The St. Tammany Farmer.

"The Blessings of Government, Like the Dew from Heaven, Should Descend Alike Upon the Rich and the Poor."

W. G. KENTZEL, Editor. COVINGTON, ST. TAMMANY PARISH, LA., SATURDAY, DECEMBER 17, 1898. VOL. XXIII.—NO. 51.

BELLE ISLE.

The leafy bowers of Belle Isle, arched over
with stately trees
Through which sing cheery measures the
happy birds and bees,
While leaflets whispering softly in frolic
breezes dance,
And multi-colored insects like living jewels
glance;
Incense from petailed censers makes glad
the scented air
Where art and nature mingle their beauties everywhere.

Sunbeams sift burnished ingots of gold
through branches deep,
Where woodland gnomes and fairies their
happy vigils keep,
Where shine and shadow fresco their rare
designs which cross
In many a mystic pattern on grassy mead
and moss;
And happy-hearted children wake echoes
blithe and gay
Amid the endless vistas of softened green
and gray.

Round many a copse and corner with
plumed and grassy reach
The wavelets leap with laughter upon the
pebbly beach,
Or dimple in the sunshine, or sparkle
'neath the moon,
While mocking echoes answer their gentle
rhyme and rune;
Night scatters o'er the waters a million
flashing gems
More brilliant than the jewels in royal diadems.

And there are spears of silver with bars of
burnished gold
Across the shimmering waters in rare array unrolled,
With mild-eyed stars which answer the
glance of stars on high
Where lovers float in rapture above a
nether sky;
True love hath here its kingdom, no wonder lovers smile
Beneath the bowers of beauty which glorify Belle Isle.

The leafy bowers of Belle Isle wave welcomes in the breeze;
Who would not leave life's worries for
such retreats as these?
Their restful benedictions, their cool and
careless calms,
The chant of short-lipped wavelets in low
and limpid psalms?
Here tired hearts find refuge, sad lips may
learn to smile,
Charmed by the subtle gladness which glorifies Belle Isle.

The leafy bowers of Belle Isle, how soft
their branches sweep
Banks rich in curve and color which overhang the deep,
Inviting souls to worship, to sweet and
dreamy rest—
Where countless ships sail proudly o'er
waves with flashing crest;
Well may the charms of nature each weary
heart beguile
Which seeks those bowers of beauty that
gladden fair Belle Isle.

I. EDGAR JONES.

The Story of Valley Shut-In.

Where the Ruins of Desolate Cottage Rest on the Spot of Happy Home.

THE Valley Shut-In is secluded from sight or sound of men, for it is hidden among wooded hills in the wildest, most inaccessible part of the Arcadian mountains. Its charm is unknown to many, and only a score or more of aged men and women give a fleeting thought to the homes of their childhood in Valley Shut-In. No one ever visits the lonely spot but those who till the meager soil, and no one views the ruins of Desolate Cottage, once Happy Home, that lie therein.

Flowing through the Valley Shut-In is a shallow river that gurgles plaintively through a wilderness of forest; an unknown stretch of river, for it turns abruptly away from the valley road and a noisier smaller tributary two miles or more away; turns at such an obtuse angle, hid with trees, that few travelers notice where it leaves them, and wonder later where the river turned its flood another way; but we who love the shallow stream always watch for the turning, and when we view it our fancy travels wishfully along that unknown path, impassable, they say, except in the driest season, and we wonder where the turnings, where the deep, dark pools and glancing shallows, what the flowers and birds along its winding way.

But ere long it reaches the Valley Shut-In and emerges again, unsaddened by the loneliness there, to ripple down through many a forest and meadow to the greater river and the sea.

On either side of the river the hills frown down upon it, and the trees on either side bend lovingly down to drink of its flood, and so no one on the hillside sees the stream, only listens to its drowsy murmur in the summer days, or a louder, wilder song when its waters come plunging down.

On the eastern side of the valley the trees crowd thickly up the hillside, and on the other alternate with brown pasture land and rugged ledges.

One reaches Valley Shut-In from this western side through a forest where rare ferns grow and orchids hide and no one finds them, through a wild wood road that is lined with the flowers that nature loves, and is carpeted with moss and sweet-smelling chips, dropped here from the winter sledding; a path traveled oftenest by timid denizens of the forest and things that creep and crawl in lowly ways.

We leave the path a moment just before it dips steeply down the hill toward Desolate Cottage, once the road to Happy Home, leave the path and follow a ledge that lies at right angles with it, and creeping under the underbrush a little way suddenly find ourselves standing on the brink of a precipice, where giant trees growing at its base 60 feet below rest their topmost leafy branches gently on the rocks above.

Below us are yawning cracks where great slabs of rocks threaten to fall away, and then in places are narrow, gloomy caves, and an echo that living here guards all living things and tells them in many reverberating, oft-repeating voices when a human being or ruder spirit stands in nature's home.

Many years ago some fortune hunter quarried in the ledge, and the ragged aperture thus made frowns in its side, though its frown is almost hidden by the filmy lace of vines that creep lovingly across its furrowed cheeks and the delicate rock ferns that have found a foothold in its wrinkles, and close by a fragment yet unbroken by geologist's hammer lingers to tell the story. For some strange freak on nature's part filled the ledge with streaks of feldspar, in the coarser granitic rock, and in places flung bright bits of mica in, and in others crowded it with crystals of green tourmaline, brittle, yet tantalizing, as they protrude their pentagonal sides from the lighter rocks, and then again a vein of smoky or yellow quartz peers out from the stone.

Below the ledge, out from under the trees and the guarding echo, we stand in a pasture where blackberry bushes and brambles grow at our feet, and there we look across the abandoned apple orchard with Desolate Cottage standing forlornly there, across a meadow that slants to the river's side, across the path of the river betrayed by the trees, to the wooded hills that rise to the sky that sinks behind them and shuts out the world beyond.

The shingles of Desolate Cottage are covered with the moss of many years, but now even the moss finds no wood beneath it and slowly falls away. The bricks of its chimney were long ago built into the walls of another home. The door stone is sunk in the grass and hid by a tangle of wild rose and burdock that quarrel and are friends again.

The floors are bending and sagging downward with the rotten sleepers. A few bits of plaster, green with years; a few bits of wall paper discolored past all resemblance to what it once was, cling to the walls. The frames of the windows and the glass that was in them are long fallen away, and driven in by the valley winds the leaves of last year's spring rustle and frolic in the tenantless rooms. In the low-roofed kitchen a great brick oven yawns beside the vacant chimney place; and all else that remains to tell that here was once a home is an ancient cradle, once red, now paintless, rocked by the passing breezes in the empty Desolate Cottage of the Valley Shut-In.

Many years ago, when the great beeches where the echo lingers were saplings and only the rocks and trees were old, John and Joanna lived with their parents in neighboring cottages of the Valley Shut-In. In the winter they went tramping over the hills to school together, John helping Joanna over icy paths and through the shifting drifts, and Joanna assisting John over harder paths in the spelling book, whispering words to him as they sat together on the lower form. And John often had a juicy apple for Joanna, or she a handful of nuts for him. In summer days they led a sweet, wild life together, fishing for the little minnows in the river, reaching for the cowslips or the flags that grew in the swamp, and when they older grew, they met in the gloaming and talked of many things. And then one night when the mated birds sang softly in the thicket, when a thrush poured forth a flood of melody in the forest and a whip-poor-will mocked insistently by the riverside, John and Joanna watched the mating birds and told to one another the old, old story.

No painting tells us now of Joanna's charms. Not even a silhouette remains to show us John's stronger face. Only tradition has handed down their story, and we are left to picture to ourselves the rosy cheek and laughing eyes that had charmed John's willing mind, and the strong, firm figure and honest face that made him Joanna's hero. Their ambition was not to move in a wider world; Valley Shut-In was quite wide enough for the home they longed for, and the hills failed to shut them in, when they and their love were left together. So, in happy disregard of worldly echoes, they began the preparation for the home that was to be. John for many months worked for others, earning the humble pittance that was laid away to build the house on land his father gave him in Valley Shut-In. Joanna spun and wove the wool and flax her mother gave her, and then searched the pastures over, far and near, picking up the feathers that the geese had dropped, gathering the wool from the bushes where the sheep had scratched, meanwhile building castles in the air.

And when the summer came each year and the birds mated again, John in the trysting place asked Joanna when the day should be, and every year for ten long years Joanna said: "Not yet; I am not ready yet." But at last, in the midst of the loneliness of Valley Shut-In, a roof was seen and then a little later in the dusk of a midsummer evening, when the whip-poor-will was singing, by the light of a midsummer moon and the glimmer of myriads of fireflies, Joanna and John came down the hill, through the path that was shaded by trees, and the light of a home gleamed across the valley and made its loneliness flee away.

John had chopped the trees that made the beams, had built the huge brick chimney, had placed the glass in the little windows, and dragged from the ledge a stone for the doorway. Joanna had filled the shelves of the cupboard with linen and wool and the beds with feathers gathered in many ways. She had planted ferns and flowers around the doorway and trained a growing woodbine across the little porch. John had fashioned many a piece of homely furniture, a cherry table, a chair of gnarled tree trunks, a chest and a settle for the fireplace, and shingle scoops for dipping meal from the bin and wooden spoons for Joanna's use. And when they began their life together a pair of wrens built a nest in the doorway where the woodbine grew.

For one short year they lived with the spirits of love and content in happy Valley Shut-In, but when the suns and shadows of that short year had passed, in the midst of the budding of the leaves and flowers, the mating of the birds and the death of a dearer hope, Joanna slept the sleep that knows no waking and John roamed alone in a wider valley.

The latch-string was never pulled in the door of Desolate Cottage, and the wrens flew away never to return.

The thrushes still sing of love in the forest, the whip-poor-will still calls by the river, the clouds float over the valley, the waters tell their story, but only the winds from the mountain side ever rocked the cradle in Desolate Cottage of Valley Shut-In.—Springfield (Mass.) Republican.

A Common Lack.

Unsuccessful Statesman — I don't seem to get along very well. What is it I lack?

His Wife—Humor.

"Humor! Huh! Suppose I had a keen sense of the ridiculous, what good would that do?"

"You would see your own shortcomings."—N. Y. Weekly.

Ruinous Competition.

Rosenbaum (reading Bradstreet's)—Eighty-seven failures last week in New York.

Cohen (aghast)—Mein Gott! such competition oz dot vill kill bizniss endirely.—Judge.

Popular Science

GROWTH OF ROCKS.

Some Well-Authenticated Instances in Which Real Progress Has Been Noticed.

Is it indeed true that rocks grow in the sea? Are there reefs in course of rapid formation? A circular recently issued by the minister of marine calls attention to unknown rocks along the seacoast and offers premiums to fishermen who discover rocks not shown by the charts. An inhabitant of Biarritz writes to Cosmos: "What is taking place at Biarritz is probably occurring along other rocky shores, and may well explain the deficiencies of our charts. Submarine rocks grow, and in the course of a few years a reef may be found where there was none when the chart was prepared. When I was a child, some 50 years ago, the rock lying furthest west in the belt of rocks surrounding our promontory hardly showed at lowest tide. An old fisherman told me that when he was ten years old he was on a Biarritz boat near this rock. His master showed him the rock then covered by several feet of water, saying: 'Child, if you live to be 60 years old you will see this rock out of water.'

"To-day the rock which, in the childhood of the old fisherman, was covered with water, and in my childhood was hardly uncovered at low water, is 200 meters above the water.

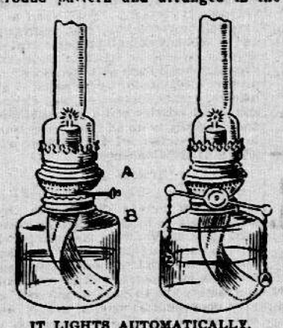
"A more recent fact. Fifteen years ago a fisherman perceived at a distance of 200 meters from the rock just mentioned, beyond the belt that protects us, a new rock, which was beginning to 'grow.' To-day this rock, which was not in existence 25 years ago, shows itself at high tide. It is at a spot where the charts indicate ten meters of water at lowest tide, and endangers navigation."

Evidently our charts are not revised often enough. If rocks "grow," as claims the correspondent of Cosmos, revision should be made every ten years. But do they grow? There is no doubt that the seacoast rises and sinks. There is a pronounced see-saw movement along the Atlantic shores, but is it sufficient to cause rocks to grow out of the water in half a century? The question is interesting, illusion is easy, but indifference would be criminal in a matter so dangerous to navigation as submarine rocks.—Current Literature.

NOVEL KEROSENE LAMP.

It Can Be Kept Lighted Day and Night at an Expense of Two Cents for 24 Hours.

A Saxon lamp manufacturing concern has introduced a novelty which is interesting to the numerous households where kerosene is the only method of lighting. A kerosene lamp has been constructed in the center of which there is a small wick burning constantly at the expense of about two cents in 24 hours. The main wick is of the round pattern and arranged in the



IT LIGHTS AUTOMATICALLY.

ordinary way, the small wick projecting a little above the round one. The wicks can be raised or lowered independently of each other, the adjusting screw for the little wick being placed within the one of the larger wick. This arrangement will be particularly welcome where the lamp is only used temporarily or where it is used as a night lamp. It is also made with a lever and chain arrangement, where it hangs from the ceiling at a height which makes it difficult to reach. When the small wick is once lighted all that is necessary to light the larger flame is to turn up the larger wick; this will light without the use of a match within half a minute or less. When the large flame is turned out the smaller flame continues to burn.

Some Causes of Insomnia.

An extended study of the phenomena of insomnia by De Menaceine, a Russian authority in medicine, brings him to the conclusion that it is characteristic of persons who blush, laugh, weep readily, and whose pulse is apt to quicken upon the slightest provocation. Loss of sleep, however, he admits most frequently results from overwork of either mind or body; overstrain of either kind will dilate the blood vessels of the brain, and eventually paralyze them, extreme cold producing the same results. Experiments also show that exercise of the emotions causes a rush of blood to the brain, and sleeplessness, if occurring near bedtime. There is a common theory that sleep is required in proportion to the scarcity of red corpuscles in the blood, and thus all persons do not correspond in their need of sleep, and many authorities agree that the need of sleep depends upon the strength of consciousness.

Queer Habits of Insects.

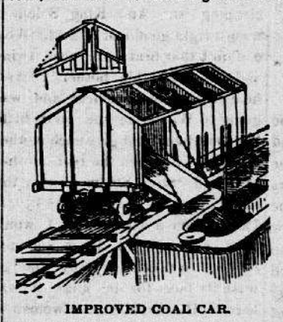
The fact has recently been ascertained that male butterflies and moths are much more given to drinking than the females, and that the habit is indulged in to the greatest extent when the latter are away laying their eggs. The females come to sugar, over-ripe fruit and other food equally with the males, but the latter alone seem to be attracted by pure water. That the males drink more than is necessary has been shown beyond question, and certain moths have been observed almost motionless for over an hour engaged in sucking up and discharging moisture almost continuously.

IMPROVED COAL CAR.

An Entirely New Way of Supplying Locomotive Tenders with Necessary Fuel.

At regular intervals along their lines, the various railway companies have established coaling stations for their locomotives, to which stations coal is conveyed in cars and unloaded. When coaling an engine at these stations large iron buckets are loaded by hand, hoisted by a crane and then lowered into the tender. The expense and labor incurred in this process are considerable, and the coal itself is often wasted by this repeated handling. It is the purpose of an invention recently patented to overcome these difficulties.

The invention in question consists in dividing a car into a series of pockets having sloping bottoms discharging toward the outer sides of the car. These pockets are closed by doors or chutes which can be raised or lowered, and used to discharge the coal



IMPROVED COAL CAR.

into the locomotive tender. The partitions forming the pockets are made double, with a space between the parts to receive the sides of the doors or chutes. When closed, the doors are locked in place, each by a catch comprising a slide held in engagement with a staple by means of a spring. A rope attached to the lower part of the slide permits the doors to be readily unlocked. The doors are raised and lowered by ropes carried over pulleys through the space in the double partitions, and up on the under side of the footboard. Counterweights are attached to the ropes, and move vertically in a longitudinal well or chamber, as indicated in the cross section. In using the car an elevated track is provided running parallel with that occupied by the locomotive. When the engineer desires to replenish his coal supply, he runs alongside of the elevated track with the tender of his engine beneath one of the pockets in the car. The catch of the door or chute being then released by pulling upon the rope, the door falls and the contents of the pocket are discharged into the tender. Locomotives can in this manner be coaled from both sides of the elevated track without causing any delay and without incurring any great expense.—Scientific American.

TO MARK STEEL TOOLS.

Receipt Which Will Do Better Work Than Acid, and Costs But a Trifle to Fill.

A correspondent of one of the technical monthlies says: "As there have been some questions asked about marking tools with acid I inclose a receipt which will mark any kind of tools, and which will not burn the hands or spoil anything except metal, while doing the work better than any acid I ever used. It can also be made at about one-tenth of the cost of the acid. I bought this receipt of a chemist:

"Take 16 ounces of distilled water and in it dissolve the following: Four ounces sulphate copper, four ounces chloride soda (common salt), one dram sulphate zinc and one-half dram sulphate alum. After it is dissolved it will be ready for use. Take the tool that you wish to mark and cover the place to be marked with a coating of soap (any good soap will do). Then write the name, marking with a pencil or other sharp instrument, and cover the place with the solution, or, rather, fill the marks made by the pencil, using the fingers, if you want to. Let stand for a little while, and when the name gets copper-colored wet and rub off. The soap is simply rubbed on the tool until there is a good coating. The engraving solution needs to be on the tool only about one or two minutes."

Shadow of the Earth.

The earth has a shadow, but few ever see it except in eclipses of the moon, or else few recognize it when they see it. Nevertheless, many of us have noticed on the fine, cloudless evenings in the summer shortly before sunset a rosy or pink arc on the horizon opposite the sun, with a bluish gray segment under it. As the sun sinks the arc rises until it attains the zenith and even passes it. This is the shadow of the earth.

Rope Used as a Tire.

On returning recently from the shore Mr. H. L. Munson had his front tire cut nearly in two when he still had six miles to ride. On looking about he found some 1½-inch ship's cable and some tarred twine. After securely fastening the cable to his rim by means of the twine he was able to ride home "with a nonpuncturable tire."

Just a Joke.

"Say, pa," asked the little son of a railway conductor, "what's an ex-chequer?"

"An ex-checker!" exclaimed the conductor. "Why that must be a retired baggageman."—Cincinnati Enquirer.

Medical Item.

The Doctor—It is easy to tell just what a man's worth as soon as he opens his mouth.

The Patient—I suppose that is why you always look at a man's tongue the first thing.—Yonkers Statesman.

What He Was After.

"I believe this is a through train?" said the road agent.

"It is," replied the conductor.

"Then I will proceed to go through it," announced the polite robber.—Philadelphia North American.

Room for Doubt.

Dewtell—"The Lord giveth and the Lord taketh away."

Downtrod (recently widowed)—Oh, I don't know about the "giveth."—N. Y. Journal.

FARMER AND PLANTER.

HOW TO SECURE GOOD ROADS.

A Leading Railroad Officer Suggests that They Be Built by the National Government.

Col. J. B. Killebrew, a leading railroad officer of Nashville, long and intimately identified with the development of the south, has in the Southern Farm Magazine, of Baltimore, for November, an interview on good roads, in whish he takes a radical position likely to attract very general discussion and to arouse widespread interest among all classes, and especially among farmers. Col. Killebrew says:

"The power given in the constitution to build post roads and post offices may be construed as to include all roads made for carrying mails, and that under this provision it would be proper for the national government to undertake a very comprehensive system of road-building. The advantages of good roads would be of such inestimable value to the people at large, and especially to the great agricultural interests—the fountain of our national wealth—that the subject demands the favorable consideration of the whole country. The benefits resulting from the adoption by the government of some general plan for building and improving roads would in every respect be beneficial to the people and to the country. It would furnish employment to all the idle labor of the country, and this labor would not be in competition with the labor now employed in industrial and agricultural pursuits. In fact, it would relieve the congestion in the labor market for some years to come and create work that would be felt in every avenue of business. While employed in making better roads this labor would benefit every class in every community without injuring any.

"The building of good roads would relieve the congestion of population in cities by making life in the country more pleasant and attractive. The greatest drawback to country life is the inability to move with ease from point to point, owing to the muddy roads, which are sometimes impassable for five or six months in the year, making such a life confined and barren of all social enjoyment, placing the country people in many sections at such a great disadvantage that ambition is crushed, energies are weakened, industry paralyzed, and ignorance is increasing rather than diminishing—at least in some districts. This state of things, for which the people of the country districts are not responsible, drives thousands to the cities, where they often suffer privation and poverty, which lead them into temptation and frequently into crime.

"Good roads, wherever built, would increase the value of property throughout the country. They would make the markets more accessible and in every way add to the profit as well as to the enjoyment of country life, and thus to the moral and material advancement of the nation.

"Suppose the general government should appropriate every year an amount equal to that now expended for pensions, say $150,000,000, for the building and improvement of the roads of the country. This would give, in round numbers, $2 per capita for the entire population of the United States. A county covering, say, 500 square miles, with a population 25,000, would receive annually for the building of roads $50,000. This continued for ten years would grade, macadamize and gravel every road in an average county of this area.

"Who would begrudge the expenditure after such roads had been built? Who would not say that the expenditure was a wise one, elevating in its influence and adding immensely to the tangible wealth of the country? We are now paying more than this amount on the expenditure of the Spanish war. Is their a single person who would not receive a benefit from good roads far greater in amount than he now pays in war taxes? Put it in another way: Is there a single person now using the highways of the country, or whose business is in any way affected by the traffic on the highways of the country (and this touches every man and woman in the United States), who would not be willing to pay as much for good roads as he now pays for the war with Spain?

"The revenue bill passed by the last session of congress in order to raise funds for carrying on the war promises to yield a much larger income than will be needed for war expenses. Broadly stated, it may be said that the people of the country do not feel these war taxes, and if this bill should be continued in effect and the surplus revenue to the extent of, say, $150,000,000 a year, be voted to the improvement of roads throughout the country, the agricultural interests of every section would be revolutionized, farm life would become popular, and a vast upward movement would be given to every phase and feature of the business, social and educational life of America."

In a personal letter to the Southern Farm Magazine bearing on this subject, Col. Killebrew adds:

"Why should the states and counties of this country be called upon to build roads to be used by the United States government in the transportation of mails and army supplies?

"Why is it not as much the duty of the general government to provide such roads as it is to provide post-office buildings or other public buildings?

"It occurs to me that the people of the United States have fallen into a slovenly way of thinking about the duty of the government in this particular. No good reason can be assigned why the government should not build roads that may not be assigned why the state and county should not build roads. Equity would demand that every one using the roads should contribute to their maintenance. It took many centuries for the people of England to learn that justice demanded that the government should construct the principal highways in the country. It was the grossest injustice to impose this burden upon the country people living along the highways, and this injustice, so keenly felt by them, produced rebellion in many districts before the government was aroused to the performance of its duty in this particular. It was strange that while the commerce between the great cities of England was a hundred times greater on the roads connecting these cities than the country traffic, yet the country people were forced to build roads and keep them in repair."

The Southern Farm Magazine, in publishing this article, recognizes the fact that it is likely to provoke very general discussion, much opposition and much commendation, and it has invited a general discussion of the subject as to its constitutionality, as well as regards the wisdom of such an innovation, appreciating the fact that the value of good roads has not in any way been overstated by Col. Kellebrew, and the farmers would be the ones most directly benefited.

How to Begin Right.

Fowls are more prolific than cattle and reach maturity in a year. An investment will lead to the establishment which enables the poultryman to arrive at a paying basis sooner than by any other method. When one has but a small capital, therefore, the desire to make a profit from poultry in a year should not be entertained. A small investment will lead to the establishment of an industry that will give satisfactory results in a few years, if the poultryman has the patience to wait until he can get established by the increase of his flock rather than by capital. Every additional fowl to the flock gained by increase is so much gain of capital, and what can not be accomplished at once may be done in a longer time. The beginner who desires to enter the poultry business must, therefore, start at it with a view of building himself up, and he must not expect any returns until he has reached a point at which he can derive a sufficient profit to afford him a comfortable living. Many who have gone into the poultry business and made no profit the first year ceased operations, when in fact they had undergone a year's experience, and should have continued. The object should be to take plenty of time, get ready and increase only to the extent of the capital.—Farm and Fireside.

About Keeping Sweet Potatoes.

We have no reason, so far, to change the opinion expressed almost every fall for many years, that whether sweet potatoes keep well or not depends more on the soil on which they are grown, or the condition of the potatoes when dug, than upon the manner in which they are stored, except that it is necessary to protect them from severe cold. We have put them in carefully-constructed bins, and had them rot, while those that rolled into the surrounding ditch lay in mud and water until Christmas without rotting. We have never been able to keep sweet potatoes grown on ground where potatoes were grown the year before, or two years before, and afterward rotted. We would not give ten cents per bushel for potatoes thus grown, except for immediate consumption. It is our opinion that the germs of the prevailing sweet potato rots are in the soil and affect the potatoes before they are dug, and that such potatoes will rot more or less no matter how carefully they are handled and stored. Our experiment stations, we believe, should experiment in this direction, and determine the facts.—Farm and Ranch.

Nitrogen as a Fertilizer.

Sir Wm. Crooks, an English agricultural chemist, after estimating all the available sources of nitrogen for fertilizing purposes, and the amount consumed by bread crops, concludes that the time will soon come when scientists must invent a process by which the great storehouse of nitrogen, the atmosphere, may be made to supply the deficit. Leguminous crops are, up to this time, the only practical method of drawing the indispensable requisite from the air. Electric currents convert nitrogen into available nitrous and nitric acids, but hitherto has proven impracticable on account of cost. Prof. Crooks thinks the solution of the problem will be found in the powers of Niagara, which he says can be made to generate enough electricity to produce 12,000,000 tons of nitrate of soda annually. The rural New Yorker suggests, in this connection, that while waiting for this development of Niagara falls, we crowd all the nitrogen possible into the soil by means of clover, cow peas, etc.

Not Very Encouraging for Cotton Growers

Mr. A. J. Landauer, of Liverpool, one of the best known men in the cotton business, who annually makes a personal investigation of the American cotton crop, prior to November 1, has been in Galveston lately and has given to the press the results of his 1898 examination of the cotton outlook. He contends that a commercial crop of 11,000,000 bales is a conservative estimate. He considers that 3,500,000 bales for Texas is a very low estimate, and thinks 4,000,000 will be nearer the mark. Mr. Landauer claims that he has never overestimated the yield. The gentleman also states that spinners are not in a condition to buy heavily for future use—that their capacity is even somewhat less than it was last year. Mr. Landauer does not give farmers much encouragement for planting largely next year.—Farm and Ranch.

HERE AND THERE.

—The only safe and economical way of procuring a good herd of cows is by raising our choice heifer calves. To buy them is often uncertain business.

—A boar should not be used for service until he is fully eight months old, and only when a steady growth has been kept up. When this is done a boar at eight months will be fairly well matured.

—A sow can not make a litter of pigs and grow at the same time, and, as a rule, she should not breed until one year old. This may not hold good with our earlier maturing breeds, but breeding too young injures their stamina.

—Think twice before driving the wagon load with corn into the hog yard and dumping the contents on the ground for a day or two's feeding. We would not treat our cattle in this way. If we did we would lose them just as we do our hogs.

If not fitted with a heating apparatus, remember that water freshly pumped from a well is several degrees warmer than that standing in tanks or ponds, and will be an advantage to turn the stock out and pump water for them every time.

THE FORGOTTEN DEAD

There Is No Reliable Roster of Confederate Soldiers.

Bill Arp Calls on the Surviving Veterans to Take Action—Dr. Catching's Book of Confederate Memories.

Thirty years is the average life of a generation. Within that time there is almost an entire change in the population of a town or city or community. Death plays the surest hand. Removals come next, and of the rest the children have grown to be men and women, and they are as good as new, for we old people know them not, neither do they know us. Often do young people say to me: "Why, I am a grandchild of your old friend." Yes, a friend who has perhaps been dead for a score of years, and I had almost forgotten that he ever lived. I lived in Rome 27 years, but now I am a stranger in that city. I was ruminating about this because I happened to ask Maj. Foute yesterday how many of his comrades he remembered. He shook his empty sleeve and pondered. "Thirty-five years ago," he said, "I could call the roll of a hundred men in my company, but now I do not believe I could name over 20 without a strain of mind and memory. Most of them are dead, and you know that when a man, a common man, dies he seems to drop out of thought or recollection. Only great men or notable men or heroes are remembered long."

How, then, is a catalogue or list or roster of our confederate soldiers to be obtained. The legislature passed a law providing that the ordinaries of each county should make a list for his county and get information from any source possible, and I suppose they are doing this, but of course it will be imperfect and incomplete. Col. Avery exhausted all sources at his command in 1880 and tabulated only the officers. Of this list he says: "It is admittedly incomplete and painfully imperfect."

A generation changes in 30 years, but our regiments and companies changed so radically in four years that they can hardly be identified even by their surviving comrades. I find in Col. Avery's table that company A, First Georgia regulars, that went into service commanded by Capt. H. D. D. Twiggs, had 12 captains. Almost every company had two or more captains. The Fourteenth regiment had four colonels, five lieutenant colonels, four majors and 20 captains. The Twenty-second regiment had 24 captains; the Twenty-sixth and 27 captains; the Eighth cavalry had 31, and the Ninth had 36. Of course the privates suffered more frequent changes than the officers and the men are few who went in at the beginning of the war and came out at its close. But even those few cannot remember all the changes—the killed in battle, the dead from other causes, the discharged, the transfers to other companies and the recruits that continually came to fill up the ranks. Then there were some few deserters and thousands of prisoners taken, many of whom died in prison and were forgotten by their comrades. Georgia sent to the field 66 regiments and 25 battalions of infantry, 11 regiments and 30 battalions of cavalry and 26 battalions of artillery. Of all those who served as volunteers during the first two years it is estimated that not over 20 per cent. are living. Only five regiments brought back the same colonels they took out.

No; the lists are lost and will never be made complete, but much can yet be done to approximate them, and it should be done quickly and put in book or pamphlet form and distributed. I was ruminating about this because that great-hearted woman, Mrs. Elizabeth Gabbett, of Atlanta, the widow of a confederate who fell in battle, has volunteered to execute the resolution of the United Daughters of the Confederacy to present badges or crosses of honor to the veterans or their widows or families, and this good woman is now perplexed to find them. Well, she may be. Hardly a week passes that I do not receive letters from Georgia soldiers or their widows written from the western states and wanting to know about our pension laws. Even their kindred here in Georgia do not know where they are, for they keep moving, and leave no sign behind. But Mrs. Gabbett must not be discouraged, for there are a few thousand within her reach, and her work will be grateful to them.

Then let us be up and doing before it is too late. Let the veterans consider it and take action that will result in systematic methods. The time will come, in fact, it has already come, when the child will feel proud that its father or grandfather or uncle, was a confederate soldier. As the years roll on the halo grows brighter. It is like the revolution of 1776. We have preserved in our family a Boston newspaper of that year. It is in mourning, and across the top are little cuts of coffins—seventeen black coffins, with the names under them of those who fell at Lexington. My great-grandfather's name is there, and I am proud of it, and we veterans believe that the cause for which we fought was just as holy as that. This is our faith.

And now I am pleased to see that my friend Dr. Catching, of Atlanta, has been inspired to write a book of confederate memories—not his own memories, but those of other people—veterans and their wives or widows. It is not to be the lamentations of Jeremiah, but an entertaining and instructive compendium of how we lived and got along during the latter part of the war, when the blockade was on us, and we had eaten up and worn out everything in all this southern land. He wants everybody who was in the war and has a story to tell that is funny or fantastic or pathetic or mixed, to write it down and send it to him to be put in the book. My wife says she went through enough to make a book of her own, and our good neighbor, Mrs. Akin, has long since told us enough to make two or three books. But of course they must make selections and mix up smiles with tears. Such a book would be a treasure in the family and would keep the children quiet of a winter night, as grandpa or grandma read to them these stories of the war. I tell you my young friends of this generation, you don't know anything about the poverty of our people in 1864 and 1865. It was just awful to experience, and it was sublime to witness the heroism with which our wives and mothers and sisters endured it. It makes me smile now to recall the shabby genteel that hung around female garments and children's clothes and cracked-up tableware and patched carpets. Why, there wasn't a circus nor a monkey show nor a pound of sure enough coffee nor a lump of sugar nor a stick of candy nor any store clothes in all the confederacy; no, not even a dose of castor oil to follow up the green apples that the boys had overloaded their stomachs with. Talk about your tan shoes! Why, we didn't have any other sort. Old Father Jenks made shoes for my boys and for my wife, too, out of calf skins that had been tanned in a tub, and the calf's hair was sticking out in patches, but they were good, if not pretty. I never see a pair of red shoes now but they remind me of the war, and of poverty. I wouldn't wear them. I made a boat in January, 1865, that didn't have a nail in it, for there were no nails. I bored holes with a brace and bit and pegged it together with wooden pins, and it never leaked a drop. DeFoe wrote Robinson Crusoe, and Dr. Goulding wrote the Young Marooners, and they are excellent books, but authors had to strain their minds to make fiction read like facts. But Dr. Catching won't have to strain anything to make facts read like fiction. So let us all send him a sketch from our own experience and I have no doubt he will give us a delightful book. It is to be a labor of love with him, for he says he has no idea that there is any money in it. He has contemplated such a book for a long time, and his heart is set out on it. Not long ago Dr. Joe Jacobs gave us a most delightful sketch about how the doctors and druggists had to find substitutes for medicine during those blockade days when a pound of opium sold for $5,000 in confederate money.—Bill Arp, in Atlanta Constitution.

SUCCESSFUL HOUSEWIVES.

They Are Not Alone Orderly But Possess Taste in Making the Home Attractive.

In these modern days we are apt to hear of woman's success in many new fields, but we hear little said of her success in securing order, comfort and loveliness of home. There are just as many home-loving women as there ever were, but the blessed old-time duty of caring for home and the loved ones of home does not call them into prominence. Ruskin says the best women are recognized "chiefly by the happiness of their husbands and the nobleness of their children. They are only to be divined, not discerned, by the stranger."

It is a matter of interest to the majority of women to know the greatest gift a housewife can possess. It is not enough that she be orderly, for we all know orderly women, who are far from successful housekeepers, whose systematically ordered houses are as barren and dull as penal institutions. The successful housekeeper must possess taste to make her house attractive, and above all she must possess the gift of making home a place of comfort, where those who dwell therein shall rest in peace, secure "not only from all injury, but from all terror, doubt and division." In order to do this there must be frugality. The household must live within its means. Want of frugality is the rock on which a great many households are wrecked. Frugality does not mean niggardliness. It only means using that which you possess wisely and prudently. It is necessary for the frugal housekeeper to be strictly orderly in order to use what she has to use systematically and in the manner which will give the family the greatest amount of comfort. To do this she must be a good cook and use provisions in the wisest manner. She must understand how cloth should be cut to give the best wear and what materials are best to buy for the various purposes of the household. Our grandmothers understood all these matters, but in those simple, homespun days it required far less extensive knowledge to purchase the supplies of a family than to-day. To-day the shelves of the merchant are overflowing with all manner of showy goods which possess little durability, and it requires knowledge and sometimes considerable strength of purpose to pass such goods by and purchase the plain material which will give practical value when put to the wearing test. It is easy to get material that is durable and desirable to-day at a medium price. There never was a time when such excellent goods were made by the American manufacturer.

It requires a great many sterling qualities of heart and mind and discriminating knowledge to be a successful housewife to-day. She who does this work well and lives up to the highest ideal of her duty is a woman to be highly honored among all women.—N. Y. Tribune.

According to the Evidence.

"Well, that's what I call an appropriate verdict," remarked Jilson the other evening, as he threw down his paper.

"What is it?" asked his wife.

"Why," he replied, "you know the defaulting cashier of the Steenth national bank committed suicide when the shortage was discovered?"

"Yes, I remember," said Mrs. J——, "but what of the verdict?"

"This morning," answered Jilson, "the coroner's jury brought in a verdict of death from exposure."—Chicago Daily News.

The Combination Too Strong.

"Your mother agrees with me exactly, Johnny," said his father, proceeding to trim the twigs from a tough switch. "She thinks, with me, that you need a good trouncing, and you are going to get it, my son."

"Yes," bitterly exclaimed Johnny, "You and maw always agrees when it comes to lickin' me. You and maw's the whole thing. I don't never have no show. This fam'ly's run by a (rust!"—Chicago Tribune.

The Anarchist Is Right.

Mrs. Binks—A noted anarchist of Chicago says that people will wake up some fine morning, and find that Russell Sage has lost every dollar.

Mr Binks—That's so, every word of it.

"My goodness! When will it be, do you think?"

"When he dies."—N. Y. Weekly.

New Designation.

"Give me coffee and Hobsons," said the customer to the restaurant waiter.

"What are Hobsons?"

"Suckers, of course."—N. Y. Journal.