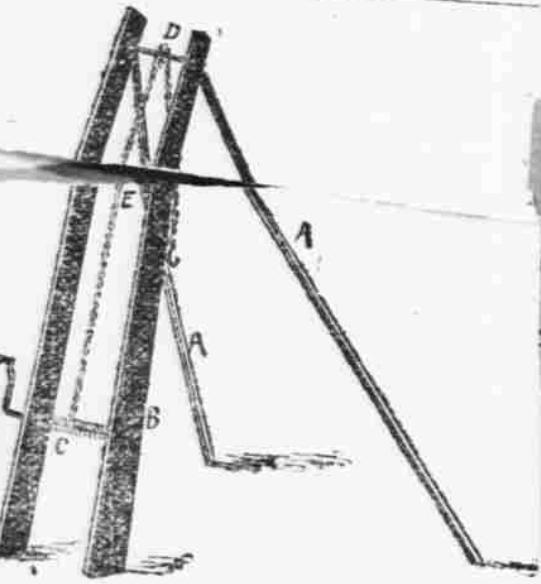


AGRICULTURAL



Device for Butchering.
This device for butchering, described by a correspondent of the Ohio Farmer, is made so plain by the illustration as to require little explanation. The standards A are 2x4 hardwood scantlings, 8 feet in length; the upright B, a 2-inch plank about 1 foot wide at the bottom and 8 inches at the top, 8 1/2 feet long. These are hinged together on top with a half-inch bolt running through a hole bored through both plank and scantling, and in the center of this the pulley D is placed, a slot of course being cut in the plank for pulley to play in.



The crank C is an old well crank, and as indicated is attached to the plank 2 1/2 feet from the base. The whole apparatus is easily portable, very convenient and cheap in construction, and every farmer who keeps pigs should have one either of this kind or similar to it, for use at butchering time.

To Relieve Choking Cattle.
A correspondent of the New England Homestead has an excellent as well as a humane way for the relief of choking cattle, and he thus describes it: "When the animal becomes choked I find the obstruction by feeling along the throat with one hand, and in nine cases out of ten it is found in the gullet. With the thumb and fingers the obstacle can be forced out the way it went in, and generally the animal is ready to assist in the removal. A few years ago I had a heifer that was choked with apples every few days, and in every instance I removed them in this way without difficulty or danger of injuring the animal. I think anything which an animal gets in its throat and cannot get down in the natural way should not be punched or pushed down, thereby endangering the life of the animal, as should be taken out the way it went in."

A Handy Manger.
The illustration shows a ladder frame hinged in the manger at both ends, which can be tipped up in, and down again. This device prevents the waste of feed, which is pushed out a trodden under foot, and saves stock that are sometimes horned into a manger or in their backs. For cattle, crossbreds or rounds should be stretched close enough together to prevent them from getting their horns caught under the bounds.—Practical Farmer.

Cost of Eggs.
Experiments in feeding and in putting the value of eggs, show that no estimate is made for labor, one egg can be produced at a cost of about 6 cents for food, or about 10 cents. If all of the food allotted to hens were converted into eggs, profit of a dozen eggs would be 10 cents even when prices are very low, but it depends on whether the hens convert food into eggs, flesh or support of bodies. It is a fact demonstrated, however, that when a dozen eggs are hatched they carry from the farm but a few of the nutritious elements of the food in proportion to their value in market and on that account they are as profitable as anything that can be produced on the farm.—Poultry Keeper.

Corn in Germany.
A large share of the \$1,000,000 worth of American corn that now goes to Europe is for the German farmer. For the past two years the German farmer has been learning how to raise his corn to his stock. It is estimated that there will be a yearly market of 150,000,000 bushels of American corn for this purpose in the German cultural districts alone. Previous German farmers had fed oats, barley and other cheap imported grains. Their own land is too valuable to plant them to grow feed.

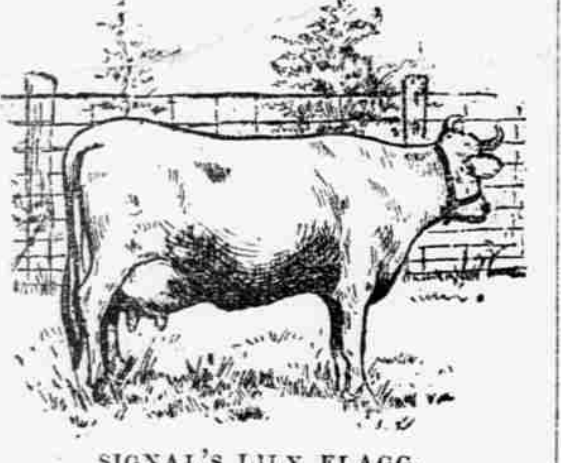
To Tan Skins.
A. J. Leaz, in the Epitomist, gives the following instructions: Dog and sheep skins, and such small skins, can be made of value for strings, etc., by tanning by soaking them in lye made of wood ashes or lime until they can be easily rubbed off, then soak in running water until the lye is washed out. Then soak in a solution of alum and salt in the proportion of three pounds of alum to one-half pound of salt. The solution should be sufficient to cover the skin. Soak for about three days, then hang up to dry in the shade, and tan the skin every day until it is dry and pliable.

To Cure Colic.
George H. Hogan, writing to the Agricultural Epitomist, says: "I would like to have every farmer and breeder of fine stock know how to cure colic, hoven, in cattle. Instead of puncturing, as recommended by some, just get a piece of an old broom handle, or some stick as large, and about twelve or fourteen inches long, and fasten in the animal's mouth so as to keep it from biting at the stick with its tongue, and it will soon pump up all the extra accumulated in the first stomach. Had I known this several years ago I could have been several hundred dollars better off in cattle to-day. I have been curing cattle for the last five years, and have not lost a single case."

Feeding Work Horses.
Whenever a working team has an unusually hard job it is the habit of some farmers to feed it extra, thus giving it much an additional labor and thus lessening available present strength. It is always to be remembered that it is the food eaten the day before, and the days and weeks before that, which is available for present strength. No animal ought to be expected to work on an empty stomach. But a light feed before an extra hard job is better than loading the stomach with more than it requires.—Home and Garden.

Orchard Manuring.
A covering of manure around trees serves as a mulch, and the lumps in the manure are broken fine by frost, while the soluble portions leach out and go to the roots of the trees. Such work as applying manure to trees in winter saves them in spring, for if the orchard is then cultivated the hurried work of spreading manure will have been done, and there is more complete incorporation of the manure with the soil.

Champion Butter Cow.
A picture is given here of the wonderful Jersey cow, Signal's Lily Flag, which has the championship record of 1,047 pounds 9 ounces of butter in one year. The cut is reproduced from a drawing from life made by Mr. Webb Donnell, for the Country Gentleman.



SIGNAL'S LILY FLAG.

Gleanings.
The farmer who buys bran and linseed meal never makes a mistake, as those substances will enrich his manure heap, as well as add to the thrift of his stock. When meal is fed to hogs, either as slop or dry, it is impossible to prevent waste; if meal is worked out of the trough or the slop spilled, it is hardly possible to gather it again. If whole corn is fed the last grain is devoured.

The food properties of corn are not changed by grinding it; it is still corn, whether served as meal, mush or slop. When feeding hogs, grind only for the aged sows which have lost their teeth, and it is doubtful if they will pay the miller. Each field of the farm is fitted for some special use. Have due consideration of the soil, the past rotation and fertilization and needs of the proposed crop. There should be no haphazard way, but some forethought, in adapting the crops to the land. Low heads for trees are preferred by some, as they lessen the work of harvesting the crop and enable the grower to combat insects with advantage, but closer cultivation can be given when the trees are tall and the lower branches trimmed off.

There is a positive scarcity of all kinds of good stock, especially of the high grades, for the best and most profitable feeding, for the best home market and export trade. Thus overproduction of grain or live stock corrects itself by being unprofitable. It is best to keep waters growing instead of fattening them, unless they are intended for market soon. An allowance of three pounds of clover hay a day for a sheep weighing 100 pounds, using no grain, should be sufficient, but to fatten rapidly give two pounds of hay and a pound of cornmeal daily.

It requires about twenty pounds of milk to make a pound of butter, and fourteen pounds of milk to make a pound of cheese. More labor and care are necessary to make cheese, however, but good cheese brings a high price, especially when the parties making it are known and reliable, and make a specialty of a choice article.

THE FARM AND HOME

MATTERS OF INTEREST TO FARMER AND HOUSEWIFE.

Favorable Showing of the Southern Corn Crop—Value of Artificial Lakes on the Farm—Plan for Digging a Good Well—Notes.

The Southern Farm Magazine, of Baltimore, has compiled from official reports the total production of corn by States in the South in 1898, showing a gain, as compared with 1897, of over 114,000,000 bushels. In the South the average price for corn runs from 40 cents to 50 cents or more, as estimated by the United States Agricultural Department. On the basis of 40 cents, this means an increase of nearly \$50,000,000 in the corn crop of the South, as compared with last year.

Compared with 1897, most of the Southern States show a small gain in acreage, running from 1 per cent. in Georgia to 8 per cent. in Texas, though Maryland, Tennessee and Kentucky show a decreased acreage of from 2 to 5 per cent. The gain in the average yield per acre was very marked in nearly all Southern States except in Georgia, in which there was a decline in the average of two bushels per acre. The total crop by States, as compiled by the Southern Farm Magazine from advance government reports, and as compared with 1897, was as follows:

States	1897. (Bushels.)	1898. (Bushels.)
Kentucky	64,486,000	85,177,000
West Virginia	17,004,000	20,328,000
Tennessee	63,673,000	73,526,000
Arkansas	35,581,000	53,709,000
Texas	72,175,000	105,461,000
Louisiana	21,576,000	27,718,000
Mississippi	30,546,000	39,931,000
Alabama	30,524,000	39,681,000
Florida	3,811,000	4,377,000
Georgia	32,173,000	26,580,000
North Carolina	15,398,000	17,500,000
South Carolina	31,324,000	34,170,000
Virginia	31,562,000	38,563,000
Maryland	20,354,000	16,495,000
Totals	469,887,000	583,127,000

The total corn crop of the United States for 1898 was 1,926,000,000 bushels, against 1,902,000,000 bushels in 1897, a gain of only 24,000,000 bushels, whereas the gain in the South alone was 114,000,000 bushels. Omitting the South, the figures would show a large decrease for the rest of the country. This is a very gratifying exhibit as a partial offset to the low price of cotton this year, but before the South congratulates itself too heartily upon these figures as evidence of the growth of the idea of the diversification of crops it should remember that the Central Southern States have in this big corn crop just a little more than caught up with the corn crop of 1896, allowing nothing for the fact that in the meantime the population has doubled.

Artificial Lakes on Farms.
We have noticed in some parts of Illinois a number of small artificial lakes constructed in the pastures where the soil is suitable. Recently we saw not less than half a dozen of these on a single large farm. So far as we could see, they supplied the only water available for the stock, and the latter not only drank the water, but bathed in it. There was no outlet, and the supply was gathered mostly from the rains. The result of such conditions is that the water becomes stagnant and foul. Water weeds and water life multiply rapidly, and the possibilities of disease are greatly increased. It would be better to build several artificial ponds, and have them above sanitary in construction.

The desideratum is to produce a pond in which there will be a current of water. In such farms as we refer to it will be found impossible to produce such ponds without going outside of the natural resources of the pasture. In many townships there are no brooks that run throughout the year. The dependence in such cases must be placed in a windmill, and this is the reason why fewer and better ponds should be constructed. A windmill will not give much of a stream, it is true, but it will be enough to prevent the water from becoming entirely stagnant.

It will take some study to make the water run through the whole pond, but this can be accomplished by placing obstructions in the way or the current, continually deflecting it. Where there are low swales it will not require much of a lift to get the water to the top of the ground. This will increase the amount of water that can be pumped. If gravel and sand be near and plentiful, it might be advisable to use some of it for the bottom and sides, as that would probably have some influence on keeping down the growth of slime in the ponds. It would be also well to suggest that the hogs be not allowed to divide the possession of this pond with the other stock. The hogs seem to do more than any other animals to keep such places in an unwholesome state.—Haymaker.

Digging a Well.
I submit the following plan for digging a good well. Dip six feet deep in the usual manner and wall with stone, laying them in mortar made of hydraulic cement and sand. Continue the excavation six feet further, making this one thirty-two inches in diameter. Put on a coat of this cement about one inch thick and connect it with the stone wall. Leave the lower three feet un-cemented. Excavate three feet more and then cement to within three feet of the bottom as before, and continue until the water is reached. If this work is properly done, a first-class well will be the result. The water will be as free from drainage as the driven well, angle worm tight, if you please. Objection may be raised that a well of this kind cannot be put down through quicksand or other loose digging. Some fourteen years ago a pioneer friend had no well on account of the absence of stone

for walling. I proposed the above plan, except the upper six feet of wall was made of grout. At fifteen feet fine sand was struck, and the excavator, who was a miner, said that it was unsafe to go further. I suggested a whitewash made of cement, which was applied and held the sand securely until each three feet was finished, and so on forty feet deep to water. Here was genuine quicksand. A tube was made of 2x4, sharpened on the inside lower end, and lowered four feet into the water, and the well has been apparently inexhaustible ever since. It was made twelve years ago, and several have been put down since, one over fifty feet, and have been perfectly successful. I examined the first well about a year ago, and as far as I could discern it was in as good condition as when first made.—American Agriculturist.

How to Clean a New Churn.
Never should a churn be employed for making butter until it has been soaked several days. Furthermore, if it is perfectly tight when the soaking occurs, the bolts ought to be loosened more or less, so as to prevent it from warping and getting out of shape, says Ohio Farmer. Some manufacturers stencil this instruction right on the churn. Despite this, however, many are the butter-makers who neglect the precaution. What are the results? Generally the butter is not good, it having for the first few churning a decidedly woody taste.

Many are the ways recommended for soaking a new churn, but far will one go to find anything that equals water for absorbing most flavors, and especially if it is used in the following manner: Have it clear and cold for the first twenty-four hours, but change it two or three times; next, churn for an hour with a solution of some weak alkali (powdered lye or lime), then rinse with boiling hot water, and if convenient soak for twenty-four hours longer with clean flavored buttermilk or sour skimmed milk, repeating this should it seem necessary. This process over, wash the churn as usual—that is, by first rinsing it with cold water, then churning for ten minutes with that which is boiling hot, and if steam is available steaming the implement sufficiently to make it warm enough to dry itself. Thus it is that almost any new churn may be rendered absolutely clean and sweet.

Lice on Poultry.
In a letter from our veteran friend, James J. H. Gregory, of Marblehead, he avows his belief that insufficient feeding is the reason why poultry become troubled with lice. In his many years' experience with fowls he has never but once had occasion to use any of the popular vermin destroyers. This is good testimony to the doctrine that lice never breed except where there have recently been lice to breed from. In other words, the notion of spontaneous generation is a humbug. It is undoubtedly true, also, that lice will not live on fat poultry. But there are times, as when hens of the brooding varieties are determined to sit, and then the steadiness with which the hen will keep to her nest will make her thin in flesh, no matter how well fed she may be. Mr. Gregory probably remembers the story of the anxious mother whose son had run away. "Dear John, come home. You know that a rolling stone gathers no moss." The son wrote back: "Dear mother, I don't want any moss. You must remember that a sitting hen never gets fat." So there is use sometimes for remedies for hen lice, as they cannot always be prevented by good feeding.—American Cultivator.

Root Drowning.
"It is difficult to get people to understand," says Meehan's Monthly, "that trees can die from root drowning. A Boston correspondent refers to two large horsechestnuts which were moved last spring with the greatest skill, but they died. In the fall an examination was made, and the holes found to be full of water within one foot of the surface of the ground. The holes were really flower pots, without the necessary holes in the bottom to allow the water to escape. There can be no better lesson in gardening than by continually remembering why it is necessary to have a hole in a flower pot."

Poultry Pointers.
Never give fowls medicines in metallic vessels. Chemical combinations might be injurious.

Ducks and geese should never be kept with chickens. They are sure to breed disease in the flock.

The earlier hens shed their old coats the sooner they will begin to make a winter egg record.

The Poultry Messenger advises putting away some second growth clover for feeding hens in winter.

Freedom from lice and plenty of range will make the growing chicks "hump" themselves these days.

The sooner you are rid of the old stock, except those intended for next season's breeders, the better.

GOOD ROADS

The Basis of State Aid.

Two highways should be built and maintained by those who live along them is an ancient doctrine, but an unjust one. Fifty years ago Macauley described how unfairly the practice operated in the Seventeenth Century; how toll roads succeeded it and, finally, free turnpikes. But in this country we have only recently begun to see its injustice, and to realize that the relatively sparsely settled country, with its comparatively small amount of taxable property, cannot equitably shoulder the burden of constructing and maintaining the major part of the highways of the country for the use of everybody.

This subject is treated by A. B. Choate, of the L. A. W. Highway Committee, in circular No. 31 of the Government Office of Road Inquiry, on "State Aid." "After years of agitation," he says, "and condemnation of the farmers for failure to build good country roads, the agitators have discovered that they have been trying to work an injustice upon the farmers. The mistake was, not in demanding good roads, but in asking the farmers to build good country roads without taxing city property to help pay for them."

Equality of taxation is a familiar principle, yet nothing could be more unequal than to tax farm property alone for the construction of roads which ultimately benefit the entire community. In the newer states the taxable property is more nearly equally divided between town and country; but, in the older ones, the preponderance is greatly in towns and cities, in New York the proportion being about six to one.

"The hearing which this fact has," says Mr. Choate, "upon the question of State Aid for building country wagon roads is very apparent, for, if the farmers are required to pay taxes on their proportionately very small amount of property, to improve the long stretches of country roads, while the city people pay only enough taxes on their great wealth to improve the roads within the city limits, it will be necessary that the road taxes levied upon the farm property shall be very much heavier in proportion to the value of that property than the road taxes upon city property, and the principle of equal taxation will be violated. . . ."

"The business men in the cities have learned that it is to their interest to have better country roads. . . . The whole State is interested in the improvement of all the roads, and since the city people are insisting that they shall be improved, it would be fair to levy a tax on city property as well as country property for the improvement of country roads. This is what is meant by State Aid. . . ."

The State does not undertake to conduct the country district schools, but it does say that, if any school district shall run a school of a certain character a certain number of months in the year, it will contribute to the expense. The State Aid proposition, then, is an application to building country roads, of the practice now in operation for running country schools."

Summing up the principal points, Mr. Choate finds that:

1. All taxes should be equal.
2. Taxing farm property to improve all country roads, and city property to improve city roads only, results in unequal taxation.
3. City people desire to have country roads improved; equal and just taxation requires that they contribute toward the expense.
4. State aid simply requires all benefited property owners to contribute to the expense of road improvements that benefit them.
5. State aid for road-building is the same in principle as state aid for public schools.
6. State aid is not a new experiment in road-building, but has proved successful in New Jersey, Massachusetts and elsewhere.—L. A. W. Bulletin.

The Song of the Angelus Bird.

When traveling in the forests of Guiana and Paraguay, it is not uncommon to meet with a bird whose music greatly resembles that of an Angelus bell when heard from a distance, says a writer in Great Thoughts. The Spaniards call this singular bird Campanero, or a bell-ringer, though it may still be more appropriately designated as the Angelus bird, for, like the Angelus bell, it is heard three times a day—morning, noon and night. Its song, which defies all description, consists of sounds like the stroke of a bell, succeeding one another every two or three minutes, so clearly and in such a resonant manner that the listener, if a stranger, imagines himself to be near a chapel or convent. But it turns out that the forest is the chapel, and the bell is a bird. One writer (Mr. Waterton) has declared that the bird tolls with so sweet a note that Actaeon would stop in mid-chase. Orpheus himself would drop his lute to listen, while the clear note can be heard at a distance of three miles! The beauty of the Angelus bird is equal to his talent; he is as large as a jay, and as white as snow, beside being graceful in form and swift in motion. But the most curious ornament of the bird is the tuft of arched feathers on its head; this crest is conical in form and four inches in length.

Cure Efficacious.
The wise physician frequently finds it necessary to "minister to a mind diseased" rather than to the body that

merely sympathizes with it. A young woman who had gone from her home in an inland village to visit friends in the great city for the first time in her life, soon began to lose all appetite and grow thin and hollow-eyed.

Her friends, fearing that she was going into a decline, called in a physician in spite of her protests, and asked him to prescribe for her. He asked a few questions, noted her symptoms, gave her a malady a scientific name, and said as he handed her a bottle of pellets: "It will be necessary, miss, first of all, for you to leave the crowded city. The air here is not good for you. Have your friends in the country?"

"Why, I live in the country, doctor," she replied.

"Very good. Return, then, to your home, engage in light exercise, with frequent walks in the open air, and take five of these pellets every morning before breakfast."

She returned to her village home, observed the doctor's directions faithfully, paying particular attention to taking the medicine, and was well in less than a week.

Meeting the family physician one day it occurred to her to tell him her experience. He listened to her, asked to see the pellets, tasted them, and finding them to be merely sugar, unmedicated, said:

"What did your city doctor tell you was your ailment?"

"He said it was nostalgia."

"Hmph! Do you know what nostalgia means?"

"No, sir."

"It means homesickness."—Youth's Companion.

The Clergyman's Lease.

One of the most popular preachers in London, from 1832 to 1879, was Dr. John Cumming, a Scotch Presbyterian. His celebrity was chiefly due to his sermons on prophecy, wherein he interpreted the signs of the times, the millennial rest, the Last Trumpet, and the Seventh Vial.

Shortly after the publication of a series of sermons, in which the preacher had announced that within a few years the present order of things would end, the poet Tennyson was dining with a friend at a London tavern. In the course of the conversation the poet said:

"Doctor Cumming, although he has prophesied the end of the world in ten years, has just taken a lease of the house he lives in for twenty-one years."

"Is that true, sir?" exclaimed a waiter, rushing forward, upon an arm. "You have comforted me wonderfully, sir. I am a family man, and I didn't see the use of my being a waiter if the world was to end so soon."

Doctor Cumming was a canny Scot. He knew how to drive a good bargain, and had unbounded confidence in his drawing power as a preacher. When he became pastor of the London church, it had run down into a poor, weak, palsy-stricken thing. The confident young Scotchman agreed to take the new-rents for his salary, and to remain satisfied with the same.

The trustees consented—there was an acre of unfilled pews—to discover in a year or two that their pastor was receiving the largest salary of any dissenting clergyman in London.—Youth's Companion.

Ex-Colonials.

During the progress of the Queen's Jubilee the colonial princes, officers and premiers attracted, next to the royal lady herself, the attention of the public. Wherever they appeared they were received with cheers and especial honors.

On one occasion the streets were packed with spectators watching the guests depart from some royal function at Buckingham palace. The crowd refused to move except when some of the Indian rajahs or Australian officers appeared, when a way was speedily opened for them.

A carriage presently came out of the gates in which were three or four Americans who had been guests in the palace. Finding that the way was completely blocked, one young fellow among them shouted:

"Let us pass! We, too, are colonials!"

The crowd divided, and as the carriage entered the opening, he added: "We are the colonials who wouldn't let our mother spank us!"

The crowd caught the joke, and replied with laughter and applause.—Youth's Companion.

Seeing the Sights.

Even in these days of liberal education, young women sometimes show how confused are the ideas shut up in their heads. Illustrative of this is the naive blunder which Edmondo de Amieis recounts in his story of a voyage from Genoa to Buenos Ayres:

The captain of the steamer which numbered the charming young blunderer among his passengers, met her one morning and said:

"Signorina, we cross the Tropic of Cancer to-day."

"Oh, indeed!" she cried with enthusiasm. "Then we shall see something at last."

Scandalous.

Mrs. Witcherly—They say Mrs. Dickson has recently become very economical.

Mrs. Harrison—Yes, she's carrying it to an extreme, it seems to me. I hear that she's even trying to get her husband to let his whiskers grow, so as to save laundry bills.

Soon Ready.

Enthusiastic amateur—O, mamma, there's such a picturesque old vagabond! I want a snap shot of him.

Tuffold Knutt (noticing that the camera is pointed in his direction)—Wait till I run me fingers through me whiskers, miss. There. Go ahead.

We have noticed that when it is announced that a singer's voice is failing the neighbors are not as sorry as they should be.