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Select Poetry.

THE OLD FARM HOME.

If you've been a happy rover
Through the fields of fragrant clover,
When life is all a simple round of bliss,
When at eve the sun is sinking,
And the stars are faintly winking,
You can call to mind a picture such at this:

Hark! The cows are homeward roaming
Through the woodland pasture's gloaming;
I can hear them gently lowing through the dells,
And from out the bosky dingle
Comes the softly tangled jingle
And the oft repeated echo of the bells.

Strange how memory will fling her
Arms about some scenes we bring her,
And the fleeting years but make them stronger grow;
Though I wander far and sadly
From that dear old home, how gladly
I recall the cherished scenes of long ago.

Hark! The cows are homeward roaming
Through the woodland pasture's gloaming;
I can hear them gently lowing through the dells,
And from out the bosky dingle
Comes the softly tangled jingle
And the oft repeated echo of the bells.

Chicago Evening Post.

Select Story.

WON BY LOVE.

"Yes, I am going away," said Cyril Danvers, switching the heads off the white meadow daises as he walked along, and glancing askance at the graceful, girlish figure and sweet, downcast face that kept pace so modestly and silently beside him. "Away from this out-of-the-way country hole, where the people understand and care for nothing but to 'grub' for existence in the soil, like moles, and affect to despise, or regard with impudent curiosity, everyone whose instincts and intuitions are higher and nobler than their own. I feel that London is the only place for me. My talents and abilities are lost here; no one comprehends, no one appreciates me, except yourself, little Daisy," the speaker added more graciously, "and my dear mother."

Little Daisy, as her companion had called her, made no answer in words; her only reply was a glance, timid and loving, from a pair of wistful, soft blue eyes, that sank modestly the instant they met Cyril's.

He reached out, and took her soft, little sunburnt hand within his own.

"You won't forget me, little sweetheart. You and my mother will pray for me at home, while I work hard in the profession that will one day bring me fame and fortune. I am sure of that!" he added, lifting his head proudly. "And you know that sketch that I made of you when first you came? Well, I shall make it the central figure for the great picture that is to make my fame; a Marguerite or a Madonna probably. And when I am rich I shall come back and marry you, and show the world the original as my own sweet wife. Will you wait for me so long, little Daisy?"

"The young girl raised her innocent eyes to his, and shook her head, with a blush and a suppressed sigh.

"It would be no use if I did," she answered, simply. "You will have changed your mind, I know; you will not want me then."

But Cyril protested earnestly against that.

"You are the dearest little thing in the world!" he said; "and you know I love you. Promise, Daisy, dear, to wait for me."

And so she promised him; wondering, in her innocent humility, that he—so handsome and so gifted, and some day to be so great—should choose a little country maiden for his love, but having no doubts, in her own simple truth, of his sincerity.

"I will read and study hard when you are away," she said, between her smiles and tears; so that, when the day you speak of comes, I shall not shame you."

And he told her, half in earnest and quite truthfully, that "she could never shame him; that her innocence, and truth, and beauty would grace the highest station. And as he clasped her in his arms, and kissed her sweet, shy lips, and realized that she loved him, something deeper and more serious than a mere light fancy awoke in his vain, ambitious soul, and for the moment he felt that the faith of this pure young heart was a better treasure than wealth or fame could bring him.

But being a man, he put the thought away. For—"Love is of man's life a thing apart."

"She is a sweet little thing!" he thought contentedly, "and when my position in the world is assured I will come back and marry her. No man could have a lovelier or purer little wife!"

But the world, with its flatteries and disappointments, its promises, delusions, and snares, soon effaced the light impression poor Daisy had made upon a light and fickle heart; and he was annoyed when his mother wrote him, three years later:

"Our Daisy," as you used to call her, is nineteen now. Her aunt has left her a little fortune, and she has welcomed it for your sake, Cyril, to be of some use to you. You cannot think how the poor child has studied to improve herself, for the same reason, or how faithfully she clings to her love for you, and her belief in your solemn engagement. My son, if you do not really purpose making her your wife, it would be more honorable to ask her to release you. It is a crime to trifle with a trusting heart, and such a one is Daisy's."

When this letter reached him he was quite impatient and vexed, and inveighed bitterly against "the folly of young girls who take a word of flattery in earnest!"

"For I have no recollection of anything like a serious engagement," he wrote, "although, of course, if Daisy claims that such was the case, I shall, if necessary, sacrifice myself to a sense of honor. But I believe my cousin is too just to require this, and too sensible to believe that a man and woman could marry happily upon the mere remnant of a boy-and-girl flirtation. It is not that any other love has filled my heart. I have never really loved. My art is my one love, and my life's one aim and hope is—Ambition."

And to himself he said:

"Marry, indeed! Tie myself down with a wife and family, to be a clog upon my best endeavors! No, indeed! And for Daisy, too—a poor, little simple country girl, as sweet and insipid as the flower I named her after! Why, look at her picture here—a veritable Marguerite, with innocent, baby eyes, and a veil of flaxen hair—fit for a poem or a picture, indeed, but not for a wife—*my* wife! Will she hold me bound? Have I ruined my whole career by a moment of thoughtless folly?"

Not if "the ruin of his whole career" meant marrying Daisy.

The very next post brought a letter that set him free. It contained but few words, simple and to the point, and was quite prettily written. He turned it over and over curiously, his first feeling of self-congratulation giving away to an odd sense of annoyance and loss.

"Cool enough, certainly. She couldn't have been so fond of me as mother thought. And nicely written. She must have improved a good deal." He glanced at the picture again. "She was a lovely creature in those days, certainly, and with proper training, and culture, and dress, and all that, might have developed into a beauty. But pshaw! don't I know how these country girls grow up? Freckled and fanned, coarse and awkward, tow-haired, ignorant, and narrow-minded. I am well out of a troublesome scrape, and have good reason to be thankful."

He thought so in good earnest when, in the following winter, he met at last the woman whom he called "his Fate;" at sight of her the light and ambitious heart—that Daisy's simple loveliness had touched, indeed, but never really won—was stirred to its depths, and awoke to a real passion.

"They tell me I am like your picture of Marguerite," said Miss Armytage to him, with her calm and gracious smile. "I should like to see it, and judge for myself, if you have no objection."

He had an objection, though he dared not say so,—it was such a fanciful and idle one. In his soul he shrank from allowing the woman whom he loved to look upon the portrait of the girl who had loved him, and whose trust he had betrayed.

For he could better appreciate now, what he had made Daisy suffer—now that his own heart was awake.

"If she loved me, as I love this queen of hearts," he thought, "what must my infidelity have cost her? Poor little, innocent child! Heaven grant that this woman, who holds my heart in her hands, may not fling it away as I did Daisy's!"

And mentally he vowed—standing beside his "Fate," and gazing with her on the "Margudrite"—to seek out the poor crushed flower he had worn so lightly, and ask her pardon, and be to her always a true friend and brother.

Ida Armytage, the beauty and heiress, stood long before the picture without a word. It may have been the memory of Marguerite's sad story, or it may have been the pure and simple loveliness of the flower-like face, that touched her heart—but, as she gazed, her own face grew clouded, and a look of pain and trouble grew in her deep violet eyes.

Then suddenly she turned to Cyril. She was stately always, but she seemed imperious now.

"What was her name?" she asked him.

For his life he could not have refused to answer; could not—even to win her—deceive the woman he adored.

"I called her 'Daisy,'" he said humbly. "It was a pet name only, she was a sort of distant cousin—I do not remember her real name—'Daisy Vane.'"

"And did you love her—I know that she loved you—no need to tell me that; I read it in those innocent eyes. Did you love her, Cyril Danvers?"

Then he told her all. His vanity, his falsehood, his awaking to real love, his penitence for the wrong he had done Daisy.

"I never knew how great it was till I loved you!" he cried. "For until then I never knew what love was! Oh, Ida, you are dearer to me than my life! I have no wish to live unless I win you!"

"And so feels Daisy still for you!" she cried, with her lovely color mantling high, and her violet eyes growing deep and dark with emotion; "or so she did feel a few months ago. I knew what her sorrow was. It was to win you back to her that first sought to meet and know you!"

Face to face they stood, looking into each other's eyes,—the woman flushed and proud, the man pale as death.

"You have deceived me, then—as I did Daisy!" he groaned; trifled with my true heart—as I did with hers! Well," he turned away and covered his face with his hands, "I am justly punished!"

She laid her soft white hand upon his arm and looked up into his face with a smile like that of Marguerite herself. The proud, imperious air was gone; she was gentle, pleading, tender now as Daisy could have been.

"No!" she said. "I have not trifled or deceived, for I love you Cyril! Nay—" for he would have caught her in his arms, "not till you are free! You are Daisy's yet, unless she gives me to you; I hold it nothing that she gave you back your freedom when you asked it;—what could her pride do less? She is not to-day, the little simple girl you won; she is called beautiful, and she studied hard to be worthy of you, and had ample means, left to her by a relative. She is no more the simple child you cast away, but a proud woman, Cyril. But pride could not cure her love, and she grieved for you, and I vowed that I would bring you back. Let me keep my word. Come back with me to your mother's house, and to 'Daisy,' and let her decide our fate."

But he hesitated.

"If she should hold me bound," he said—"and I love you!"

But she smiled happily.

"She is too proud to hold you against your will," she added. "Will you come?"

"Anywhere—with you to lead!" he answered, passionately.

She held out her hand.

"I will lead you to your happiness," she said, quietly.

The evening sun bathed the landscape in crimson splendor as they drove up to the gate. How familiar was the scene!

"Those seem to be the very same meadow-daisies whose heads I switched off years ago," Cyril said; and then another memory came back and he broke off, sighing.

Mrs. Danvers came running out to meet them, and clasped her long-lost truant in her arms.

"Welcome home, my son!" she cried; then turning to Miss Armytage: "And Daisy, too! You two together! So you succeeded then, true heart, and won him back again!"

Cyril uttered a sudden cry.

"Daisy!" he cried. "*You*, Daisy? Oh!" And then swift comprehension flashed on his heart and brain. He turned, and caught her to his heart. Forgive me! Forgive me, my true love! I know you now—so changed and yet the same; my little cousin, my own sweet 'Daisy!'"

Curious Uses of Potatoes.

To sweeten new iron vessels boil potato parings in them.

To keep potatoes from sprouting scald with boiling water.

An excellent starch for fine linens and laces is made from grated potatoes.

Potato flour, so much used in French cookery, makes fine bread and extra pastry.

Old potatoes should be pared very thin Use a vegetable brush to remove the skins from new ones.

In selecting potatoes examine the eye. The smaller the eye the better the quality. Spotted potatoes should be rejected.

Water in which potatoes have been boiled will cleanse delicate-colored woolens or worsted goods and chintzes and calico.

Soiled silks are renovated by sponging with potato water and then rinsing in clear water. To a pound of grated potatoes use a pint of water.

Queen Victoria is reputed to be worth $45,000,000. She receives for the civil list annually from the nation the sum of $3,095,000, and once, some 40 years ago, a kindly disposed subject left her $1,250,000.

[redacted]

Mr. Poe—And it appears to have been filed January 28, 1888. Was that, in fact, the date?

"No, sir."

"What was the date?"

"November 18, 1889."

"Can you tell when he took the oath?"

"Yes; November, 18, 1889."

Mr. Carter—We object to any oral testimony as to his qualification.

Mr. Poe—From whom did you receive the bond and when?"

"From Mr. Archer, on the 18th of November, 1889."

"He qualified, and his bond was approved by the Governor on that day, yet it was dated January 28, 1888. What explanation can you make of that?"

"It was after the discovery that Mr. Archer had not filed a bond, and I told the Governor of it. Mr. Archer insisted that he had filed a bond, and he dilly-dallied about it for some time before I could see the Governor Mr. Archer insisted that I should fill out the bond as of January 28, 1888, the date when he ought to have qualified, and I was weak enough to fill it out that way. But I afterwards told the Governor of it, and he insisted that it should be properly dated. I changed the date on the text book, and forgot to change it on the bond. I first spoke to Mr. Archer about his bond on the train coming from Annapolis one afternoon. He insisted that I was mistaken, but I told him there was no evidence of it in the Governor's office, or in the office of the clerk of the Court of appeals. He first said it was in his office at Annapolis, and then in his office at Belair, and finally claimed to have found it in the latter place. After I had been foolish enough to date it incorrectly as he requested, it floated through my mind that I had done wrong. The words, 'Executive Department' and 'Bond approved,' on the bond were written by Mr. Robert Bowie, chief clerk in the treasurer's office; the name of Governor Jackson was written by the Governor himself, and the word, 'Governor,' was written by me (Mr. Le Compte). Mr. Archer said he was surprised the bond was not in place, but it made no difference, as he held over."

Mr. Carter—How long has the text book been in use in the executive department?

Mr. Le Compte—The first date is November 15, 1867, and the first qualification is that of Thomas F. J. Rider, clerk of the Circuit Court for Wicomico county.

Mr. Carter—Does it contain the names of all the treasurers from that time?

By examination, Mr. Le Compte said it did, except Mr. Gittings, who filled an unexpired term.

Mr. Carter—You, as secretary of state, and the Governor, as governor, would know in the interval that no oath had been taken, would you not?

Attorney General Whyte and Mr. Poe—We object.

Judge Fowler—What is your objection?

Attorney General Whyte—It is not material to this case. It is only opening up again the old question as to a lack of duty on the part of the governor.

Mr. Carter—We offer it as testimony.

Judge Fowler—The objection is sustained.

Mr. Carter—We reserve an exception.

Mr. Carter—The bond bears date January 27, 1888. On the fifth page I find this endorsement: "Executive Department, Annapolis, Md., January 28, 1888. Bond approved. Elihu E. Jackson." You said in your testimony in chief that the words "Executive Department" and "Bond Approved" were in Mr. Bowie's handwriting, and the words "Annapolis, Md., January 28, 1888" and "governor" yours, and that the governor's signature was his own. When the Governor signed, was it in your presence?

"Yes, sir."

"And all else that appeared above his signature was there when he signed it?

"Yes, sir."

"What day were the words 'Annapolis, Md., January 28, 1888,' and 'Governor' written?"

"November 18, 1889, the only day I ever saw the bond."

"At the same time that these words were written, the oath in the text book was filled up, as I understand?"

"Yes, sir."

"So that the oath was written that way when Mr. Archer took the oath?"

"No. That's the way I wrote it when I saw Mr. Archer."

"You changed it?"

"Yes, sir."

"The Governor at the same time signed the approval of the bond?"

"Yes, sir."

"You didn't call the Governor's attention to that date in the bond?"

"No, sir; I overlooked it."

"The Governor, then, did not look at the certificate?"

Attorney General Whyte—We object.

Mr. Carter—Well, I'll object. This is a cross-examination throughout and direct.

Attorney General Whyte—The fact that he signed it is all that is necessary.

Mr. Carter—Then the presumption is that he signed January 28, 1888.

Mr. Poe—As to the date of the approval, that was not an open question, because the defense have distinctly stated in their plea that it was approved November 18, 1889.

Mr. Carter—I reckon it's one thing what's in evidence and what's in a plea. If the learned counsel went into this matter in the examination in chief, I can do the same thing in cross-examination.

Mr. Poe—to prove what?

Mr. Carter—Just what you please.

[redacted]

I cannot say exactly. Some weeks probably."

HOW THE DISCOVERY WAS MADE.

"How did it come to be discovered that the bond had not been filed?"

"August 16, 1889, the Board of Public Works ordered the sale of some Cincinnati, Washington and Baltimore Railroad bonds belonging to the state. Some time after that some one came to Annapolis representing Mr. Gustavus Ober, and asked for a certificate of Mr. Archer's qualification, to be used in connection with the sale of these bonds. I gave the certificate. Some time after that something caused me to think about the matter, and, upon examination, I found that he had not qualified."

"Can't you fix how long it was after the certificate had been given by you that he was treasurer?"

"I haven't the slightest idea."

"Was it in September?"

"I think it must have been later than that."

"When was the sale of bonds made?"

"I don't know."

"You gave a certificate that he was treasurer and had qualified, without looking at the test-book?"

"Yes, sir. I did it because he had been in office so long it never occurred to me there could be any doubt about it."

"Do the certificates contain the date of qualification?"

"No, sir."

"If you did not look to see if he was duly qualified when you were asked for the certificate, what was it that caused you to do it afterwards?"

"That I cannot tell; but it came to me, and I looked."

"Is there nothing that will enable you to fix the time?"

"Nothing except that I mentioned it to Mr. Archer a few weeks prior to the 18th of November."

"When did you mention it to the Governor?"

"A few weeks after I did to Mr. Archer."

"When Mr. Archer brought you the bonds you say it was in the Governor's private office; was it then that he asked you to fill in the date January 28, 1888?"

"Yes, sir."

"When was it that you determined to change the date?"

"Mr. Archer went out and the Governor came in. I told him about it, and he said it must be changed. I changed the date before Mr. Archer came back."

HOW THE GOVERNOR SIGNED IT.

"Did you tell the Governor the wrong date was suggested to you by Mr. Archer?"

"Yes, sir."

"He signed the bond with the wrong date on it after you told him it was wrong, and that you thought it ought to be changed. As you had put in dates that would have recited a falsehood, didn't you call the attention of the Governor to the fact that it was false in the bond as well as in the test book?"

"I think I only called his attention to the transaction."

"And after his attention had been called he still signed it?"

"Yes, I think he did it on the faith of what I had told him, though."

"Can't you account for the fact that he looked at the date in the certificate, and not in the bond?"

"Knowing I had done it in one instance, I suppose he thought I had done it in both."

"But he did not examine the bond?"

"He scanned it."

"But the part that he did not scan was the few lines he ought to have scanned?"

"Yes, and I think my writing misled him."

Railroad Brevities.

It is figured that the United States has a mile of railroad for each 400 of population and each 22 miles of area, while the balance of the world has a mile for each 7,500 of population and 237 miles of area.

Kansas has more miles of railroad than all the New England states put together. She has 1,159 more miles than New York, more than Pennsylvania, Iowa or Texas. Kansas to-day has 8,754 miles of railroads. Illinois alone surpasses her with 9,000 miles.

The new Canadian Pacific railway bridge at Milford, Man., spanning the Souris river, has been opened for traffic. The immense bridge was completed in the marvelously short time of five weeks. The structure is 3,300 feet in length and is on an average 75 feet high.

There are many indications that before long the electric light will be the only luminant employed on railway trains. The Russian government has decided that all the carriages on the state railways shall be lighted by the electric light in the future.

Professor R. H. Thurston, of Cornell, declares in The Forum that it is mechanically practicable to attain a speed of a hundred miles an hour in railway travel. The only obstacle, he thinks, is a financial one—the public will not pay for the speed, and the companies won't supply it at a loss.

A Wooden Caterpillar.

One of the queerest things of Tasmania, New Zeland, and other parts of Australasia is the bulrush or vegetable caterpillar. This wonderful plant is a fungus, a sphaeria, which grows seven or eight inches above the ground, generally in a single stem, round and thickly covered with brown seed for some five or six inches ending in a curved wormlike point. It is usually found growing at the roots of a particular tree, the "rata" of the natives. When this plant is pulled up its single root is found to be the exact counterpart of a large caterpillar, say one three or four inches long, which, although it preserves every detail of such grubs, dissection proves it to be solid wood. Intelligent persons of the countries named above say that this curiosity is formed in the following manner:

A large species of moth feeds on the "rata" tree; the grub of this moth burrows in the ground; the seed of the sphaeria gets lodged between the scales on the grub's neck, strikes root and completely turns the interrior of the creature into a woody substance. In every case the shell of the grub is left intact, no small rootlets puncturing it at any point. Scientists says that the above explanation is all "bosh," and that the plant develops the form of a caterpillar because it is its nature to do so. If this be true why should we laugh at the stories of the Mandrake Man and the Scythian Lamb, specimens of which are preserved in the Surgeons' museum, London.

An official estimate sets down the number of wolves in Russia at 170,000; it is further stated that the loss caused by the destruction of sheep and swine by wolves is so great that it can not be even approximately estimated. The reward paid for each wolf that is killed is 10 roubles. The number killed in 1889 in the single government of Wologea was 49,000; and in the government of Kasan 31,900. The number of human beings killed by wolves during the year was 203.

Cats.

We have dog-shows; why not cat-shows? The cat has been domesticated quite as long as the dog, and is in some respects a more remarkable animal, as the folk-lore of many nations and the observation of modern savants testify. Although, too, owing to the nocturnal habits of the feline race, it is hard to prevent crossing, and there are, therefore, fewer distinct breeds of the domestic cat in a given country than of the domesticated dog, it would still be possible to compass much interesting variety in a cat exhibition. To say nothing of the best-known type, the familiar tabby, which often reaches a noteworthy size, there is the admired Angora, whose long, silky hair is of a dusky white; the Siberian breed whose hair is red; the Chartreuse, or Maltese, which is of bluish-gray tint; and the Spanish, or so-called tortoise-shell, whose hair displays a mixture of black, white and yellow.

It is not, however, in color only that domesticated cats differ widely. There, for instance, is the glove cat of Nubia, the Chinese cat with ears turned down instead of up, the twisted-tail cat of Madagascar, the short, turn-cated tail of the Malay Archipelago, and the entirely tailless cat of the Isle of Man.

As regards the remoteness of the period at which the dog and the cat were domesticated, it is true that remains of the former animal are found in the lake dwellings of central Europe. On the other hand, we read of the cat in Sanskrit writings older than the beginning of our era, and we find it pictured on Egyptian monuments of Pharaonic times. Moreover, the cat, being sacred to Isis, was often mummified, and some of the cat mummies date from four thousand years ago. In our days, cats are distinguished for attachment to localities rather than to persons; but it may be doubted whether this was so in ancient Egyt, where for ages they were treated with unvarying kindness and even with veneration.

In one particular, feline intelligence surpasses anything exhibited by dogs. Repeated experiments have verified the almost incredible fact that cats conveyed in bags or baskets to distant places can find their way back to the point of departure. According to the well-known naturalist, Mr. A. R. Wallace, this marvelous achievement is due to an extraordinary development of the sense of smell, which enables the cat to take note of the successive odors encountered on the way, and to follow them back in their proper inverse order. It is doubtful whether even this hypothesis will explain all the recorded examples of a cat's faculty for identifying localities traversed blindfold.

A Cow's Black Milk.

Rupert Hansborough, of Chilicothe, Ohio, is the possessor of a natural curiosity in the shape of a cow which gives black milk. She is on Mr. Hansborough's model farm, situated a few miles out of town, and can be seen at any time grazing on his pasture, and at milking time her singular yield will be shown any one desiring to behold it. Of mixed breed, Jersey and Durham, with a strain of Ayrshire, she was calved on the farm and was the second born to her mother, whose milk presented no peculiarity, and whose first calf, a heifer, too, still gives an abundance of natural tinted milk.

Mollie, as she is called, is a pretty little cow, with nothing unusual in her appearance, and has borne already five young, which have thriven well on her black milk. It produces a fair amount of cream, which is a trifle lighter in color and which when churned makes butter resembling coal tar, but as palatable as though of golden yellow. Mr. Hansborough says that at first they were afraid to drink or use the milk in any way, but, overcoming their prejudice, now enjoy it as any other.

He has received numbers of offers for her, both from the proprietors of museums and stockmen, but declined them from hopes that she will yet transmit her peculiarity to some of her progeny. Chemists in Richmond and Washiugton have analyzed the milk, both fresh and when made into butter, but declare that they can detect nothing to account for its sable color, but attribute it to some unique coloring pigment in the corpuscles of her blood.

A year ago the average daily production of petroleum in Pennsylvania, according to the Philadelphia Times, was 60,000 barrels. Now it is 85,000. The prime cause of this increase was the advance to a dollar per barrel in price when the production fell to 60,000 barrels, and the effect of the increase to 85,000 is a drop in prices to 70 cents.

From Farm Journal.

Fertilizing with Clover.

L. W. D., of Massachusetts, asks questions about my rotation of crops, how I fertilize, etc. He says, "You told in March issue of receiving $1,200 for potatoes; but made no account of manure or fertilizer it took to grow ths crop."

My thirty-five acres of cultivated land is divided into three parts of about equal size. Suppose one to have been sown with clover seed last spring, or wheat. This year it will grow clover all the season. Next spring we plow it and plant potatoes, some variety that will be ready to dig by the last of August or very first of September. (We have no market here for potatoes until ripe.) As soon as the potatoes are off we dig up the ground with the Cutaway harrow, and smooth and roll it, and drill in wheat. On that wheat we sow clover seed (and sometimes a little timothy) again in the spring. Thus we have a three-year rotation, and the land has clover growing on it two full years out of three.

Now for the fertilizing of our last year's potato crop. The field was in clover in 1888. We cut the first crop for hay quite early. The second crop, which it was estimated would have made two tons of hay per acre, was left to fall down on the land, and lie until dry enough to plow in the spring. Then we turned it under for potatoes, and this with the clover roots was all the manure or fertilizer used. There was no work drawing manure, no money out for fertilizers, except to buy about five quarts clover seed per acre. The field is in wheat now, and my next neighbor remarked the other day that he thought it the best piece I ever had. Early in the winter we top dressed, very carefully, the poorest portions of the wheat, as shown by the fall growth. Our hay is fed out on cement floors, and the manure kept from all waste by the use of land plaster in the stables and a roof over the barnyard. We sell potatoes and wheat, but never any straw or hay. We aim to only cut what hay we need for four work horses (fed in the stable the year around) and our cow. The rest is left to go back to the land.

The Science of Pop Corn.

In what condition is the starchy interior of the grain just before it explodes? The common experience of the kitchen and laundry will help us here. In making up the mixture for stiffening clothes, the laundress puts starch into water and boils it, and we all know that in this process the starch loses its powdery character and becomes blended with the water into a pasty, translucent mass. The effect upon the individual starch granule is a softening and considerable increase of its bulk and, finally, its rupture and diffusion through the water. While we cannot see the inside of the grain at the critical moment when it has all but burst, we may, in view of what we now know, probably surmise the truth. Is it not very likely that, as the grain gets hotter and hotter, the moisture present in the cells, or in the starch granules themselves, softens them first, and then, when the heat becomes too great to permit its remaining in the fluid state, it suddenly turns to steam, and the now plastic starch expands in every direction, forming little vesicles, losing at the same time, of course, the moisture, and thus becoming firm and brittle again? This is the conclusion to which I have been brought, and I think of the wonderful physics of popped corn with great satisfaction whenever I shake my popper over the glowing coals.

A Chance Word.

Who can estimate the value of a chance word, in the sense in which there is such a thing as chance? Upon the silence occasioned by the sudden stopping of a street car there fell these words:

"So long as you can contribute to the pleasure, happiness, or comfort of any human being, you are of importance in the world, and no longer."

Whatever may have been the object of these words, the thought reached the hearts of a dozen or more passengers, and it was interesting to note the changed expression on some listless faces. In utter unconsciousness of any effect of her words, the lady from whose lips they fell passed out into the street. Perhaps in the great day it may be her happiness to know that the Lord then used her tongue for a blessing to some heart which had as yet failed to comprehend the meaning of its life struggle; for the truth she emphasized was a truth which all of us need to realize. Not our personal enjoyment, nor our seeming success in life, but our part in God's plan for others is the measure of our importance in the world.

Abalone Stories.

There is a saloon on Kearney street, San Francisco, says a letter from that city to the N. Y. *Tribune*, which keeps in a showcase an abalone shell. It is large, about the size of a man's two outspread hands, and in the center a mass of pearly accretions take the shape of a baby's shoe. The story is that years ago a little child in Marion county wandered down to the beach, slipped in between the rocks, and was caught by the cruel mollusk, which closed against the tiny shoe and gripped it close to the rock. Years after, when every one but the mother had forgotten the story, and she sat by the fireside with grown up daughters about her, some abalone fisher found the curious shell and put it on exhibition in the window of his cabin. There the mother saw it, and hastening forward, brought the other little shoe, which she had found cast up by the tide on that dreadful day when she sought up and down the beach in vain for her child. They placed it beside the winkled shell, and every one uttered a cry of surprise, so startling was the resemblance. Afterward a chemist cut deftly into the bright nacre of the mass and found traces of leather wrapped in its shining folds. There the lost baby's little shoe lies hidden and changed to pearl.

The Chinese and Italian fishermen who live on sand-floored bays of the coast from Cape Mendocino southward to point Conception know the abalone thoroughly, and they never despise the muscular grip of a large one. They carry pointed bars of iron with which to pry them off the rocks at low tide; they cut them out of the half-shell, for the abalone is a "univalve mollusk," to use the phrase of the professor of natural history, and they broil them for dinner, or dry them for market. But they seldom venture to stoop in a cramped position down the rock crevices to pluck a giant abalone from his hold without having the iron handy. Three or four times the body of a drowned fisherman, who tried that once too often, has been swept ashore a day or two later, when the mollusk released its hold. Once, down at Point Sur, a Chinaman was drowned in this way, and the rest of the fishers in the village of black huts under the yellow cliff deserted the place within a week. They said that the ghost of the dead Chinaman had turned into an abalone and would seek another and another victim until the last of his comrades was dead. I rode by that day with a friend and saw them pile the dead Chinaman's clothes and belongings on the beach and burn them. Then they put a sign in Chinese on the top of the cliff, and, as I have heard, no Chinaman has ever since ventured to fish in that cove.

Polished abalone shells and ornaments made from the "buttons of pearl," which every large shell contains, are very common in California, but one sees little in these days of the old native Californian use of them on saddles and bridles. If a vaquero were too poor to sport pounds of silver on bridle-rein and saddle leather he could at least wear abalone buttons, polished by hand. The shells, too, were carried far inland, and used on hundreds of ranches for such homely purposes as soap-dishes and candle-holders. Up and down the coast, in willow copses, or set in seas of tule, are the ancient "Kitchen Middens," where, mingled with clam and oyster shells, broken abalone shells often form the greater part of the vast mound of debris. Inland, too, in the valleys where Indians once lived, abalone shells are found, carried there ages ago. The abalone must have been one of the principal food-resources of the California seacoast Indians, and was probably exchanged by them for the acorns and pinenuts gathered by the Indians of the interior.

The abalone is fast disappearing. The Chinaman has conquered. The profits of the modest mollusk, when dried and shipped to China for the soup of the rich merchants and high official dignitaries of the empire, are so great that he is pursued summer and winter, and thousands of tons of him have been dried, sacked, and shipped away. There are but few large abalones left. One can find wave-worn shells on the beach or in deep limestone caves that are larger than any now obtained. You will still find thousands of about the size and shape of a gentleman's watch crystal, but the shells that are eight inches across only turn up at rare intervals, and are much sought for by collectors and jewelers who know their beauty when polished. There are two sorts of abalones on the California coast, one black on the outside, the other red. When this outer shell is ground partly through the effect is either black or red, as the case may be, on a pearly ground. The abalone pins and sleeve-buttons that contain green or blue shades come from the pearl buttons in the blackbacked abalone, while those that contain silvery and green tints come from the buttons in the red-backed species.

Should the hands become stained with aniline wash them first with a little bleaching powder, then rinse them in alcohol.

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