Farm Notes.

Planting an Upland Swamp.

There is a piece of upland swamp—the most abominable, sour, spouty, ill-conditioned tract in the whole neighborhood—adjoining my place. The owners at various times have made ill-directed efforts to make it productive, without success. About six months in the year it is too wet to work; the rest of the time it is too dry. The underlying stratum of white clay is like putty, so that if molded in the proper shape and dried in the sun it would make very good cannon-balls. On top of it is about four inches of mold and roots of aquatic plants, rushes and the like. For thirty years it has been a nuisance and an eyesore adjoining the town, and streets, have been opened around it. Open ditches, also, have been cut around it to divert the flow of surface water. For some inscrutable reason, known best by the fates, a slice of it was included in my purchase several years ago. I was then an innocent tenderfoot from Ohio, and wore a 7¼ hat. I was not afraid of a little wet land. There were tile kilns in Ohio, and we were used to putting down lots of the tile—horse-shoe, large and small, deep and close together, so that we only laughed at cat-tail swamps and swales of all degrees. I got some t'le, by sending 100 miles for them, and went to opening ditches. Well, it was like digging in pig lead. Possibly the comparison is not very just—we will say half-hardened putty. It beat anything I ever saw for pure cussedness and tenacity. At last they were laid and covered. My ground was drained. It was redeemed. I felt all the reward, in anticipation, of the honest triumph of abor over opposition of nature, and waited for the rains. It rained. Then it rained more, somewhat like the present season. The fill in the ditches settled and formed beds for rivulets. They washed gullies, and I put a V-flume of boards at one point of junction, where a lateral pipe entered a main line, to carry the surface water over the point of danger. The V leaked and the acute angle was puttied with the tenacious clay from the ditch. I can honestly recommend that adhesive plaster ahead of any hydraulic cement in Christendom. A rapid current of water poured through without wearing or loosening it. It held its ground as well as tar. That was seven years ago. It is there yet. This only to give an idea of the nature of that clay.

The tile carried water, to be sure, but only the percolations belonging to the cutting. I know that for a fact. Fresh horse tracks in the fill rained full of water and stayed there all winter, as if in a tin cup. The effects of the underdrains were not seen a foot on either side of the ditches since cut.

Somebody may want to know what we did about it. Well, the young orchard was duly planted on top of the ground and the roots hilled over. The surface was always plowed to the rows and drainage insured through deep dead furrows between the rows. Apricots, peaches, pears, figs, plums, and so on, bear annually, and the trees look first rate, though manure and whale-oil soap, doubtless, have something to do with it.

This brings me to the point—the swamp. I paid $400 an acre for it, and the problem is, how to make it productive. Following the contour lines of the land, we have put in three open ditches, which, strange to tell, have a rapid fall. The intervening surface is like a sponge, and sheets of water stand within five feet of deep cuts. Next, there will be lateral drains emptying in the ditches; but they will be boxed with two-inch redwood planks and covered over. Every sag in the surface is to have its drain, so as to insure perfect surface drainage. This is all that can be expected. We must adapt ourselves to conditions as we find them. Thorough draining with tile is not often a failure—say one time in a thousand. Surface work is pretty good, if well done, and maintained by intelligent plowing thereafter.

This swamp is to be an orchard, with its trees of prunes, peaches, figs, etc., planted on top of the ground. Being a new wrinkle, I have amused myself in jotting it down for the benefit of similar sufferers.

If we fail to reclaim the swamp you shall hear from me again. I then propose to rig a derrick and bore for oil, when it may be my usual luck to strike something else—artesian water, from the present signs.—*Cloverdale Corr. Rural Press.*

A creamery is being organized at Yakima.

Alfalfa is as good for poultry as any other kind of clover.

Pomona has just filled an English order for 58,000 gallons of wines.

We have seen many 4-year-old navel orange trees in Pomona this season that will bear a box of fruit each next month. That makes each of the trees worth about $2 75 this year.

At the agricultural show held at New South Wales, in July last, American bred sheep were very successful in competition with some of the best Australian flocks. The American sheep carried everything before them in the judging.

The popular deciduous fruit for planting in Central California this season is the prune. In the vicinity of San Jose alone, it is said, about 1800 acres of prunes are to be set out before next February. The Visalia *Delta* says there will be more prunes planted in Tulare county this year than any other fruit tree, and varieties of peaches best for drying will take a second place.

In the matter of dust or earth baths fowls much prefer burrowing in the earth to wallowing in a shallow dust-box. One corner of the poultry-house should be inclosed and then filled with soft, pulverized, dry earth to about twenty inches above the level of the floor. Have a small door connecting this with the poultry-house, and when it is left open the fowls will walk in and take a good wallow. All kinds of poultry especially love to dust themselves when there are indications of stormy weather.

The guava is ranked among the "small fruits." The bushes are set eight feet apart each way. Sometimes set among rows of larger trees. They begin to bear the first year after transplantation. Those of the right size to transplant cost 12½ to 15 cents apiece. We have good authority for the statement that the strawberry guava is easier to cultivate, better to ship, and is more profitable than the blackberry. Some hundreds of the little trees will be set near town this winter. The boom price of a town lot may be obtained by planting the same to guavas.—*Long Beach Journal.*

Advice.

Coming to me for advice? a careless weaver of rhymes!
Ah! for a maxim indeed to suit all seasons and times;
Far in the east—in Persia, their wisest of sages say,
"The stone that is fit for the wall is not left by the way."

Make yourself perfect as may be, in profession or trade;
Do not be idle, for rust grows fast upon a sheathed blade.
Many there are who will come, yet few are chosen at last;
The scythe of the future will reap what you sowed in the past.

Will you paint castles of air? dally and slothfully gaze
On the wrecks of years that were once so hopeful in days?
Never! it is that you "will," not you "hope" or you "may."
The stone unfit for the wall is left to rot by the way.

Deep in the earth lies a germ, the heart of a rose unblown,
And the statcliest statue at first was a block of stone;
The gem from the mine, uncut, still holds the diamond's gleam,
And the song that never dies, what was it once but a dream?

'Tis truly the fittest survive in the battle of life;
Look to it then your armor and arms are ready for strife.
Listen, my dear, in Persia, their wisest of sages say
"The stone that is fit for the wall is not left by the way."

—Ernest McGaffey, Chicago.

KENTUCKY FARMERS.

Delights of a Bucolic Life in the Blue-Grass State.

"The farmers in central Kentucky must be rich?"

"Rich? Of course they are. It is the only country I ever saw with a community of rich farmers," says Dr. Henry Wilson in the Atlanta *Constitution*. "Any man who owns a blue grass-farm is rich. He can't help it. His land is worth from $75 to $100 an acre remote from the railroad, and near a village from $150 to $250. It grows blue grass spontaneously. You can run a field fifteen years in corn, then stop it, take the stock off and it will sod itself. Turn the first year's sod under and next year it reappears. Turn it under again and you have land as rich as ever and carpeted with blue grass. The land has a substrata of lime, and it fertilizes itself."

"It is a royal life they lead?"

"It certainly is. They have their fine horses, their southdown sheep, pedigree hogs, Durham cattle, raise everything they need, and are absolutely independent. Why, take the southdown sheep. They grow so fat, so broad across the back, that if one turns over and gets on its back he can not recover his feet, but would die unless the shepherd turned him. Their Chester and Essex hogs are pedigreed as carefully as their horses, and such hams and meat as they make! As for cattle, there is Mr. William Beasley, who lives near Lancaster, who raises fine horses for the east and Durham cattle for Europe. He has no Durhams that will not weigh from 1,800 to 2,000 pounds, and buyers sent direct from English farms come to his barns every week in the year to select fine cattle. He takes a country horse, educates him up in style and pace and sells him for $1,000. The millionaires of Boston and New York send their buyers to his stable and take his stock at his own price."

"They are hospitable, these farmers, are they not?"

"That is not the word. They are glad to see you. Each farmer has his ice-house, a huge dry well in which the ice is packed with straw. Then there is the mint bed, and the fine liquors in his cellar of whatever age you want. He gives you the inevitable mint julep, and yet there is little drunkenness in that section—less than I ever saw. Dr. Wash Miller who lives near Winchester is worth about $500,000. His land is worth a third of that. He has fine horses, poultry, hogs, cattle, and in his park, which is as beautiful as a royal park in England, 200 deer run at large. A king on his throne is not happier or more independent than a farmer in the heart of the blue-grass region.'"

"Did you go to the Lexington fair?"

"Of course I did, and let me tell you you will find more fine stock and higher grade animals at the Lexington fair than anywhere else on earth. Why, just think of it, I saw them preparing white Chester boars for inspection. They would lay a boar on a table, wash him with castile soap as carefully as if he were a baby, then wipe him perfectly dry—and he was so used to being washed that he would turn over to expose his body to the water—and then comb his hair, dust him out with a fine mohair brush, cut his toenails, clean out his nose and ears, cut the long hairs off his body, and then powder him and dust him until his skin was as soft and pink as a baby's. Such a boar would bring from $75 to $100, and the pigs of his family would sell for $25 apiece the day they were born. I saw cotswold rams there as large as a yearling calf, with their fleece washed and combed, their horns polished and their eyes and ears dusted out as daintily as if it were a young lady preparing for her first ball. The Durham cattle almost looked like elephants and had pedigrees as long as a feudal prince. The Jerseys are used in Kentucky only as pets and for fancy butter and to furnish milk for milk punches."

State Indebtedness.

Virginia leads the states of the union in the amount of her funded and floating debt, which aggregates $31,960,000. Massachusetts, however, is a close second, with an obligation of $31,000,000. Tennessee stands third with figures at $17,000,000; Pennsylvania fourth, with $15,000,000; North Carolina, Louisiana, and Maryland in the mentioned order. The rich state of New York has a debt of but $7,000,000. Minnesota and Ohio has each a debt of $4,000,000. The debt of New Jersey is less than $2,000,000, and that of Kansas about $800,000. Illinois, Wisconsin, West Virginia, Colorado, and New Hampshire, are given as free from debt. California, Delaware, Kentucky, and Iowa are practically out of debt. The grand total of the debts of all the states is $220,000,000. Nevada shows the highest rate of taxation, 90 cents per $100, and Massachusetts the lowest, 11 1-2 cents per 100.

HOW FAST A WATCH CAN TRAVEL.

The Average Timepiece That Covers 6,570 Miles in Two Years.

Of all the articles of luxury which in the course of centuries have become necessities the watch is, no doubt, the one that performs the most remarkable feats. Yet it is in many cases the most sadly neglected. Man will eat and sleep as a matter of course, without thinking once in a thousand times that by so doing he maintains the numerous parts of his organism which through the pulsation indicate the state of regularity. Man will wind a watch without calculating in doing so upon the force set in motion. Take a cylinder watch of the average size, for instance. A glance at the movement shows, first of all, a small cogwheel moving rapidly back and forth without completing the revolutions. Ever single swing of this balance wheel is equal to about 72°, or three-fourths of a revolution—averages having been taken in all figures to be adduced for the matter of convenience. The diameter of the balance wheel is usually, in the average sized watch, seven-twelfths of an inch, the circumference consequently twenty-one-twelfths, or one and three-quarters of an inch. The small point of resistance at the outer periphery of the balance wheel consequently covers with each swing a distance of 3-4x1-34 of an inch, which is equal to one and five-sixteenths of an inch. An attentive observer will find by carefully watching the second hand of the watch that there are five swings, or steps, in each second. That means 18,000 swings in an hour, or 432,000 in a day of twenty-four hours. Consequently the point of resistance covers in a day 432000x15-16 of an inch, or 568,667 inches, or 17,389 feet, which is, within a fraction of about one-fortieth, nearly nine miles. If a good watch runs two years without repairs, the point of resistance has made 6,570 miles without a stop.

In an anere movement of the same size as the cylinder watch referred to, each swing of the balance wheel is twice as large. Each given point at the outer circumference of the balance wheel—for there is no point of resistance in the anere watch—would cover in twenty-four hours a distance of 18, or in two years 13,140 miles. At this rate it would take the balance wheel, sometimes erroneously called escapement, about three years and nine months to cover a distance equal to the circumference of the earth.

No sensible man would for a moment entertain the idea that a diminutive wagon with wheels of seven-twelfths of an inch in diameter could travel around the earth in three years and nine months, even if there were an absolutely level road to travel on. Repairs would take up half the time. The watch is only able to perform its remarkable feats on account of the diminutive weight and yet immense hardness of its parts and an almost infinitesimal degree of friction. The latter is so much reduced that a single drop of oil is sufficient for five years in a high grade watch.

Another achievement of the watch is the degree of exactness with which it works. The swings of the escapement are rendered isochronous (of equal duration) by means of the hairspring, the regulating being done by the lengthening or shortening of the spring. For instance, if a watch differs two minutes, either too slow or too fast, in twenty-four hours, it means that—inasmuch as there are 432,000 swings in that period of time—each swing is the three thousand six hundredth part of a second too long or too short of absolute correctness. If, therefore, the correction is to be made that the watch shall differ only half a minute in a day, each swing of the escapement has to be regulated by the one-fourteen thousandth part of a second—a part of time that as to duration can hardly be comprehended unless it is with the quickness of thought.

The watch, if otherwise properly constructed, is assisted only once a day by the winding, not counting those marvels of the watchmaker's art which run unassisted for a week or even a month. Taking this into consideration it is indeed marvelous how the inanimate metal has been rendered serviceable by art and the laws of nature—it is, in a word, a miracle in the vest-pocket.

Killed a Deer at Thirty Paces.

One of the most curious deer stories of early times occurred about 1854 at White Sulphur Springs, Napa county. A large party of people were there, some of them among the best-known citizens of San Francisco. Some of the guests went out on hunting expeditions, and among these was Dr. Josselyn, now of Madrone, Santa Clara county. He was "loaded for quail" and saw a fine buck within thirty paces. He dropped his pocket-knife down his gun-barrel, aimed at the shoulder, and fired. The deer leaped high in the air and disappeared over a bush and the disgusted sportsman returned to the hotel, thinking his shot a failure. He told the story at the hotel, and, he says, "had to set up the champagne all the evening," besides enduring universal skepticism. The next day however, the deer was brought in and it was found that the pocket-knife had penetrated to the heart.—*San Francisco Chronicle.*

Sports in Scotland.

An English paper says the value to Scotland of the opportunities for sports is very large. The deer forests of which there are 100, covering 3,000 square miles of land useless for agriculture, rent for £100,000 annually; £12,500 of this goes to the local taxes. If any forest fails to be rented the whole neighborhood feels it greatly in the diminished amount of money expended there. The grouse moors rent for £440,000, and pay £55,000 in takes. Most salmon rivers are let with the moors, but some are rented alone and add a considerable sum to the total already given.

Bagdad, on the Arizona & Pacific road, is said to be the hottest station on the road. The thermometer has stood at 140 degrees in the diningroom, and 128 degrees at midnight on the coolest side of the depot.

KIMBERLY'S DIAMOND FIELDS.

How the Sparklers Are Obtained From Mother Earth.

John Agnew, the wealthy resident of Natal, South Africa, who arrived here as a steerage passenger on the Germanic on Friday, was found Saturday night at the apartments of his sister, Mrs. Lamb, No. 27 Rutgers street, says a New York writer. Mr. Agnew is about 60 years old, but hale and vigorous. He has spent more than half his life in the vicinity of Natal, has traveled all over South Africa and has been a frequent visitor to the diamond fields.

He married a daughter of a wealthy Irish lady over thirty years ago, and went to South Africa with his young bride and fortune of $250,000. After acting for six years as postmaster at Natal, during which time he made judicious and profitable investments, he became a merchant and exchanged merchandise of all kinds with the natives for ivory, wool, ostrich feathers, hides, gold-dust, nuggets and diamonds. Now he is worth over $1,000,000. He gave the reporter an interesting account of life and business in diamond fields.

"The center of business in the diamond fields," he said, "is Kimberly, a city of over 60,000 inhabitants. It has excellent police and sanitary regulations and is situated on tableland in the midst of a sterile, sandy plain, about 5,000 feet above the level of the sea. The climate is exceedingly cold in winter, and it is not unusual to find Kaffirs who have been drinking heavily at night frozen to death in the streets in the morning. The city is surrounded by the four principal diamond mines—the Kimberly, the Old De Beers, the Dutoii Span and the Bulantine. The three first named are controlled by an English company, at the head of which is a Mr. Rhodes, one of the best-known men in South Africa.

"Everybody in and about Kimberly is in the diamond business. There is no agriculturist. Provisions are brought from Natal or Cape Town or by the Boers in wagons 300 or 400 miles overland. Going there from Natal you travel about 200 miles by rail and 300 miles by wagon. Nobody is allowed to sell diamonds in Kimberly without a license, which costs £80, and nobody is allowed to buy them without a permit. If a stranger is found with a rough diamond in his possession without a permit he is arrested, taken before a magistrate and is liable to be sent to jail for three years. I came very near being caught that way myself on my first visit. I had bought a nine-carat diamond from a broker whom I knew very well, when he asked me if I had a permit. I told him no, and he replied: 'Here is your money give me back the diamond. We will both get into trouble.' Then I got a permit.

"The diamonds are taken now from a stratum of blue clay 800 feet below the surface. This clay, which is almost as hard as rock, is brought up in blocks and broken upon vast uncovered platforms. Some of the larger diamonds are found in the breaking up. The work is done by natives, who are divided into gangs of six, with a white overseer for each gang. Both the overseers and the men get a percentage on the diamonds they find, as well as fixed wages. When the natives quit work or come up from the mines they are stripped and searched, and even their mouths are examined. After the clay has been broken up on the platform it is sprinkled with water and allowed to dry in the sun. Then it crumbles and is taken to the washers.

"You remember, of course, how the diamond fields were discovered. It was in 1869, I think, or thereabouts, that a Hottentot child playing in the sand found a bright stone. Its father carried the stone to a Dutch trader near the coast, who gave him an old wagon, some oxen and goats for it. The Dutchman carried it to Cape Town and sold it for $5,000. That stone was the famous Star of Africa, afterward purchased by the Prince of Wales for, I think £30,000. It was found on the plains about thirty miles from Kimberly. J. B. Robertson, now one of the richest men in South Africa, was then a peddler. He went to the interior shortly after the discovery of that stone and returned with handfuls of diamonds. Then followed the rush to the diamond fields."

A Touching Incident.

A touching incident was that of Mrs. William Nichols, a brilliant and much-admired lady of Bath beach, who had been suffering for some time from an affection of the eyes, says the Brooklyn *Citizen*. She was led to fear a speedy change for the worse, and immediately consulted her physician. An examination discovered a sudden and fatal failing in the optic nerve, and the information was imparted as gently as possible that the patient could not retain her sight more than a few days at most, and was liable to be totally deprived of it at any moment. Last Tuesday the afflicted mother quietly made such arrangements as would occur to one about to commence so dark a journey of life and then had her two children, attired in their brightest and sweetest costumes, brought before her; and so, with their little faces lifted to hers, and tears gathering for some great misfortune they hardly realized, the light faded out of their mother's eyes, leaving an ineffaceable picture of those dearest to her on earth—a memory of the bright faces that will console her in many a dark hour.

The Old "New England Company."

Few people in this country probably knew that the old "New England company" is still in existence in London until its commissioners visited Canada the other day. The ancient corporation has an office in the English capital, and keeps a dingy sign hanging out. The commissioners are busy in doing work for the benefit of the Indians in the Dominion, and in the last half century have expended $500,000 on the Six Nation reservation alone. All their available funds are expended nowadays within British dependencies. The present commission is the first that has made a tour in Canada for half a century.

THE MAKING OF BEADS.

Where the Pretty, Glittering Baubles Are Manufactured for the Market.

Most of the world's beads are Venetian, says *Harper's Magazine*. In the island of Murano, 1,000 workmen are devoted to this branch. The first process is to draw the glass into tubes of the diameter of the proposed bead. For this purpose the glass-house at Murano has a kind of rope-walk gallery 150 feet long. By gathering various colors from different pots and twisting them into one mass many combinations of color are made. The tubes are carefully sorted by diameters and chipped into fragments of uniform size. These pieces are stirred in a mixture of sand and ashes, which fills the holes and prevents the sides from closing together when they are heated. They are next placed in a kind of frying-pan and constantly stirred over a fire until the edges are rounded into a globular form. When cool they are shaken into one set of sieves until the ashes are separated, and in another series of sieves until they are all perfectly sorted by sizes. Then they are threaded by children, tied in bundles, and exported to the ends of the earth. France has long produced the "pearl beads," which in the finer forms, are close imitations of pearls. They are said to have been invented by Jaquin in 1656. The common variety threaded for ornaments is blown from glass tubes. An expert workman can blow 5,000 or 6,000 globules in a day. They are lined with powdered fish-scales and filled with wax. It takes 16,600 fish-scales to make a pound of the scaly essence of pearl. Until recently the heirs of Jaquin still carried on a large factory of these mock pearls. The best of them are blown irregular to counterfeit nature—some in pear shape, others like olives, and they easily pass for genuine.

Imitation gems formerly employed the chief attention of the highest artificers in glass. They are still the chief idea of ornamental glass in China. In the ancient and middle ages they circulated everywhere without much danger of discovery and the formulas were held as precious secrets. Blancourt first published their composition in 1696. Now they are common property, and, with the growth of science in the last century, an expert knowledge has become widely disseminated which easily detects the paste from the real jewel, particularly as the modern false stones are less successful copies than the old glass-makers produced. More study is now given to artificial, which are true gems, being composed of the same material as the genuine ones, but manufactured.

Apollos in Petticoats and Fez Caps.

Even in the country districts you will find people who are posted on the Greek poets and there are few Greek youth who have not read what we call the Greek classics. The country people of Greece are far different from those of the cities. It is outside of Athens that you find the picturesque costumes and it is here that you see the fine Greek features of the past. The girls about Corinth have faces which remind you of some of the noted statues, and I have seen near Athens girls who could pose for Minervas or for the goddess of love. I have seen several Apollos in petticoats and fez caps and I saw a face the other day which made me think of that of Achilles. The costume of the farmer and that of one of the regiments of the Greek army here in Athens is the same. It may be called the Greek national costume, and it is the queerest outfit you will find outside of Corea. If you will take the tallest and leanest man of your acquaintance and put him in a short, round-about vest and white, ballet-girl skirt; if you will put a soft red, rimless cap on the side of his head and let the long, black tassel of this fall down over his ear, and then clothe his feet in long, red slippers, which turn up at the toes, you will have some idea of how these gaudy country Greeks look. You must however, make the vest gorgeous with brass, silver, or gold embroidery and it must have long sleeves which hang down from the wrist. On the toe of each red slipper there must be a red tassel as big as a chestnut-burr and of the same shape, and bright leggins must be wrapped tight around the shins. The white skirts must come to the thighs and they must stand out as though starched. They must be so many that the breadth of the bottom will be at least a foot thick and the wearer must flirt them as he moves with a gay and giddy air. If you would have him like a Greek soldier you must give him a great belt and fill this with old pistols and knives. You must put a sword at his side and a gun in his hand. You must shave off all but his mustache and give him a strut like that of a drum-major when the band is reviewed by the major.—*F. G. Carpenter's Athens Letter.*