, to outline the north coast of America and to discover the islands and archipelagos poleward from the three continents of the northern hemisphere.

And yet, however, more than 8,000,000 square miles of arctic territory remain unexplored. There has been a tendency of late to cry down arctic exploration as unprofitable and uselessly wasteful of life. Yet the fact is that enterprise in this direction has been enormously valuable to mankind. Within the last two centuries it has furnished to the civilized world products aggregating \$1,000,000,000 in market value, the most important of them being yielded by the whale fisheries. Comparison has been suggested between the climatic and other conditions of Spitzbergen and those likely to be found on the polar continent. The archipelago of Spitzbergen is described by Gen. Greely as the most interesting of Arctic lands. Though so near the pole, its climate is comparatively mild. Its flora is extensive, and reindeer were once so plentiful there that Russian and Norwegian hunters killed them by thousands annually. On one occasion four Russian sailors were cast away on the east coast, where they remained seven years. They had only one gun and a few rounds of ammunition. Their experience in this polar land outdid the romance of Robinson Crusoe. From driftwood cast upon the shore they made arrows and spears, which they tipped with whalebone. These were supplemented with bows that were strung with the twisted entrails of reindeer. They devised traps for catching blue foxes and nets for snaring water fowl. They labored not only to sustain life, but with a definite purpose of acquiring stores of fur and bone of commercial value. So successful were they that yearly they made large additions to their stock of skins of polar bears, reindeer, seals and foxes. One of them died in the sixth year, but the others were rescued soon afterwards.

CONSUMPTIVES NOT WANTED.

A draft of the bill prepared by the government of New Zealand for the exclusion of consumptives from the colony has been received. It is framed on the lines of the present legislation excluding persons suffering from leprosy, smallpox and other contagious disorders, except that it imposes an extremely heavy penalty upon captains of ships bringing consumptives to port, whether knowingly or unwittingly. This law if passed, will compel the captains, as a matter of self-defense, to require all intending passengers from American, English or Asiatic ports to provide themselves with medical certificates showing that they are neither consumptives nor exhibit any tendencies of being so affected.

ITALIAN PATRIOTISM.

The Italians are flying in trainloads across the border into France, for fear of being drafted for the African campaign. It would be hard to find in history another such case of national panic. It is the well-to-do, or tolerably so, who are running away, while the poor, who have not the money, are forced to stay at home. It is no wonder that the king, who is a sensible man, thinks of abdication.

"UNCLE TOM" IS IN WANT

NOW EIGHTY-FOUR YEARS OLD AND QUITE FEEBLE.

The Old Negro Original in His Kentucky Hut—Once Escaped to Canada—The Friend of His Race.

Lewis George Harris, or Clark, as he is known, the original Uncle Tom of Mrs. Harriet Beecher Stowe's "Uncle Tom's Cabin," who is now on the verge of starvation, was visited at his humble home in Lexington, Ky., by a newspaper reporter last week.

He is now eighty-four years of age, and is quite feeble. When asked to speak he brushed back his grey, kinky hair, his face brightened, and he began telling of his tribulations in a weak, shaky voice:

"I have not been able to get about much for the last two years on account of a very bad spell of grip, which came upon me just after I moved to Lexington. I am all alone in the world, and I came to Kentucky to spend the last days of my life, because I feel more at home here.

"But it does seem that the world is using me badly. Sometimes I am very despondent. I bought a cottage here in Lexington with what little money I had saved and thought I could rent it for enough to exist on. My tenant ran away and never paid me a cent, and about a year ago the house burned, and the little insurance was not sufficient to rebuild it. It was rebuilt, but I had to go in debt considerably, and here I am living to-day, alone, with nothing in view of the long cold winter."

CAME TO CANADA.

The interior of Uncle Tom's cabin is dismal. A rude bed and three cheap chairs, and a few cooking utensils are the furnishings. When he has anything to eat he prepares his own meals. He was asked how he lived.

"Some days I have nothing to eat. Others days I live on what I can buy for five cents. In my day I handled thousands of dollars, travelled all over the United States in good style, and never knew what it was to want for anything. It is killing now, at my old age, to find myself without means of existence.

Uncle Tom was asked what he did with the large sums of money he made lecturing and in other ways. "I used every dollar of it to forward the cause I espoused fifty-four years ago. I was a slave under the Ohio river on the Kentucky shore in 1841. When I learned that I was to be sold I made my escape from this State at night and went to Canada.

"From the day I reached the Dominion until the present time my work has been the freeing and bettering of the condition of the negro race. I have lectured in almost every city in the United States. I had tremendous audiences in New York at Cooper Union and other places. My last work on the lecture platform was in the Blue Grass region of Kentucky in 1881-2, when I begged my people to remain in this state and not go to Kansas. I was quite successful in my efforts at that time."

PRINTED IN A PAPER.

A greasy old copy of Mrs. Stowe's novel is the only literature in Uncle Tom's home. It was found high up on a shelf over a door.

"Did Mrs. Stowe get many facts used in this work from you?" "She certainly did. When she came down to Kentucky and began teaching school she knew nothing of the slave question. One day she saw an auction sale of negroes at the Mason County court house. Then, she began studying the negro dialect, but never began work upon her book, until she went to Cambridge, Mass. I was living there, and she called at my house and talked with me, and made notes for three whole days. Nearly every fact in her story was given to her by me at that time.

"There is a wrong idea in the minds of most people, even to this day, that Mrs. Stowe's work was first printed in a book. It was not. The Abolition Society was publishing a weekly paper in Baltimore, which received a serious setback when the Fugitive Slave law was passed in 1850. The managers of the abolition movement met. They decided that it was necessary to do something at once to put new life into their newspaper and make it a power, if possible, for abolition. It was at this meeting that instructions were given to Mrs. Stowe, offering her \$100 for a series of articles on abolition, to continue one year. She wrote an acceptance, but, instead of contributing editorials, she sent in instalments of the story 'Uncle Tom's Cabin,' which she had about completed. After the story had run through a dozen copies of the abolition weekly its circulation had increased to such an extent that the management sent Mrs. Stowe \$300 additional for the work.

AWAITING THE END.

"When the story had been run out in the paper the managers wished to republish it in book form, but they learned that Mrs. Stowe had copyrighted the work."

The book was published, and Mrs. Stowe received a royalty of 15 cents on each copy, and the sales were so large that it netted her a comfortable fortune. It has since been translated into and published in more languages, so book men say, than any work ever written, except the Bible.

Old Harris talked on interestingly for an hour. His mind is clear and his sight is still good. There is no doubt, however, that he is in need. His parting words were: "Tell my friends in the North that I have fulfilled my mission as best I could and am now awaiting the end here in old Kentucky."

AN IMPORTANT POINT.

Mr. Askin—My precious one, will you share my lot?
Precious One—Is there a mortgage on it?

TO BE MORE ACCURATE.

Mr. Manhattan (to Miss Bawstawn)—Do you ride a wheel?
Miss Bawstawn—I ride a pair of wheels.