

Agricultural.

As an illustration of the profits of corn culture in Lost Angeles county, California, the *Anaheim Gazette* cites the case of a farmer who last year sold 150 cents of corn from 30 acres. He sold it for \$1.53 per cental—a total of \$1874.50—and his cash outlay was hardly \$150.

Layering consists simply in bending down a branch and keeping it in contact with or buried to a small depth in the soil, until roots are formed. The connection with the parent plant may then be severed. Many plants can be far more easily propagated thus than by cuttings.

The milk of a cow in her third or fourth calf is generally richer in quality than a younger one, and will continue so for several years. In dry seasons the quality is generally richer, although cool weather favors the production of cheese. Cold weather increases the yield of butter.—*Farm, Herd and Home*.

It should be remembered that no matter how good and rich a milk cow may be it is unreasonable to expect the quantity and richness of the product to be kept up unless both the quantity and adaptability of the food are matters of attention. Do not expect impossibilities, even if you are the owner of prize milking animals.

The best time for shipping bees any considerable distance is in April, or quite early in May, before the combs are too heavy with blood, though with proper care in preparing them and ordinary usage in hatching they may be shipped at any time with comparative safety, except in quite cold weather.

The Navajo Indians in Arizona have 900,500 sheep, and 200,000 goats, the result of the investment of \$30,000 for them by the Government two or three years ago. This heretofore expensive tribe required an appropriation of only \$5000 a year and are now considered self-sustaining. They occupy an immense tract of land, however, which is held for settlers.

I think the value of flax straw for feeding stock generally depends on how much seed there is in it. I have stacked upon my place seventy-five or one hundred tons of flax straw; I have also a quantity of prairie hay, which I do not value very highly for the wintering of stock, and I was obliged to fence it in to keep it from being eaten up, while my flax straw went untouched. I would not give 50 cents a ton for flax straw for feeding stock, as there is not any substance in it.—*A Kansas Farmer*.

Gladiolus bulbs should be planted in succession at the intervals of two or three weeks, through the months of April and May. They should be planted about three inches deep, a little pure soil or sand being laid over each before the earth is closed in about them, an arrangement which may be only advantageously followed with bulbous plants generally. In hot summer weather they should have a good mulching of half-rotten manure, and as soon as the flower spikes are produced liquid manure may occasionally be given them.

A writer in the *Fruit Recorder* makes the statement that one of the neighbors planted some cabbage plants among his corn where the corn missed, and the butterflies did not find them. He has, therefore, come to the conclusion that if the cabbage patch was in the middle of the corn-field the butterflies would not find them as they fly low and like plain sailing.

There are fewer cattle now in Colorado than there were three or four years ago. The profits of herding were great, and there was a rapid increase until drought and a subsequent severe winter caused the loss of thousands of head from starvation and exposure. It is probable that Colorado will not in many years have as many head of cattle as it had before this disastrous experience.

A fruit-grower in Western New York sold the past season \$3000 worth of quinces from an orchard of 10,000 trees which have been bearing three years. Every year hereafter the sales will, or should, largely increase. So far the only manure used has been a mixture of salt and ashes. The orchard is kept cleanly cultivated, and the trees are too large to grow other crops among them.

The greater part of the water found in plants, and the earthy or mineral ingredients, including the nitrates, enter the plants by means of the roots. Probably gaseous matter may also be absorbed by the roots. Absorption of fluids by the roots is due to diffusion, by virtue of which liquids of different densities have a tendency to mix, the thinner passing into the thicker liquid through the cell-walls.

Sandy soils are, in the average farmer's sense of the word, the lightest of all soils, because they are the easiest to work, while in actual weight they are the heaviest soils known. Clay, also, which we call a heavy soil, because stiff and unyielding to the plow, is comparatively a light soil in actual weight. Peat soils are light in both senses of the word, having little actual weight and being loose or porous.

The sheep is a close grazer, and even

prefers short pastures. It is scrupulously clean, though not very select in the choice of the herbage on which it feeds. Wool, being a highly nitrogenous substance, requires a larger supply of albuminoid food for sheep than other ruminants demand. Wool being the chief profit of sheep farming, it will be economy to feed oats or oil-cake pretty freely to secure a liberal growth of this staple.

I find coal ashes to be a very valuable article to be used for many purposes. I have used them for three or four years on currant bushes for the destruction of the currant worm, and find no necessity for the use of hellebore or any other poison. They are as effective on cucumber vines to keep off the striped bug. Last year I used them on cabbages, filling the head full, and had no further trouble with the worms. The cabbages heated well, receiving no injury from the ashes. The ashes are better to be sifted through a fine sieve.—*E. J. H., in Fruit Recorder*.

Oxford and Pestilence.

It is remarkable how often Oxford was scourged by pestilence in the sixteenth century, and Merton College was by no means exempt from its ravages. The most appalling outbreak was that which took place during the Black Assizes, as they were afterward called, in the year 1577, when some 500 persons are said to have perished of jail fever, including the Judge, the High Sheriff, most of the jurors, and a hundred members of the university. No Fellows of Merton are mentioned among the victims, but Anthony Wood says that fatal cases occurred in every college and hall. It is pleasant to relate that Dr. Bickley, then Warden, earned public gratitude by his devotion to the sick, when even the doctors had deserted their posts. But this was only one of many similar visitations. In 1489 a terrible pestilence in Merton College had carried off Thos. Kent, a Fellow, and a famous astronomer. In 1493 another plague drove the Merton Fellows into retirement at Islip. In August, 1503, the plague broke out again in the University, and the Principal of St. Alban Hall, with most of the students, fled to Islip. In October it attacked Merton, and one Fellow who died of it was buried in the chapel. Others took refuge at Stow Wood, or Wootton, near Cumber. Two more Fellows of Merton, carried off by the plague, were buried in the chapel in 1500 and another in 1509. In 1544 the plague raged so fiercely in Oxford that Merton excused its Bachelors from attendance in the schools. In 1571 almost all university proceedings were interrupted by the same cause during most of the year. In 1575 another visitation of plague, noticed in the *Merton Register*, obliged the Vice-chancellor to postpone the commencement of October term. In 1578, and again in 1582, it broke out afresh; the Vice-Chancellor suspended all university lectures, and Merton College gave its Masters a dispensation from their statutory exercises. In 1603 it spread from London to Oxford, all university business was suspended during Michaelmas term, and the colleges, before dispersing, made weekly contributions for the relief of the plague-stricken citizens. Such were the sanitary difficulties under which academic studies were carried on in what posterity has been taught to regard as the golden age of Elizabeth.—*Fortnightly Review*.

Afraid of Banks.

An old lady of respectable appearance was recently arrested at a draper's shop in Paris on suspicion that she was circulating counterfeit coin. A clerk had pronounced bad a silver five-franc piece which she offered him, whereupon she had drawn from a large canvas bag another coin of the same denomination, which he likewise rejected. The police authorities found suspended under her dress by a belt and wires five bags containing 240 five-franc pieces, 1000 francs in gold, six bank-notes of 1000 francs each, 100,000 francs, in public securities. In reply to questions the old lady gave her name and address, and said that she lived alone she always carried her fortune about with her; moreover, she doubted that her coin was bad, as she never accepted a piece without examining it. The Commissary of Police sent the silver to a money changer, who at once declared that the shopman was mistaken, as there was not a bad piece among the coins. The lady then readjusted her treasure in his hiding place, and left the police station somewhat disturbed by her adventure.

A correspondent of the *Druggists Circular* recommends the following as the best remedy against dandruff, itching of the scalp and falling of the hair: Borate of soda, 10 drachms; salicylic acid, 10 scruples; tincture of cantharides, 6 ounces; bay rum, 25 ounces; rose water, 25 ounces; boiling water, enough to make 4½ pints. Dissolve the borax and the acid in boiling water; mix the bay rum and rose water with the solution; then add the rest, and filter.

DEATH OF THE MONGOL.*

From o'er the ocean's trackless tide,
From land of sun and flowers,
The Mongol came with hopeful pride
To find a home in ours.
In childhood's days his breast had thrilled
With tales his elders told,
How o'er the sea the land was filled
With precious gems and gold.
And when ripe manhood's hour had come
The held by gentlest hands,
He bade adieu to friends and home
And sought the fabled lands.
"Full soon," he said, "with riches blest,
I'll hie me back again;
For better than the favored West
I love my native plain!"

Alas! sad eyes shall weep for him,
Who nevermore may come;
The West-wind sing his requiem,
Who died so far from home!
Nor will they know who look in vain
How fondly turned his eyes
In fancy back to his native plane,
And to his native skies.
"My dear, my native land, for thee
Alone is shed this tear!
In life the brightest spot to me,
In death thou'rt doubly dear!"
"But tho' so far from thee I die,
Bright land of sun and flowers,
Some part of thee at least is nigh
To bless my latest hours!"

'Twas but a lump of common clay,
Brought from his native land,
That as his life fast ebbed away,
He clasped within his hand.
It seemed to cheer the heavy gloom;
And watching by his side,
They saw a smile his face illumine,
As peacefully he died.

*A Chinaman was recently brutally beaten in Philadelphia, by a party of roughs, and died shortly after being taken to the hospital, "holding in his hand, and pressing almost with devotion, some clay brought from China. He could not die in China, but he reverently pressed some of her soil in his palm as he sank to his final rest on earth, so far from friends and home."
—*Bryn Mawr [Pa.] Home News*.

Practical Silk Culture in the South.

Automatic Silk Reels and their Importance to the Silk Industry of the South.

To the National Cotton Planters' Association of America:

Silk growing is essentially a Southern industry. The natural home of the silk growing industry is proven by nature in nearly every step that we take, to be in our Southern land.

We have whole forests of the wild mulberry and the osage-orange trees—the leaves of which are the natural food for the feeding of silk cocoons. Both of which together with the white mulberry can be propagated to any extent desired—both by seed, graft, layer, cuttings or transplanting the trees in the fall, winter or spring. The fall and winter is the very best time for transplanting. The spring is the time for grafting, budding, setting out cuttings and sowing the seed.

We have such a vast scope of country, plenty of shed room of all kinds, gin houses, cotton warehouses, spare cabins, etc., without extra cost, all over our broad Southland, all of which are as good to raise the very finest quality of silk cocoons as the finest silk cocoonery built to order.

The natural home of the silk worm is proven also by the many tons of wild silk. Wild silk cocoons can be found upon almost every cedar tree or pecan tree in the South, grown every year in the open air without any care or attention. This fact alone proves absolutely the special adaptability of silk culture to the South, and that it is the natural home of the silk producing silk worm.

We can produce three full crops of silk in one season, in the South, and this is another undeniable proof of the superior locality for silk culture in the South.

(It must be here understood that the very best localities of France and Italy can only produce two crops and in some seasons can only produce one crop of silk cocoons.)

We ship annually, millions of our own breeding of silk worm eggs to France and Italy, to be hatched and raised in those countries to produce silk cocoons. The silk-culturists of those countries prefer American silk eggs for many good reasons, principally of which is the well known freedom from disease among American silk worm eggs and, among other reasons, their extreme hardness and great production of silk, and last, but not least, the superior fineness of the American silk cocoons which are produced from American silk worm eggs.

Another proof is the wonderful climate we have for the production of raw silk (silk cocoons) is the well known fact to all silk culturists in America, that we of the South, require no artificial heat (fire) to hatch the silk worm, whilst in the old silk growing countries it takes four and five days manipulation of the eggs before they can commence to hatch the eggs besides having artificial heat (fire) to be able to hatch the silk worm eggs.

While all we have to do in the South is to spread the eggs out on the feeding trays, and in a few hours they commence hatching vigorously. In the short space of four or five days you can hatch millions, when it would take ten and twelve days to do the same work in foreign silk growing countries, and we have done the work in half the time.

This is another great advantage that we enjoy, for we save time and therefore money.

Another great advantage we have is the fact that whilst it takes from thirty-five to fifty days for the silk worm to attain its full growth before commencing to spin its cocoon of silk in the old world, we have only to feed the silk worms from twenty-one to thirty days for them to attain their full size and commence to spin their house of silk (silk cocoon). This immense saving in time amounts to an enormous sum in one season.

The yield of silk will be at least one-third more, especially when the silk worms spin their silk in this short space of time, for it is a well known fact that the sooner the silk worms begin to spin their cocoons, the finer the quality and the greater the yield than when they take a longer time to mature.

I have sold worm eggs these many years, to the North, South, East and West, and from the returns of silk cocoons from all these sections from the same breed of silk worms eggs it can be seen at a glance that the silk cocoons grown at the South excel all others both in size, amount of silk on each cocoon, strength of fiber, firmness of fiber and great uniformity of size, etc., which goes to make up the quantity of the silk cocoons.

I have gone further in my experiments with foreign silk eggs which I have imported and reared in the South, and these same silk worm eggs produced finer cocoons in the South than they produce in their own country, when it is a well known fact that acclimated silk worms eggs are the best and most profitable for silk growing to have (by acclimated silk eggs I mean silk eggs bred in the United States).

The long season of fine weather we enjoy and our comparative freedom from tornadoes and hot dust storms, as they have in other silk growing countries, is still another strong point in our favor.

These ten advantages that we possess over any other silk growing country in the world, I am fully aware will surprise many of you here present from our Southern cotton growing States, and you wonder why you were not made acquainted with them before!

There are many, many reasons for this great advance in silk culture in the South and in the United States; prominent among the many is the wonderful invention of the "Automatic Silk Reels."

These reels are for the unwinding (reeling) of the silk from the silk cocoons which would have to be done by hand, which is a very tedious as well as a very skillful work to do. In other words these reels are of the same advantage in preparing and working the silk cocoons, as the cotton gin is for cotton. The many improvements made in silk machinery now being manufactured in the United States have advanced the price of silk cocoons to double their former price.

To give you an idea of the amount of silk cocoons and reeled silk (raw silk) consumed in the United States during one year, I copy from the custom house reports from San Francisco and New York city, for the month of September, which foot up the enormous sum of \$2,682,000.90 for silk cocoons and reeled silk (raw silk) for only one month importation. Now the September import is a fair estimate for the balance of the year. Now multiply this sum by twelve (twelve months in the year) and you can form a fair estimate of the enormous amount of raw silk needed by the silk manufacturers of the United States.

PROFITS OF SILK GROWING FROM AN ACRE OF LAND.

To give an estimate of what can be done (I give you as an example the profits of one acre), and what has been done on my silk farm near Memphis, and many others not only in Memphis but in many other parts of the South these last few years.

One acre of ordinary land planted in	
White mulberry, wild mulberry,	
or osage orange trees, the first year	
will produce	\$250 00
The second year will produce	300 00
The third year will produce	350 00

and will increase in the same proportion year after year, for the trees grow very rapidly, and two crops of leaves can be had in one year.

The above address was delivered, by P. Wallace McKittrick silk culturist, of Memphis, Tennessee, and is an exhaustive resume of this important question. Mr. McKittrick is one of the best informed persons on this subject in the country, and is entitled to national commendation for his zeal in attempting to place us in a fair competitive plane with similar industries in Europe.

For the illumination of balloons M. Mangin uses an incandescent electric light, surrounded by water contained in a glass vessel.

Sanitary.

THE CARE OF THE EYE.—1. Avoid reading and study by poor light.

2. Light should come from the side, and not from the back or from the front.

3. Do not read or study while suffering great bodily fatigue, or during recovery from illness.

4. Do not read while lying down.

5. Do not use the eye too long at a time for near work, but give them occasional periods of rest.

6. Reading and studying should be done systematically.

7. During the study, avoid the stooping position, or whatever tends to produce congestion of the head and face.

8. Select well printed books.

9. Correct errors of refraction with proper glasses.

10. Avoid bad hygienic conditions and the use of alcohol and tobacco.

11. Take sufficient exercise in open air.

12. Let the physical keep pace with the mental culture, for asthenopia is most usually observed in those who are lacking in physical development.

LIME WATER AND MILK.—The *German Town Telegraph* says that experience proves that lime water and milk are not only food and medicine at an early period of life, but also at a later, when the functions of digestion and assimilation are feeble and easily perverted. A stomach taxed by glutinous, irritated by improper food, inflamed by alcohol, or otherwise unfitted for its duties—as is shown by the various symptoms attendant upon indigestion, dyspepsia, diarrhoea, dysentery and fever—will resume its work, and do it energetically, on an exclusive diet of bread and milk and lime water. A bowl of cow's milk may have four tablespoonfuls of lime water added to it with good effect. Lime must not be taken into the stomach in conjunction with calomel, or mercury in any form.

HOW TO ESCAPE NERVOUSNESS.—The first prescription is an ample supply of pure fresh and cool air. The nerves will always be weak if the greater part of the day and night be passed in close, ill-ventilated and over-heated apartments. The nerves more than the rest of the body, to be properly nourished, require a full supply of oxygen. They will not endure vitiated air, whether the impurities come from sewers, gas-lights, subterranean furnaces, or the individual's own person without making an energetic protest.

A gas burner consuming four cubic feet an hour produces more carbonic acid in a given time, than is evolved from the respiration of eight human beings. Bear this in mind, you who suffer from nervousness, that when you have shut yourselves up in your rooms and lighted an argand burner (which consumes about twelve cubic feet of gas per hour) you are to all intents and purposes immured with twenty-three other persons, all taking oxygen from the atmosphere. Is it any wonder that after several hours' exposure to the depraved air your nerves should rebel, as far as their weak state permits, and that your head should ache, your hands tremble, and that your daughter's playing on the piano almost drives you wild?

An over-heated apartment always enervates its occupants. It is no uncommon thing to find rooms heated in winter by an underground furnace up to ninety degrees. Fights and murders are more numerous in hot than in cold weather, and the artificially heated air that rushes into our rooms, deprived as it is of its unnatural moisture by the baking it has undergone, is even more productive of vicious passions.

It is no surprising circumstance, therefore, to find the woman who sweats all day in such a temperature and adds to it at night by superfluous bedclothing, cross and disagreeable from little every-day troubles that would scarcely ruffle her temper if she kept her room at sixty-five degrees and opened the windows every now and then.—*Our Continent*.

The Workshop.

It is desirable to locate the shafting and machinery so that belts shall run off from each other in opposite directions, as this arrangement will relieve the bearings from the friction that would result where the belts all pull one way on the shaft.

A liking for one-story factories has been developed among the manufacturers of New England, and they are being built in many cases where the nature of sites permits. They are said to be economical, handy, safe and free from that vibration which looms impart to tall structures.

Jacob Reese of Pittsburg, Pa., puts forth some remarkable claims in regard to an alleged new discovery in metallurgy. He says he is able to melt instantly a bar of cast steel one inch in diameter—which cannot be fused in less than five minutes in the highest furnace heat attainable—simply by throwing against it a column of air having a velocity of 25,000 feet per minute.

To lay out quarter-turn belts, draw

on the floor, with chalk, two full-size d pulleys and the position of the floor, and measure this correctly, and then, if desirable, transfer to paper on a smaller scale. There should be some allowance for the sag of the slack sides of the belt. In cutting the holes through the floor, use string or tape between the two pulleys passing through trial holes in the floor.

The following is given by an exchange as a good boiler cement: Mix two parts of finely powdered litharge with one part of very fine sand, and one part of quicklime which has been allowed to slack spontaneously by exposure to the air. This mixture may be kept for any length of time without injuring. In using it a portion is mixed into paste with linseed oil, or, still better, boiled linseed oil. In this state it must be quickly applied, as it soon becomes hard.

Gas of unprecedented cheapness is to be made, if the promises of a Chicago inventor are kept. His process of manufacture is to use up all the usual by-products—coke, gas tar, ammonia and fixed carbon—in the production of gas. Nothing will be left but a deliquescent slag. Every atom of hydrogen and carbon in the coal will be turned into gas. Instead of 10,000 or 12,000 feet of gas from a ton of coal, he will obtain 40,000. Test works are to be built at Elgin.

Home Economies.

HAM.—To boil a ham, scrape and wash carefully in plenty of cold water. Put it to cook in boiling water enough to cover it entirely, hock end up; let it remain on the front of the stove till the ham begins to boil; then put it back, and let it simmer steadily for three hours. Take it off the fire and let the ham remain in the water it is boiled in till cool enough to handle; then skin it, put in a baking pan and sprinkle with about three ounces of brown sugar; run your pan into a hot oven and let it remain a half hour, or until the sugar has formed a brown crust. This not only improves the flavor of the ham but preserves its juices.

AN EXCELLENT WAY TO COOK A DUCK.—Is to first parboil it; then take a small dripping-pan, or even a sauce-pan will answer if it is deep enough; line this pan with small slices of bacon; put in a little water with which to baste the duck. When the duck is tender and brown remove it to a hot platter; make a thick gravy, using for foundation the gravy in the pan, just taking out the bits of bacon; these may be placed around the duck on the platter. To the thick gravy when nearly done you may add canned mushrooms or green peas. Pour the gravy around the duck also. With this should be served mashed potatoes, turnips, onions boiled or cut in thin slices and fried brown in butter and lard. Currant jelly or cranberries cannot be spared.

A NOVELTY IN CAKE.—Bake a loaf of white cake or of corn-starch cake; have the loaf when baked about three inches deep. When done and cold, put on the top of the loaf pieces of orange; these should be cut in the size of a caramel. Put them on as close together as possible, and have them smooth or even if you can. Then cover the cake, orange and all, with frosting. If corn-starch cake is made, follow this rule: One cup of flour, one cup of corn starch, one heaping cup of white sugar, half a cup of butter beaten with the sugar until it is as light as cream, one large teaspoonful of baking powder and the whites of four eggs beaten to a stiff froth and put in last; a large half cup of sweet milk should be stirred in with the butter and sugar after they are well beaten. This cake does not keep well, and should be eaten while fresh. A nice white cake to be covered with orange is made by using the whites of five eggs, one cup of milk, half a cup of butter, one teaspoonful of baking powder, one cup and a half of sugar and about three cups of flour.

The Oldest Locomotive Engineer.

Frederick Langer, who died at Davenport, Iowa, a few days ago, aged seventy-five years, is said to have been the senior railroad locomotive engineer in the United States. According to the *New York Tribune*, his first experience in that calling was in 1835, on the Albion, an engine built by George Stephenson and run on old State road from Philadelphia to Columbia, Pennsylvania. He remained constantly at the work of "engine driving" until 1856, when he retired to farm life. In 1876 he was invited by the late Colonel "Tom" Scott to visit the Exposition at Philadelphia, and on his way there and back again to Davenport he rode in his old place in the cab, and handled the lever as skillfully as ever, thus literally working his passage, although his pockets were full of first class passes over all the roads.