FARM AND GARDEN NOTES.

ITEMS OF TIMELY INTEREST TO THE FARMERS.

Lettuce...Feeding Hens for Eggs...Planning for Fall Fresh Cows..."Find a Way or Make It."

ESTABLISHING AN APIARY.

A bulletin of the Department of Agriculture says: Spring is the best time to establish an apiary, especially for a person unacquainted with the practical care of bees. Colonies in good condition secured then are more easily kept in order by the novice than if purchased in the fall. Mistakes in management may possibly be remedied before the season closes, and by the time it is necessary to prepare for the winter the learner will have gained a certain amount of practical knowledge of the nature and requirements of the bees.

If the start be made late in the season, mistakes, if they occur, may result fatally before the proper remedy can be applied. The beginner had better obtain his start by purchasing one or two colonies of pure Italian or Carniolan bees in accurately made frame hives and in first-class condition. These he should get of some bee master of repute near his own place if possible, in order to avoid expressage and possible damage through long confinement or numerous transfers. The cost per colony may be $6 to $8, yet bees at this price will generally be found much cheaper in the end, for, though common bees in box hives may frequently be obtained at half the price or less, the cost, when finally transferred into frame hives, fitted up with straight combs, and the common queens replaced by Italian or Carniolans, will not be less.

The possession of a colony already in prime working order gives the novice a standard with which to compare all others, and often enables him to avoid costly experiments. Another plan, also commendable, is to agree with some neighboring bee keeper to deliver as many first swarms on the day they issue as are wanted. These will give the right start if placed as received in hives with foundation starters and the frames properly spaced—one and three-eighths inches from centre to centre, it being understood that the swarms are early and prime ones, with vigorous queens. Only those issuing from colonies that have swarmed the year before, or from such as were themselves second swarms of the previous year should be accepted. Swarms from these will have queens not over one year old.

It is better to have queens of the current year's raising, but these can only be obtained by taking the second or third swarms from a given hive, which come later and are smaller, or by substituting young queens for those that come with the swarms.

FEMININE DAIRY WISDOM.

As given to the world by Dorothy Tucker through the Farm Journal:

Salting regularly is one very important matter in the dairy.

When cows have not received an abundance of salt, and then a change to regular salting is practiced, a great change both in quantity and quality of milk can be noticed. A still better plan is to keep it where each cow can help herself whenever she desires.

The best cows are always the heavy feeders.

If they eat heartily and are healthy, and do not lay on fat, you may be sure that it is going somewhere, and you will always find it in the milk pail.

Good, regular care will count now. Breeding and natural capacity are powerless to contribute to successful stock raising unless accompanied by thoughtfulness, intelligence and regular care.

Merit is not proof against neglect, starvation and abuse. Give a cow just enough to keep her alive and how can she fill the milk pail?

Too many unobserving men expect this, and then wonder why they are poor.

How many farmers are preparing to idle away the winter? Is there any excuse for such practices, and is there any other business that will permit it?

Winter butter production is more profitable than summer; then why not be a winter producer?

Every degree you raise the temperature of the stable up to comfort saves food and is one step in the right direction for prosperity.

Don't let the heifers form the habit of drying up early. With plenty of food and good care they will milk nearly the year round.

Be sure that linseed meal forms a part of the grain ration now.

Don't neglect the daily brushing and cleaning of every cow. There is nothing like pure, simple, old-fashioned cleanliness.

Get special customers for your butter, and furnish it every week. It is worth a few cents per pound to the consumers to know that they are eating pure, clean butter, and not oleo or some other manufactured stuff, and there is a big difference between cash and trading out butter.

A NEW METHOD WITH HOGS.

The method and success of a farmer in Franklin County, Ohio, is worthy of note, writes W. T. Taylor. Sows are bred to farrow in July or August. As soon as the litters are old enough to wean, the sows are taken away, fattened and sold or slaughtered by Jan. 1. The herd of pigs are kept thrifty and growing through fall and winter. As soon as blue grass or clover peeps out in spring they get that, followed by other pasture range until the last of June, when a full ration of corn is fed. By the last of August or Sept. 1 they are ready to sell. Out of this young herd every spring the most likely females are taken and bred to farrow as before, keeping no sows over winter.

This gentleman's methods in this line are worthy of imitation and his success as a farmer has been perfectly satisfactory to him through a succession of years. No doubt the average price obtained has been above fall and winter level, and I think if taken through his twenty years would come pretty close to the five cent mark. Having bought many lots of his feeding, I know of their merits. On Aug. 30 last thirty-eight head averaged two hundred and fifty-six pounds and netted him at home scales $330.80. A lot of thirty sold on July 19, 1895, averaged two hundred and sixty-five pounds and netted him $370.37. There are certainly many advantages in this plan and taken upon an average basis the price is likely to be higher at the season he disposes of his product than at any other time in the year.—American Agriculturist.

"FIND A WAY, OR MAKE IT."

The first requisite of a market gardener is to be able to produce the best of vegetables at the smallest cost. This may be accomplished by systematically saving all available manure and by the intelligent use of commercial fertilizers. He must study the tastes and wants of his customers, for on them depends the life of his venture. Having done so, the next step is to get his products into proper and attractive shape. Have all vegetables carefully graded in at least two classes; the finest in one class and the next best in another, with prices corresponding. Sell directly to consumers. Endeavor as soon as possible to build up a reputation for honesty and reliability, and after once establishing it, do not vary one iota therefrom. Let his customers feel that they can depend upon him always to do as he agrees, and that his products are invariably of the best. Don't plant too largely of any one crop. Plant a variety, but only such as are suited to the requirements of his customers, and that there is likely to be at least a reasonable demand for. Plan to have a supply on hand when the markets are not glutted, for the goods then bring the best prices. Have patience to wait till the financial crisis is settled, and the markets will improve of their own accord. Be cheerful himself, and try his best to please everyone else.—H. B. Mitchell, in Practical Farmer.

PLANNING FOR FALL-FRESH COWS.

December and January are good months in which to control and supervise the service of the bull. Midsummer and the dogdays are a good time for the cow to be dry and prepare to calve again, and a most unprofitable and annoying time to make milk or handle it. The greatest product and the richest come at the season when milk and butter are always comparatively high in price. In actual practice, four fall-fresh cows have been found to equal five which calved in the spring, in twelve months' product, and at about four-fifths the cost.—Henry E. Alvard, United States Department of Agriculture.

FEEDING HENS FOR EGGS.

Farmers generally feed too much corn; its fattening properties are so great that it should be fed sparingly and then on the cob, except that for the night meal on a cold day hot corn is excellent.

Buckwheat or wheat should be the principal feed during winter. Oats are good when the ground is bare and there is free access to gravel and grit.

Warm milk or water, along with crushed oyster shells, should be provided liberally. Liquids are necessary for the formation of egg shells.

Scraps from the table, peelings and cabbage are equally relished by "biddy," and if properly housed and cared for will give good returns in the egg basket.—New England Homestead.

LETTUCE.

With the exception possibly of the cabbage, few vegetables require as rich soil in order to get the best results as lettuce. Many vegetable plants are not particular as to the quality of the manure. Anything in abundance will do, but the lettuce seems to prefer rank, partially rotted manure to any other kind. We have seen it thriving in the rich soil of a greenhouse where it was used as a "first crop."—Meehans' Monthly.

Europe's Electric Roads.

There are now 560 miles of electric roads in Europe, an increase of 125 miles during the year, says the Chicago Inter-Ocean. The number of cars has increased from 1,236 to 1,747. Germany leads with 250 miles of track and 857 cars. Then come France with 82 miles and 225 cars, Great Britain with 65 miles and 168 cars, and Austro-Hungary with 45 miles and 157 cars. Russia has one line with 6 miles of track and 32 motor cars. Of the 111 European lines 91 are worked by the overhead trolley system; three, one each in Germany, England and Hungary, by an underground current; nine by an insulated central rail, and eight by storage batteries.

Fourteen tons of turkey were shipped from East Georgia, Vt., one day recently.

HOW MUCH IS A KNOT?

Very Few Landsmen Know Its Value Expressed in Miles.

In this day of record breaking by ocean steamers, when every big steamer that comes into port is expected to carry a record hung at a yardarm, so to speak, how many landsmen know the meaning of the term "knot," in which rate of speed at sea is chiefly expressed? It is purely and wholly a nautical term, having specific application to the speed and distance made by a vessel moving in the water.

The word "knot" is the mariner's term for a nautical mile, and its use is really derived from the log line used by navigators of the ocean when they wish to determine the speed and the distance that the ship has probably sailed in a given time. The log line is an important and very necessary part of a ship's fittings; especially is this the case when, for several days at sea, the navigator is unable, because of the sun being hidden by clouds or thick weather, to get a peep at it with his sextant, from which the actual position of the ship is worked out. With the data taken by a frequent heaving of the log (a small block or section of wood with a long line attached and run out from the stern of the vessel for a specific number of seconds), noting the force and direction of the wind, the possible currents, or other influences acting favorably or against the progress of the ship, the navigator is enabled to calculate very nearly, in overcast or foggy weather, about where his ship is at any hour of the day. This is called "working out the position of the ship by dead reckoning."

Every one who has studied the geographical table in his early school days will recall that part of the singsong recitation running like this: "Sixty-nine and one-sixth statute miles, or sixty geographical miles, equal one degree of longitude at the equator." Now, the difference between a statute mile and a nautical mile is that the latter is about 806 feet greater than the former. There are sixty geographical miles to each degree of latitude, or to each degree of longitude at the equator, which divisions of miles are called "minutes" in the nautical vocabulary, hence the old saying, "a mile a minute." As there are 360 degrees, or meridians, of longitude, there are 1,600 minutes, or miles, in the entire circumference of the world, at the equator; and it has been mathematically determined that one minute—one geographical mile—at the equatorial circle is equal to 6,086.7 feet. But it has been the practice of mariners not to be too exact on small fractions when measuring distance as great as a mile, consequently the practice of defining a knot or nautical mile as equal to 6,080 feet, instead of 6,086.7 feet, has been generally adopted.

When the navigator desires to make a log-line by which to ascertain the speed which his vessel is making through the water, he follows the constant 6,080. As the number of seconds in an hour are to 6,080 feet, so are the number of seconds in the time glass (to be used) for measuring the ship's speed to the number of feet in each unit of measurement marked off on the log-line. If a half minute (30 seconds) glass is to be used, the knots must be made 50 feet 8 inches from each other, and the number of these knots which pass from the reel over the stern while the sand is running from the top bulb to the lower bulb of the glass is equal to the number of knots or nautical miles that the vessel would make in an hour, providing the same conditions for speed continue.

For instance, if the engines of a steamship continue to make the same speed during the hour, or if the force of wind and spread of canvass of a sailing vessel continue the same, the number of knots on the line passing from the reel while the sand is running through the thirty-second glass is as good an actual measurement of the vessel's speed through the water as could be obtained, except that the course should be measured by an actual survey with instruments. If it was shown that the vessel was making ten knots, she would cover ten geographical miles, or a little more than 11½ land miles, or eleven and a half times 5,280 (5,280 feet being equivalent to a land mile). Hence, to speak of the City of Paris having made 525 knots or nautical miles in twenty-four hours, she covers a distance of 604½ land miles, as comprehended in railroad distances, or a rate of 25 land miles an hour, which is faster than many railroad trains travel.—New York Herald.

Some Eccentrics.

"It is a very funny thing," said a barber to a New York Mail and Express reporter, "how particular some men are about little things. For example, I know one man who has come in here every day for the past five years. He cannot possibly sit still long enough to be shaved unless he is having his boots blacked at the same time. It doesn't make any difference whether they need shining or not, they must be shined if he is to be shaved. Another man insists on holding a palm leaf fan in his hands winter and summer."

A Novel Wagon.

A novel wagon passed through Elberton recently. The entire body, with the cover, was formed of the body of one tree. The tree was cut the right length for the body and the heart of it was hewn out so that the driver could sit in the hollow very comfortably and drive, thus forming a secure cover as well as body.—Atlanta Journal.

TROPIC LIGHT AND HEAT.

They Were the First Things that Impressed a Visitor to Jamaica.

The light and the heat are the two things that most impress one on first coming to this land. The light is the more impressive of the two; from sunrise to sunset it is omnipresent and constant; the very shadows are luminous, dark though they appear by contrast. I should say that latitude seventeen was about forty-five million miles nearer the sun than latitude forty. Yet it is a tender, soft, suffused light, not a fierce and hard one. The atmosphere is not so rarefied as that of our own west; one can read here by moonlight, but one cannot read fine print easily. The remote distances of the landscape are melted in an aerial haze instead of being defined with the relentless clearness of a steel engraving. Nevertheless, the light of the tropics is superlative; it seems to belong to a planet more recently evolved from the parental luminary than ours. So intense and pervasive is it, one would almost say irradiates the mind as well as the body; it appears to possess a spiritual quality. I had read of blazing tropic suns, of scorching, blistering tropic heats, but I find nothing of the sort. However great the ultimate effect may be, the manner is always gentle, sweet, subtle, soothing; Harbour street in Kingston never shows so savage a temperature as Broadway in New York. But for all that, it will not do to take undue liberties with this soft-spoken climate.

After walking a few miles along the white, undulating roads, or panting up a steep hillside, nothing could be more delicious than the touch of the northern breeze fanning you as you sit under the shadow of a broad-spreading silk cotton, nor could anything be more dangerous. You are being fanned by the wings of death. Evaporation is wonderfully rapid; you come in from exercise drenched with perspiration, and before you can make ready for a "rub down" your skin is already dry. In the north a slight chill may be followed by a slight cold, and that be the end of it; here your chill may turn out the end of everything for you. Moreover, the soil when dampened by rains probably exhales a miasma productive of what we call malarial fever; in Jamaica it occasionally develops into an appalling, ugly and brief disease known as black vomit.

On the other hand, if you are rationally cautious, and let liquor of every kind alone, you may walk or climb, or play tennis, or ride horseback all through the hottest parts of the cloudless day, and feel only the better for it at night; in fact, you must take plenty of exercise in order to be at your best. The way to get ill is to avoid exertion and perspiration, and sit at ease in the shade absorbing cooling drinks. Such people sometimes last two years. Those who pursue the alternative regimen are not surprised to find themselves alive and alert at ninety and upward. Of course it is more difficult to get ill on the higher levels than on the lower ones; but taking the island by long and large, it is one of the healthiest places on the globe.—Julian Hawthorne, in the Century.

Ancient Tar and Feathers.

"There is a general impression, in this country at least, that the institution known as 'tar and feathers' is distinctively American. Nothing could be further from the mark," observed Judge Riley of the Virginia bar. "The fact is, what we understand to be a coating of tar and feathers is of ancient origin. There is also an idea afloat that tar and feathers is a sort of Southern celebration, that it was invented there, and that it is of common occurrence in that section of our loved country. I assure you that both these ideas are wrong all through. In the first place, while there is plenty of tar in the South, the stock of feathers is not so large. And again, they are too valuable to use in such a way.

"Where a person deserves such a treatment it is much easier and better to give him a thorough cowhiding. A cowhiding sticks as well as a coating of tar if it is properly applied. Tar and feathers originated in the days of Richard Coeur de Lion, over eight hundred years ago, as is evidenced by one of his ordinances for seamen as follows: 'That if any man is taken with theft or pickery, and thereof convicted, he shall have his head polled and hot pitch poured upon his pate, and upon that the feathers of some pillow or cushion shaken aloft that he may thereby be known for a thief."—Washington Star.

The Working of a Big Department Store

No other business that is conducted under one roof equals the department store in magnitude of detail. Take for instance the case of one of the giants of the species. It employs from 3,500 to 5,000 persons, according to the season. In a year it does nearly $10,000,000 of business. Its largest individual sale last year was an orchestrion for $4,500, and its smallest a patent clothes pin for one cent. During the holiday rush there were several days when its gross receipts ran over $100,000. It has more than seventy departments. To heat it one hundred miles of steampipe are required, and the electric light plant would adequately equip a small city. It represents a rental of nearly $300,000 a year, and at a conservative estimate the daily expenses of the store are $5,000. When it is considered that this enormous sum is made up from the profits in sales, for the most part in small parcels, one gets an inkling of the infinite care in details and the perfection of system which go to make such enterprises as they are. A man who has himself conducted one of these businesses recently made this statement:

"The profits of the department store are represented by the cash discounts on its bills."—Scribner's.

Vegetation and Moisture.

Exhaustive experiments on vegetation of various sorts have shown that the degree of moisture required varies considerably at different stages of the growth and development of plants. It is curious to note how nature provides for this moisture at the proper seasons. More water is required when the first leaves are coming out. This period generally occurs when the ground is very wet from the spring snows and rains. After the leaves are out less moisture is needed until the blossoming season, then a great deal is required. The best fruit develops when the ground and atmosphere is comparatively dry. Constant moisture is not desirable, as it is though to impair the keeping qualities of fruit, especially if accompanied by a high degree of heat. A very wet season favors quantity in fruit, while a tolerably dry one gives much finer quality. It is a well understood fact that potatoes grown in very wet seasons are much less desirable in flavor and quality than when the soil is fairly light and dry. During the past season great difficulty has been experienced in keeping fruit on account of the amount of moisture and the high temperature of a portion of the summer.

Nature in the Ocean.

It is estimated that the cyclops will beget 442,000 young in the course of the year, and if these were all permitted to mature and reproduce themselves the seas would in a short time be a simple mass of living organisms. But the etochilus, or "whale food," constitutes almost the exclusive food of the vast shoals of herrings and the sea-living salmon and salmon trout. Their existence is one of the greatest economic triumphs of nature, for these minute creatures scour the sea of its refuse and keep it sweet, while they form the food of fishes which in turn furnish wholesome food for millions of human beings.

Feeding on dead vegetable and animal matter, these entomostraca are converted into the food fishes of the world by one remove, being first assimilated by the herrings, and then absorbed by the cod, tunny, mackerel and other fishes which follow herring shoals and prey upon the latter. They mainly swim on the surface of the water, and it is the search of them in this position which brings the shoals of herring to the surface. Their countless numbers are also augmented by the microscopic larvae of fixed shells, such as the barnacle, which begins life in this form, first as a one-eyed swimming crustacean, then growing a pair of eyes, and finally affixing itself.

In rivers these larvae are the sole food of all young fish, and often also of older fish. In early spring the creatures in every stage—eggs, larvae and perfect though microscopic entomostraca—swarm in the water, on the mud and on the water plants, and were it not for nature's provision for keeping them in check so rapid would be their rate of multiplication that the whole character of the water would speedily be entirely changed.

Ears and Hearing.

Snakes are believed not to hear well.

Beethoven was the only deaf musical composer.

The ears of the garden slug are located in his neck.

One kind of the medusae has, it is said, eighty ears.

One variety of the cricket has its ears in its hind legs.

The ears of the fly are located near the base of the wings.

Most grasshoppers have their ears in the middle of the body.

The cavity of the middle ear is about the size of a kidney bean.

Thomas Holcroft wrote a famous comedy called "Deaf and Dumb."

The United States has 480 deaf mutes to the million of population.

In 1864 a national college for deaf mutes was founded at Washington.

Caucasians are more liable to deafness than people of any other race.

All carnivorous animals have small ears, capable of very quick movement.

The blind are generally possessed of a singularly acute sense of hearing.

The crocodile hears remarkably well, and has the rudiments of an outer ear.

The mammalia are the only inferior animals which possess an external ear.

There is no creature which possesses a more sensitive hearing than the cat.

Scarlet fever and cerebro-spinal meningitis are frequent causes of deafness.

In 1886 Bell's method of visible speech began to attract widespread attention.

Strange as it may seem, most varieties of jellyfish have true organs of hearing.

A Philatelic Exhibition.

England's stamp collectors as their part in the celebration next year of Queen Victoria's attainment of the "record" as tenant of the British throne, are to hold an international philatelic exhibition. It will begin late in July in the galleries of the Royal Institution of Painters in Water Colors, and the Duke of Saxe-Coburg and Gotha and the Duke of York are among the prominent collectors who have promised to support the enterprise. It will embrace British, Colonial and foreign postage stamps, envelopes, postal cards, news bands, philatelic appliances, literature and curiosities and objects of interest in connection with the postal service.

A STORY AND ITS SEQUEL.

Pathetic Death of the Grand Niece of a Revolutionary Hero.

The pathetic death in Brooklyn a few days ago of Mrs. Josephine S. Gerocka, who claimed to be a grand niece of Count Pulaski, adds a tragic sequel to one of the most thrilling chapters of the American revolution.

A member of one of the oldest and most aristocratic families of Poland, Count Pulaski was forced to leave home on account of the conspicuous part which his father had taken in the Polish revolution. Although a mere youth he joined the Turkish army and figured in several engagements between the Turks and Russians. Later on he went to Paris, where he made the acquaintance of Benjamin Franklin, who was there in the interest of the American cause. Becoming deeply interested in the struggle of the revolutionary patriots he offered his services, through Mr. Franklin, to the commander-in-chief of the American forces. His offer was promptly accepted, and shortly after his arrival in Philadelphia he participated in the unfortunate battles of Brandywine and Germantown. In spite of his first disastrous experience, however, he organized an independent corps of troops and took part in the famous engagement at Valley Forge. Although he sustained a frightful loss of men, he reorganized his corps and started south, where a still more grievous chapter of misfortune awaited him. At Charlestown, he made a stubborn assault upon the British lines, only to be repulsed with great slaughter, and again at Savannah his troops shared a similar fate. In the latter engagement, however, the brave officer felt mortally wounded, and his long career of reverses ended on Georgia soil.

With gratitude to the noble count for his heroic defense of her borders Georgia has named one of her counties in his honor, while a towering shaft of marble in the city of Savannah preserves the record of his courageous martyrdom.

Similar, in point of misfortunes at least, to the checkered career of this illustrious prince has been the experience of his hapless niece, Mrs. Gerocka. Several years ago she filed a suit against the government in which she sought to recover the sum of $2,000,000, which she claimed that her grand uncle had advanced to the American cause. Unable to substantiate her claim, however, the suit failed. Sometime after this she was given a clerkship in Washington, but on account of indifference to her duties it was necessary to dismiss her. Unable to return to Europe for lack of means she took up her residence in Brooklyn, where she gradually sank to the very lowest condition of poverty. For quite awhile she sold papers on the streets, but growing tired of this occupation, which little harmonized with the gentle blood in her veins, she finally resorted to the desperate extreme of self-destruction.

Our American annals contain no sadder tales of misfortune than the ones which group themselves about the names of Count Pulaski and his grand niece.—Atlanta Constitution.

An Incident in History.

"There is some doubt as to what part the Nineteenth Maine played in the war, though most of the boys think it put down the rebellion," said Major Parsons the other day. "The fact is, the Nineteenth ate up the Southern Confederacy. They stole pigs, robbed hen roosts, cleaned out orchards and cellars and foraged the country so thoroughly that the rebellion had nothing left to feed on, and so lay down and died."

Then Al Wells of the same regiment took up the thread of the story:

"We were sweeping along one day, dining on the fat of the land, as usual. Another troop was ahead and between them and us rode General Hancock. As the General was passing one plantation the aged proprietor came out and stopped the General's party.

"General," said he, "I want some sort of safeguard. Those troops that have just gone by stole my pigs, lifted my hen roosts and emptied my cellar."

"I'm sorry," said Hancock.

"Yes," replied the old man, "they stole everything but my hope of immortality. Thank God, none of them can steal that."

"Don't be too sure about that," retorted the General. "The Nineteenth Maine is coming next."—Lewiston (Me.) Journal.

Expensive Feathers.

Feather hunting, in some instances, is more profitable than gold seeking. The egret feathers sell from thirty-two to thirty-five dollars an ounce. Of course, they fetch at least double that when retailed over the counters of New York's most popular shops. They are not sold by the ounce there, though. They go by the piece. While there are probably hundreds of men who make a business of killing birds for their feathers, the best known of the feather hunters in the West is Hamlin Smith, the white chief of the Cocopah Indians. Their reservation includes most of the land on Madeline Bay. In the marshes of this broad sheet of water are found the egret, heron and crane in numbers. Even the heron's feathers come high. They fetch at wholesale from eight to ten dollars an ounce. One heron will often yield feathers worth one hundred and fifty dollars. If herons are more plentiful than egret, they are more profitable hunting, because there is only a small tuft of covering on the egret that is marketable.