PRACTICAL FARMING.

GARDEN HINTS.

As the products of the garden are worth more for either use or sale in a reason fo drought if in spite of dry weather we can succeed in growing good crops, some hints as to how we can overcome drought ought to be given in this series of articles, writes Waldo F. Brown. First, I will say that ordinarily to attempt to water a garden only hastens its destruction, and it has been proved scientifically that the application of a fourth or even a half an inch of water to the surface in a time of drought will make the land drier forty-eight hours later than if no water had been applied. The reasons for this apparent contradiction are first, that when we water during a drought we do it under unnatural and unfavorable conditions. Let us note the difference. It cannot rain until the atmosphere has first become humid; then clouds gather and shut off the rays of the sun, and usually the temperature drops ten or twenty degrees and it remains cool and cloudy for a day after the rain falls. All these conditions favor the utilization of the moisture by the plants. If the farmer tries to water his field or garden during a drought all the conditions are unfavorable. The sun beats down and the dry atmosphere sucks up the moisture, and though the water is convenient so that one could put on a hundred barrels a day, evaporation would carry off more from each acre in a single day than it would be possible for a man to put on. I presume most of my readers have noticed that often in a dry time a sudden shower will come up and a fourth inch or possibly a half inch of water will fall. Then if the weather clears at once and the sun and wind begin to dry the land, in less than twenty-four hours the plants show greater signs of suffering from drought than they did before the rain. The fact, as ascertained by careful examination, is that the rain at the surface attracts moisture from below, and then all passes off together and is lost. But the farmer can do something to save this moisture, and that is to stir the surface as soon as possible and break the capillaries by making what is called the earth mulch. To do this, cultivation should be shallow and as level as possible. It is under such conditions that an implement like the "Success Weeder," or a good smoothing harrow is of great advantage, as it gives a fine level seed bed. A single man and horse can mellow about two acres an hour. The Planet Junior thirteen-tooth cultivator harrow will do good work if the rows are of uniform width and the cultivator spread so that once in a row will answer. When a light rain comes in the evining, in a dry time, the farmer should start his teams as early as possible the next morning and keep them at work until all the ground is stirred on which cultivated crops are growing. One man with a team and good cultivator can save more water from evaporating in a day than he could draw on from a near by pond in two or three days, and while he would ruin the crops by driving over them with the water wagon, he would greatly benefit them by using the cultivator. If a garden is to be watered at all, do it near sundown in the evening, and as soon after daylight as possible the next morning make the surface fine with a graden rake. If any of my readers think I exaggerate the saving of moisture by a mellow surface, let me suggest that a single experiment be made. Water two square yards, using five gallons of water to each, which would make about at the rate of one inch of rainfall. Put it on after sundown, and early the next morning thoroughly pulverize a part of the surface of one plot and leave the other undisturbed. After a few days of dry weather examine both the plots, and you will find a wonderful difference. The mellowed plot will be moist nearly to the surface and perfectly free from weeds; the other plot will be baked hard and dry to a depth of sereral inches. and will probably be covered with weeds. The difference in the amount of moisture on the two plots will be at the rate of several hundred barrels per acre. A dry soil will absorb a rainfall of over 2,000 barrels per acre without any running off, and if all of it is saved by the earth mulch plan, it will keep the crops growing for weeks after the neglected plot has stopped growing. In my next article I will tell how to water artifically.

CROPPING AN ORCHARD.

I am sure that many questions are sent to me for answers that have not been well considered by the senders, says Joseph Meehan. I have in mind now the question of whether or not vegetables or small fruits should be grown in an orchard. It seems to me to be a question which every one could decide for themselves if a little thought were given it. It is altogether a question of what the soil and situation will do. Can two crops live on the same ground? Is there food enough and light and air enough for two? If there is, then have the two. When the question is asked of me I can only answer in a general way. In young orchards the roots of the trees are not spread far from the trunks, and there would be unoccupied ground which vegetables or small fruits might occupy. There must be no robbery to the fruit trees, and there must be no impoverishing of the ground the roots will eventually occupy. If enough manure be applied that nothing will be lost in the soil, I think cropping it with vegetables or small fruits would be a gain on account of the cultivation of the soil the crops would necessitate. When trees are large, even should the roots from one tree meet that from another, the branches cast cast such a shade that small growths under them, are rarely satisfactory. This, then, is the whole story to those who wish to know what they can do with their orchards. There must be a good supply of manure available, and stable manure will answer every purpose.

In regard to cultivating the ground, after fruit trees are in bearing, there seems but little use in it, but when growing it is a wonderful help to them. I would cultivate young trees whether crops were under them or not. Examples of the benefits of cultivating the ground among crops, whether of trees or vegetables, are continually occurring, yet the question of its utility is discussed in newspapers and at farmers' meetings as if it was yet undecided. Its usefulness is shown by the stronger growth all vegetation makes under the system, and in dry seasons by the ease with which it bears up under droughts. In ground but seldom cultivated trees languish, or at best grow but slowly, while small, and when a dry spell comes they are quickly under its effects. Many of the diseases from which trees suffer come about from this cause. In New Jersey peach orchards are common examples. If let alone orchards soon die out; the trees get the yellows and have to be destroyed. A case was lately cited where a man at Hamilton set out 1,000 trees which he plowed and harrowed among from April till September, manured well every fall, and kept the borers out. The fourth year he sold his crop for $1,000 on the trees, and did about the same for three years following, and the orchard is considered good for seven years more, as he had just cut down an orchard which, treated in the same way, had lasted seventeen years. A neighbor of this man set out about 1,800 trees at the same time, which were supplied from the same nursery. He plowed once a year, took borers out once in two years, fertilized but little, in consequence of which the trees are all yellow, the fruit worthless, with flesh clinging more or less to the pits. The first man thinks his trees the best he ever bought, while the latter thinks he was cheated in the stock. Every one should make up his mind to cultivate continually, and should provide himself with tools for the purpose before spring comes.

DAIRY GRANULES.

Experience has shown that it is possible with certainty to detect tuberculosis in cattle by the tuberculin test. Half-way measures cannot lead to the eradication of this disease.

Steer cows fed steer rations are all right, if nothing better can be obtained, but that is no reason why we should not select the best cow for our purpose. Animals are born with different capacity for production. The main point is to get better bulls. We are apt to forget that the bull is half the herd, and haggle over ten or twenty dollars on a bull as we do on a heifer.

Ensilage, being of a succulent nature, seems to have a cooling effect, and cows will bear a heavy ration, with ensilage as a base, without injury, when if the same feed unites without ensilage, they would suffer with alimentary and secretory troubles. Ensilage gives us an abundance of starch in the cheapest form that it can be grown upon the farm. An acre of corn put in the silo has six times much starch as an acre of good hay.

BOTTLED BACTERIA.

Fears Hitherto Expressed as to Their Dire Effects Are Passing Away.

The average layman has long been sustained by a secret belief that the vast majority of bacteria are harmless, and considering that he daily consumes millions of them in eating, drinking and sleeping it is consoling to find the belief confirmed by an eminent authority.

Another scientist, contributing to an English review, does something toward relieving bacteria of their evil name by explaining how much they have to do with successful butter making. Butter, as every one knows, is best made from sour cream and does not keep well unless the cream is soured before churning. This result is usually attained by letting the cream stand till it sours of its own accord. But a series of experiments carried on in Schleswig-Holstein have proved that the souring of cream is produced by the presence of certain bacteria, which can be cultivated and introduced in such a way as to cause artificially the necessary souring.

A doctor named Witter has studied the subject and "so skillfully blended certain cultures together that when the mixture was added in due proportion to sterilized cream to effect souring, the butter made therefrom was of most delicious flavor, pure and of great commercial value, inasmuch as it kept admirably.

The dried seed or powder of the bacteria used in this process can now be bought put up in bottles. A proportion is added to a small quantity of skimmed milk, which is subjected to a moderate continuous heat till the bacteria have developed. The "fermentation starter" is then added to the cream. The pure culture is only used occasionally, enough of the "starter" being left over every day to begin operations with on the next. The excellence of Danish butter is attributed to the care taken in choosing the "fermentation starter.

PILL-ANTHROPHY

Or Philanthropy to Give you good Good Health for 10 Cents—The cost of Dr. Agnew's Liver Pills.

Sure, Safe, Quick and Pleasant to act. No Pain, no Griping. 10c. a vial.

For Sick Headache, for distress after eating, for Biliousness, for coated Tongue, for Constipation. They work wonderful cures. All druggists have them. 40 in a vial, 10c.
Sold by W. E. Richardson.

WHAT UNCLE SAM IS AT.

ITEMS OF INTEREST ABOUT THE BUSY YANKEE.

Neighborly Interest in His Doings—Matters of Moment and Mirth Gathered from His Daily Record.

Mary Ellen Brown, colored, has become a notary public at Georgetown, Ky.

Three drummers at Danville, Ky., got on the horse scale and balanced them at 1,059 pounds.

It is said in New England that Bath, Me., has more smokers than any other town of similar size in that country.

In Kansas City a horse wandered away from its stable and fell into an abandoned well, 22 feet deep, but was not injured.

Two white-winged crows make daily visits to Robert Mullini's farm at Ilchester, Md., but so far they have eluded efforts to capture them.

Asa Bitters and his son took a morning off recently and captured ninety-nine rats which had been feeding on his grain, near Russell, Kan.

Residents of Jefferson street, Topeka, have been victims of a trained or perverted dog which stole their newspapers and took them to its master.

Winter has been so long in some of the Washington State valleys, that it is said that no hay will be left by the time the spring crops are in, as unusual condition.

Lurene Rudy, 4 years old, of Hagerstown, Ind., is said to embroider beautifully the daintiest fabrics, working out intricate designs, and blending colors in delightful harmony.

Four years ago, when wool was low, a Jonesboro, Me., man sold all his sheep but one, which each year since then has raised a black lamb, until this year, when it had a pair of white ewes.

Harry Zimmerman, of Snydersburg, Md., shot and captured without doing it any serious injury a gray eagle which measures 3 feet from beak to tail, and 7 feet 3 inches across the wings.

La grippe has not been known in White City, Fla., and the town is so unpropitious to physicians that two of them who sought a practice there have left the place, and it is now without a doctor.

Hezekiah Bradds, sexton of a Baptist church at Kansas City, having been abandoned by his wife, who took away all their household goods, made his domicile in the church steeple and instituted suit for divorce.

H. R. Ragan, of Grove, N.C.; says of a Poland China sow that he owned for three years that he sold $41.50 worth of her pigs and has $25 worth left, and that, including the sow, he killed 2,000 pounds of pork.

At Norfolk, Va., a plant has been established with capacity for five tons of peanuts daily, for the manufacture of peanut oil, peanut flour, and stock feed, the estimated combined yield representing more than $400 a day.

Of three young men who shocked the Episcopal Church, of Dodge City, Kan., by giving a Midway Plaisance entertainment some time ago, two have been killed, and the other has been maimed for life, all in railroad accidents.

In and about Tipton, Mo., there has been distributed a circular signed by a Christian evangelist who offers a reward of $100 for a passage in the New Testament teaching that sprinkling is Christian baptism, or for a passage of Scripture teaching that denominations are good things.

Charles Roberts and his wife and four children walked almost all the way from Clay county, Kan., to their former home in Anne Arundel county, Md., being helped to a railway ride over one stage of the journey by sympathetic people at Bengies, in Baltimore county, who took up a collection for them.

Misfortune has overtaken William Byers, whose 600-acre crabapple farm of 30,000 trees near Leavenworth, Kan., has been seized by creditors. It was supposed to be the largest crabapple orchard in the world. In the early prohibition times Byers planted all the trees he could get and coined money out of cider which he sold all over the State. The free sale of liquor during the last two years ruined his market.

The Rev. William C. Mullenix, of Wheaton, Ill., 64 years old, was married last month at Grand Meadow, Minn., to Mrs. Mary Beesen, aged 62, of Grand Meadow, the ceremony being performed by the Rev. Mrs. Mullenix, the bride's daughter, and the daughter-in-law of the bridegroom. The bridegroom had preached the funeral sermon of his bride's first husband and had married her to her second husband. He is her third husband, and he has, himself, been twice a widower.

So heavy have been the snowdrifts in Sargent county, N.D., that it is said a farmer of Harlem township has added thirty-five feet of tubing to his well pipe in order to raise water above the snow. A hotel proprietor, Z. O. Patten, has had to build a barbed wire fence around the roof of his barn to keep away stray stock, a horse having one day crashed through the roof while walking over what appeared to be a snow-covered hill. Sidney Mull claims to have dug thirteen feet into a drift to get at the top of his windmill.

Irving and Florence Gilbert, brother and sister, have astonished their friends in Sioux City, Ia., where they are well known, by starting for Newton, Mass., to buy a small farm and work out an independent future after a peculiar idea advanced by the brother. Their plan is to raise on the farm all that they need and only what they need, to sell nothing, and to do without whatever is to be had only by purchase. They are to cultivate the land themselves and make their own clothing. Miss Gilbert was graduated from the Sioux Falls High School, and she taught in the schools there. She was active socially in the city's life. Her brother became known in Chicago during the World's Fair, where he was employed as an architect on some of the buildings. He is a victim of dyspepsia and nervous prostration, and he believes that both, which he thinks came as the result of the high tension of city life, will disappear in a life of simplicity.

ADDICTED.

The young Princess of Naples the daughter-in-law of Queen Margherita, is the latest member of royalty to join the ranks of cigarette smokers. The Austrian Empress is now an incessant smkoer and uses a mixture much stronger than the ordinary, being a Turkish growth heavy flavored with perique. She generally uses an amber holder, to prevent the fingers from becoming discolored. Notwithstanding the Czarina's strong antipathy to smoking, the Dowager Empress of Russia is in her declining years more strongly addicted to the weed than ever before. From smoking 35 cigarettes per day she now smokes 40 per diem. Queen Amelie, of Portugal, one of the loveliest characters in the whole circle of European royalty, has now become such a devotee to the cigarette that it is not unusual to see her smoking in her carriage when driving about the poor quarters of Lisbon on her many errands of mercy. As previously announced, the beautiful and accomplished Queen Margherita of Italy, Maria Christina, Queen Regent of Spain and the Queen of Roumania are more inclined than ever to be faddists along this line.

THE MAN FOR THE OCCASION.

Higgins has gone to the southwest with the idea that he will make millions.

How?

He claims to have invented a device that can be used as a cyclone cellar when it blows and as a house-boat when the floods rage.

WAS SLOWLY DYING.

THE RESULT OF AN ATTACK OF LA GRIPPE AND PNEUMONIA.

The Strange Case of Mr. James Owen, of Johnville—Doctors Told Him His Lungs Were Affected and He Could Not Recover—Now in Good Health.

From the Sherbrooke Gazette.

When a man faces what medical authorities tell him is certain death, and regains health and strength, he is naturally grateful to the medicine that has restored him. Such a man is Mr. James Owen, one of the best known farmers in the vicinity of Johnville, Que. Mr. Owen tells his story of shattered health and renewed strength as follows: "On the 17th of December, 1894, I was attacked with la grippe. A week later the trouble developed into pneumonia in its worst form, and I did not leave my bed until the first of March, 1895, and then I was so weak that I was unable to walk alone. All winter my life hung in the balance. Summer came, and I was still weak and feeble, though with the warm weather I gained a little strength. I had, however, but very little power in my legs, and I could

not ride a mile in a buggy owing to the pain they caused me. My lungs also troubled me and I raised a great deal of matter. I then consulted the best doctor we have in this section of province. He told me candidly that I was past medical help. He said that my left lung was in a state of collapse, and that my right lung was also affected. This was in July 1895. For the next three months, every day seemed to draw me nearer and nearer the end. I was so pressed for breath at times that I could not walk any distance without stopping to regain it. In the month of November I begun to take Dr. Williams' Pink Pills. It was certainly a forlorn hope, and I admit I did not expect much benefit from them, but took them rather to please a friend who urged me to do so. I believe I was surprised when I found they were helping me, for I thought I was beyond the aid of medicine, but help me they did, and I gladly continued their use. The result is they have made a well man of me. I have not a pain about me, my breath comes as freely as it ever did, and I am strong and vigorous. My case can be briefly summed up in a few words. Dr. Williams' Pink Pills have given me a new lease of life and I am glad to let everybody know it.

Dr. Williams' Pink Pills create new blood, build up the nerves, and thus drive disease from the system. In hundreds of cases they have cured after all other medicines had failed, thus establishing the claim that they are a marvel among the triumphs of modern medical science. The genuine Pink Pills are sold only in boxes, bearing the full trade mark, "Dr. Williams' Pink Pills for Pale People." Protect yourself from imposition by refusing any pill that does not bear the registered trade mark around the box.

TOO FAR AWAY TO GET IT.

The Emperor of Germany stands twenty-first in the direct line of succession to the British throne.

WHEN PHYSICIANS FAIL

TO EFFECT A CURE IN CASES OF ECZEMA TRY RYCKMAN'S KOOTENAY CURE. IT HAS A RECORD OF CURES UNEQUALLED IN THE HISTORY OF ANY REMEDY.

There is no escaping the fact that Eczema is one of the most intractable of diseases. Its symptoms are so severe and the irritation it causes so great that a sufferer would gladly give anything, do anything, to get relief.

Physicians are often at their wit's end to know what to do with cases of this nature, and in all kindness we would advise them to prescribe for their patients Ryckman's Kootenay Cure. So far we know of ten medical men who have either used it or recommended it.

In the city of London, Ont., at 440 Park Ave., there lives Mrs. Burdick, who is to-day a grateful woman for having been cured by Kootenay of an Eczema of *five years' standing*. The disease had spread all over her body and was a constant source of irritation, so much so that she was unable to obtain more than one hour's sleep at a time. She had three physicians in attendance and took many patent medicines, but none of them cured her.

After taking eight bottles of Ryckman's Kootenay Cure her blood became pure and she has not the slightest sign of Eczema or any other eruption on her body.

Another lady, Mrs. Richards, living at 28 Aikman Ave., Hamilton, had a somewhat similar experience. For two months she was unable to rest night or day with the awful itching and pain. Medical men failed to cure her, but four bottles of Kootenay did, and she now says the Eczema has entirely disappeared and she feels like another person.

We could multiply instances like the above, and if you are desirous of further indisputable proof of Kootenay's Kingship over disease, send your name to the Ryckman Medicine Co., Hamilton, Ont. Phrenological chart book sent free to any address.

One bottle lasts over a month.

FOR TWENTY-SEVEN YEARS.

DUNN'S BAKING POWDER

THE COOK'S BEST FRIEND

LARGEST SALE IN CANADA.

THE MODERN SHARK.

The modern shark is deteriorating. In ages gone by there were ferocious sharks, such as would make a mouthful of you without blinking, 70 feet in length. Plenty of their teeth have been found which are five inches long, whereas the biggest of the teeth belonging to sharks that exist at the present day are one and a half inches long.

ITCHING, BURNING SKIN DISEASES CURED FOR 35 CENTS.

Dr. Agnew's Ointment relieves in one day and cures Tetter, Salt Rheum, Scald Head, Eczema, Barbers' Itch, Ulcers, blotches and all eruptions of the skin. It is soothing and quieting, and acts like magic in the cure of all baby humors; 35 cents.
Sold by W. E. Richardson.

HOW IT WAS THEN CLASSED.

Football was a crime in England during the reign of Henry VIII.

EIGHTY IN EVERY HUNDRED

Suffer More or Less from That Most Offensive of Diseases Catarrh—That Dr. Agnew's Catarrhal Powder is a Wonderful Remedy is Testified to by Thousands who Have Been Cured Outright—Mr. Alex. Edmondson of Rosemuth, Ont., Says:

"I have been troubled with catarrh for a great many years. Have suffered greatly from it. I had tried all the so-called cures, but never received any relief from them. Seeing Dr. Agnew's Catarrhal Powder largely advertised, I determined to try it, although very sceptical about any relief, but I was greatly and agreeably disappointed, for from the first dose I received very great relief, and to-day I can honestly say that it has cured. I keep it constantly in the house, as we find it a quick cure for cold in the head. It gives almost instant relief. I have no hesitancy in proclaiming it the best cure for catarrh, and I heartily recommend it to all sufferers from this malady."
Sold by W. E. Richardson.

KNEW WHAT HE WAS DOING

Young Higginside married, you say, on ten dollars a week? That took nerve, anyhow. What was he working at?

Nothing. It was the girl that was earning the ten dollars.

FOURTEEN YEARS IN TERROR.

But Dr. Agnew's Cure for the Heart Gave Relief in 30 Minutes and Three Bottles Effected a Cure Which Baffled the Best of Physisicians.

This is what Mrs. J. Cockburn, of Warkworth, Ont., says: "For fourteen years I have been a great sufferer from heart disease; troubled very much with sharp, shooting pains constantly passing through my heart. Very often the spasms were so severe that I would become unconscious. My limbs would swell and become quite cold. For these fourteen years I doctored with best physicians without relief. Having seen Dr. Agnew's Cure for the Heart advertised, I determined to try it, and before I had taken half a bottle I found great relief. I felt the beneficial effects inside of thirty minutes. I have taken three bottles and it has done me more good than any medicine or any physician ever did. I can conscientiously recommend it to all sufferers from heart trouble."
Sold by W. E. Richardson.