

Agricultural

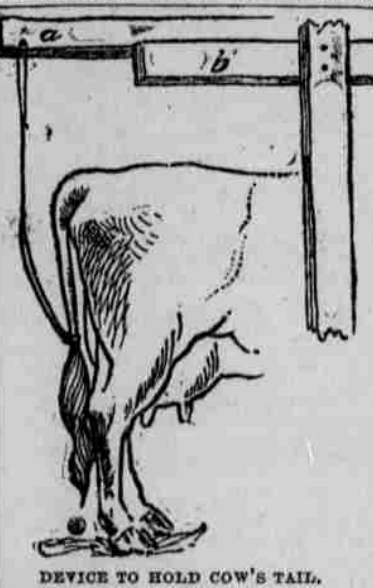
The Silo.
The round silo is preferable to the square one. And two smaller ones are better than one large one when the challenge is needed for summer feeding. A less quantity is exposed.

Markets Near Home.
Markets exist in the small towns, as well as in large cities. Farmers ship their produce to cities when their nearest towns may be buying from the cities in order to supply the home demand.

No Food For All Purposes.
There is no perfect food for all purposes. Everything depends upon what is to be accomplished. If the object is to fatten an animal the food should contain a larger proportion of corn than if the desire is to promote growth. Of the various foods, grass is equal to any, as it is rich in mineral matter and is also an assistant in fattening because it promotes digestion and is eaten slowly. For milk production grass may be assisted by the concentrated foods and also by hay, but only a variety of food is perfect for any purpose.

Have Regular Feeding Hours.
The Oregon station made a test of the importance of regular hours for feeding and milking cows. They took six cows and divided them into two lots as near alike as to age and length of time in milk as they could. One lot was fed and milked regularly at 5.30 a. m. and 2.30 p. m., while the other lot was fed and milked at hours ranging from 5 to 7 a. m. and from 4 to 6 p. m. This was kept up for three weeks, the amount of feed being the same for each lot. As a result those fed and milked regularly increased their milk production 5.9 per cent., while the other lot shrank 4.4 per cent. This difference of about ten per cent. in three weeks emphasizes what we have said so often: Feed and milk regularly.

A Clean Cow Stall.
The simple device here illustrated can be used in nearly every cow stable to keep the stalls clean, and prevent the cows from switching during milking in fly time. A piece of heavy



DEVICE TO HOLD COW'S TAIL.

cord, with a loop in each end, is fastened above the cow at a, and the other end slipped around her tail as shown. When she lies down this will keep her all out of the gutter and filth. When about to milk, hang the cord over a beam or a hook at b, which will pull the tail above harm's way.—Orange Judd Farmer.

How to Be a Good Farmer.
There are thousands of farmers all over the country who if asked why they are living in the country, will say that they don't know enough to do anything else. In my opinion the farmer to enjoy his work and to be able to accomplish anything of importance, must be as well educated as any other class of people. He should not only be familiar with scientific works, but he must not neglect higher mathematics, and should be familiar with animals and insects, know about the growth of plants, formation of soils, etc. He will then be better able to solve the many complex problems which confront every farmer in this day and age.

Many think that the farmer's life is an unenviable one, that he is tied down at home, scarcely having time to eat his meals, while the truth of the matter is, the farmer can be the most independent man on earth if he chooses. He must rise early, work late and continuously for a while in the spring, but after two or three months the hardest of his work is done, and he can take it comparatively easy during the remainder of the season.

One of the greatest essentials to prosperity and enjoyment of life is perfect health. The best opportunities for this are offered on the farm unless much work is attempted. Exposure to bad weather must be avoided as much as possible. While stock farmers especially must be out in all kinds of weather, good food and proper clothing will go a long way towards protecting any bad effects. The orchard, garden and poultry yard make it possible for the farmer to give the very best to live upon. While he in other professions may make money faster, very few callings afford more pleasure and more substantial returns. It is now possible to have all the pleasures, periodicals of all kinds, that the dweller in the country need not be ignorant.—Harry Courthright, in American Agriculturist.

Increased Potato Crop.
The high prices of potatoes this year have caused importers to bring back from Europe in the largest quantities ever known. Every owner of potatoes has had a chance to sell his tubers for good prices, and nothing has done so much to stimulate the small yield last year east as the lessening of the general crop was considerable profit for the average grower, and some more fortunate than others in their yield realize greater returns per acre than ordinary seasons. Small crops often receive a blessing to the few expert

grewers, although a bad thing for the general run of farmers. It is during such seasons that the expert shows his superior knowledge of conditions and when his science and skill prove their worth. It is during adverse seasons when modern intensive culture makes the highest showing, for while other crops are producing only half the average yield, the farmer who understands his business well and practices the latest methods is making his crop yield a third of half more.

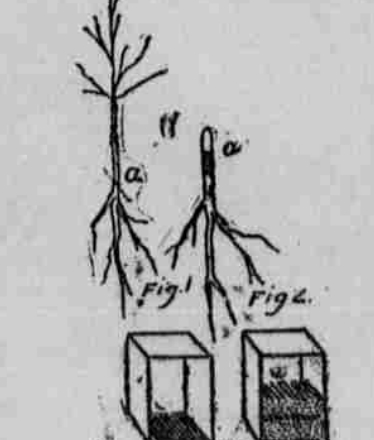
With prices ruling high, this extra yield means for him all profit. In full seasons, when prices are depressed by the abundance of yield, he may not get enough for his crop to pay for the actual work. So it is that during poor seasons we find the best growers making less complaint, and sometimes actually rejoicing.

A full crop of potatoes, when prices are high, as they have been this year, will net higher profits per acre than any other crop that we can grow, and even a three-quarters crop should yield a profit sufficient to pay big wages. Therefore we find plenty of growers not at all discouraged over the past season's results. On the contrary they are more convinced than ever that there is money in potatoes, but more especially in intensive, modern culture. One such season in the past is enough to convince many of this. A high yield of excellent market potatoes can be accomplished only through intensive culture in good seasons; but when the weather, seed and insects are all against the crop, one is particularly thankful that nothing has been left undone to get the best from the soil. Intelligent culture pays at any time, but in poor seasons it pays better than any time. In fact, it is the only culture that pays at all during such seasons.—C. L. Mangan, in American Cultivator.

Root Grafting Apple Trees.
The apple is propagated by root grafting by large growers of nursery stock, but not so much by those who grow only small quantities of trees. The value of trees grown from root grafts, as compared with budded trees, is much discussed, and root-grafted trees are much praised by some and condemned by others, and probably both sides are right under certain conditions. A good strong root in a perfectly healthy condition, skillfully grafted early in the winter, carefully packed, kept in a cool, moist place and carefully planted in the spring will no doubt make as good a tree as can be produced by the same stock planted in the nursery in the spring and budded in the fall. As a correspondent asks how to make root grafts, I will briefly outline the work as it is done in many nurseries.

The work of root grafting requires a strong, healthy stock or seedling, a sharp, thin-bladed knife, always kept sharp, and skill to make a clean cut with no twists or turns to it, but flat and smooth. To one not skilled in the use of the knife, considerable practice is needed in cutting upon shoots of the apple or pear, or other hard woods, before making the grafts. The root or seedling, Fig. 1, is held in the left hand, and an upward cut made at the point, a, where the root and top come together, called the collar. A tongue is then cut about midway of this, a, Fig. 2, which is to fit into a similar cut on the scion.

The scion, Fig. 3, a piece of last year's growth, about six inches long, of the variety desired, is then taken, and the same kind of a cut made on its lower end. The two cut surfaces are then placed together and the tongues pressed firmly against each other, taking care that the inner bark, called the cambium layer, comes in contact with as many points as possible. If



STEPS IN ROOT GRAFTING.

The scion is the same size of the stock this may take place on both edges, but if it is smaller than the stock, contact can only be made on one side. After pressing as firmly as possible, the union is made more complete by tying the parts together with raffia fiber, soft twine or waxed thread, as at Fig. 4. The success of this work depends upon how carefully the cut has been made, how much of the cambium layers come in contact, and how firmly the parts are bound together.

After the grafts have been made they are to be packed in moist sand or light soil and kept in one position until taken out for planting in spring. A very good way of packing is to take a soap box or other box of the right size and place it on one end, Fig. 5. Then put in a layer of grafts and cover with soil, pressing it firmly about the grafts, putting in layers of sand and gravel, Fig. 5, b, until all are in or the box is filled. The box should be kept in a cool, moist place, as nearly frozen as possible, yet not actually frozen, until spring.

As early as the land will work up fine and mellow, the grafts should be planted in the nursery rows about five inches apart, and in rows four to five feet from each other. As the grafts are taken from the box they should be put into a pail of water, that they may not be exposed to drying, and be planted with an spade or dibble, taking care not to start the union of the scion and root. During the first year in the nursery little care is needed, but to keep the land well cultivated, and allowing only one shoot to grow.—Professor S. T. Maynard, in American Agriculturist.

It isn't always the clock with the loudest tick that keeps the beat time.



Oyster Shell Roads.
Driving, cycling and automobiling tourists who return from their outings on the South Jersey pikes this summer are unusually enthusiastic in their praises of these shell roads, writes the Philadelphia Press.

The process of constructing these roads is of special interest because of its simplicity. There is no expense of digging out the roadbed and filling it with large stones and then with a smoother top dressing as in the construction of a macadamized road. The shells are simply unloaded from the boats (which bring them in great quantities from nearby oyster fields to Buena Vista wharf), and are then carted out along the roads until a hollow is found, or any spot that needs repairing, and are then unceremoniously dumped and left without any process of pounding or smoothing, until broken up and leveled off by the passing carriages and farm wagons.

In constructing a shell road from the beginning, load after load of the oyster shells are dumped in an irregular bank along the centre of the roadway; then with a road scraper a bank of earth is thrown up along the edge to keep the shells from scattering. This leaves a narrow, smooth space over which the scraper has passed along the edge of the bank of shells; and as this is used for driving as long as the weather is dry, it would seem that the bank of sharp shells would never be driven into smooth, white firmness. But wait until there is a heavy storm, and the smooth road at the side becomes a mass of heavy mud and sand, then the rough shell bank is gladly mounted, and although it is decidedly rough at first, the heavy country driving and carting of farming produce soon crushes the shells and forces them into the rain soaked soil beneath. A second or third banking of the shells, scattering them further over the sides of the roadbed each time, with this process repeated, forms a roadbed that is hard and firm to the depth of a foot or more, and beautifully smooth and white.

When these shell roads extend along great stretches of pines, with even rows of cedar and fir trees lining the roadway (as they do throughout many parts of New Jersey), one is reminded of the palm lined drives so alluringly pictured in views of "our new possessions."

Solving the Problem.
Cost is now the principal obstacle to the building of good roads in New York State, according to State Engineer Bond. The farmers, who have the most to gain from improved highways, but who have been slow to appreciate this fact, are now represented to be generally in favor of the movement. Applications under the Armstrong-Higbie law for road improvement are piling up in the State Engineer's office. With a reduction in the cost of road building, the State appropriation could cover more ground, and to this problem of a reduced cost Mr. Bond has been devoting his attention.

He thinks he has found the solution in the proposed establishment of a State rock-crushing plant, near Rockland Lake, across the Hudson from Sing Sing, where the convicts could be employed, in converting the trap rock, abundant there, into road metal. He regards the location as excellent for the purpose, and would expect the returning canal boats to carry loads of broken stone up into the State at cheap rates, rather than to go back light. Another suggested merit in the idea is that it would solve the convict-labor problem, so far as Sing Sing is concerned.—New York Post.

Europe Was Fortunate.
The countries of Europe were fortunate in having a system of roads established long before the invention of the steam railway. In the United States the rapid extension of railways has caused the roads to be neglected. Good roads are essential to the prosperity of rural districts, as they promote local commerce and tend to make the people better acquainted with one another.—Thomas W. Knox, New York City.

Mean New Opportunities.
Good roads mean new opportunities which will broaden and sweeten life. They mean education, and just as ignorance is the root of falsity and disorder, so education means knowledge and love of law and order, the nation's only hope for the abolishment of crime.—Clara Louise Burnham.

A Good Suggestion.
The Legislature of each State should pass a law for the establishment and maintenance of good roads. Let the bicyclist of town or city unite with the farmer in agitating the matter, and a millennium of good roads will speedily result.—Mrs. R. F. Woodward, Fort Wadsworth, N. Y.

Needed For Everybody.
By all means let us have good roads for the farmer, for the merchant, for the wheelman, for the pedestrian, for everybody.—Ellen F. Pratt, Editor Health and Dress, Iowa City, Iowa.

Don'ts.
Don't consider yourself the axle of the world. You are only a spoke.
Don't waste emotion. Excessive feeling disturbs the brain, weakens the heart and ages the body.
Don't confuse fault-finding with criticism. One has its root in captiousness, the other in kindness.

Don't be superstitious. Reason out causes rather than dwell upon effects.
Don't be pharisaical. Be honest, virtuous, obliging and wise, but don't preach.

Don't be ashamed of your parents. They may be illiterate and dull, but they gave you a chance to become what you are.—Philadelphia Record.

Booksellers who supply English schools report that there has been in recent years a very great increase in the demand for German school books.

ANOTHER GRAND REPORT FROM HIS MAJESTY'S DOCKYARD, AT PORTSMOUTH, ENGLAND.

Where Upwards of 10,000 Men Are Constantly Employed.

Sometime ago the Portsmouth Times and Naval Gazette published a most thrilling and remarkable experience of the wife of Mr. Frederick Payne, himself connected with the Portsmouth Dockyard for many years. The report produced a great sensation, not only in Portsmouth, but throughout the country, being considered of sufficient importance for reproduction and editorial comment by the leading Metropolitan and Provincial Press of England, as showing the marvelous powers which St. Jacobs Oil possesses as a cure for Rheumatism, its application having effected a perfect cure in the case of Mrs. Payne, after having been a helpless cripple and given up by several physicians.

We have now further evidence of its intrinsic value as a Pain Conqueror. Our readers will do well to follow the intelligent and highly interesting details as given in Mrs. Rabbets' own words: To the Proprietors St. Jacobs Oil: Gentlemen—My husband, who is a shipwright in His Majesty's Dockyard, met with an accident to his ankle and leg, spraining both so badly that his leg turned black from his knee to his toes. The Dr. said it would be months before he could put his foot to the ground, and it was doubtful whether he would ever get proper use of his leg again.

A few days after the accident I had a book left at the door telling about St. Jacobs Oil, so I procured a bottle from our chemist, Mr. Arthur Creswell, 379 Commercial Road. I began to use St. Jacobs Oil, and you may guess my surprise, when, in about another week from that date, my husband could not only stand, but could even walk about, and in three weeks from the time I first used the Oil my husband was back at work, and everybody talking about his wonderful recovery. This is not all. Seeing what St. Jacobs Oil could do gave me faith in your Vogeler's Curative Compound, also favorably mentioned in the book left at my house. I determined to try the compound on my little girl, who was suffering from a dreadful skin disease, the treatment of which has cost me large sums of money in going from one doctor to another with her all to no purpose.

She has taken two bottles of Vogeler's Curative Compound, and one would now hardly take her for the same child, her skin has got such a nice healthy colour after the scaly look she has always had. I shall never cease to be thankful for the immense benefit we have derived from these two great remedies of yours. I think it a duty to recommend these medicines now I have proved their value. (Signed) ELIZABETH S. RABBETS, 93 Grafton Street, Mile End, Landport, Portsmouth, England.

A liberal free sample of Vogeler's Compound will be sent by addressing St. Jacobs Oil Ltd., Baltimore.

The above honest, straightforward statement of Mrs. Rabbets' evidence is stronger and far more convincing than pages of paid advertisements, which, though in themselves attractive, yet lack that convincing proof which Mrs. Rabbets' description of her own experience supplies. St. Jacobs Oil has a larger sale throughout the world than that of all other remedies for outward application combined, and this can only be accounted for from the fact of its superiority over all others.

Some people are such natural born liars that they look ashamed of themselves every time they are caught telling the truth.

The Pet Dog's Airing.
First Nurse Girl—Seems to me y'r puttin' on a heap o' style drivin' in the park with a moneygrammed kerriage, and coachman and footman, too. Does y'r missus lend ye her private rig?
Second Nurse Girl—Seems to me to take her pet dog out for an airing.
First Nurse Girl—But, where's the dog?
Second Nurse Girl—Under th' seat.

Lonesome All Round.
The ark had been about ten days on its journey, and the occupants were by this time well acquainted. "It's a dreary time," said one of the two fleas. "Here we are compelled to satisfy ourselves with but two dogs to live upon."

"I'm getting lonesome," said one dog to the other. "There are not enough fleas to lend zest to life, and the microbies are all camped on the two cats."

A Possibility.
"We must elevate the stage," said the impresario. "Here the divorcees, ex-pugilists, ex-train robbers, bridge jumpers and other artists voiced their hearty agreement with this statement."

Yet there was one voice of dissent. "I trust," said the trapeze artist, "that the elevation will not be so extreme as to interfere with my rigging."

That Was All.
Tenderfoot—I understand there was some difference between Cactus Cal and Alkali Ike.
Buck Haas—They's considerable difference. Cal's dead an' Ike's alive.
Tenderfoot—Yes, but what was the original difference between them that led up to the killing?
Buck Haas—Ike was quicker on the trigger, that's all.

Population of Home.
Under the Emperors the population of Rome was more than 2,000,000. During the Middle Ages it was reduced to 14,000. When Victor Emmanuel made the city his capital it was 184,000; in 1886 it had increased to 312,000; in 1890 to 457,000; and in 1900 to 550,610. The estimated population in 1902 is 550,000.



Mrs. L. A. Harris, a Prominent Member of a Chicago Woman's Political Club, tells how Ovarian Troubles may be Cured without a Surgical Operation. She says:

"Doctors have a perfect craze for operations. The minute there is any trouble, nothing but an operation will do them; one hundred dollars and costs, and included in the costs are pain, and agony, and often death."

"I suffered for eight years with ovarian troubles; spent hundreds of dollars for relief, until two doctors agreed that an operation was my only chance of life. My sister had been using Lydia E. Pinkham's Vegetable Compound for her troubles, and been cured, and she strongly urged me to let the doctors go and try the Compound. I did so as a last resort; used it faithfully with the Sanative Wash for five months, and was rejoiced to find that my troubles were over and my health restored. If women would only try Lydia E. Pinkham's Vegetable Compound first, fewer surgical operations would occur."—MRS. L. A. HARRIS, 278 East 31st St., Chicago, Ill.

\$5000 FORFEIT IF THE ABOVE LETTER IS NOT GENUINE.
When women are troubled with irregular, suppressed or painful menstruation, weakness, leucorrhoea, displacement or ulceration of the womb, that bearing-down feeling, inflammation of the ovaries, backache, bloating (or flatulence), general debility, indigestion, and nervous prostration, or are beset with such symptoms as dizziness, faintness, lassitude, excitability, irritability, nervousness, sleeplessness, melancholy, "all-gone" and "want-to-be-left-alone" feelings, blues, and hopelessness, they should remember there is one tried and true remedy, Lydia E. Pinkham's Vegetable Compound at once removes such troubles.

DO YOU SHOOT?
If you do you should send your name and address on a postal card for a **WINCHESTER** GUN CATALOGUE. IT'S FREE. It illustrates and describes all the different Winchester Rifles, Shotguns and Ammunition, and contains much valuable information. Send at once to the Winchester Repeating Arms Co., New Haven, Conn.

SALZER'S SEEDS
BRONX INSEKTS
The greatest good of the season. We have the best and most reliable and the only large grower of seeds for sale in America. We are headquarters for TRIPLE INCOME GROWN, Triple Income, and all other seeds. We will give wherever seed is sold. It is an agricultural wonder. Get it while it lasts. It is a money maker. Try it for 1902. Catalogue sent free.

Poor Soils
are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of **Potash.**
Write for our books—sent free—which give all details.
GERMAN KALI WORKS, 92 Nassau Street, New York City.

Wills Pills Lead the World. Are You Sick? Send your name and P. O. address to The R. B. Wills Medicine Co., Hagerstown, Md.

ALABASTINE
Alabastine is the only durable wall coating... Many ailments, particularly throat and lung troubles, are attributable to unsatisfactory wall coverings... Alabastine has the endorsement of physicians and sanitarians.