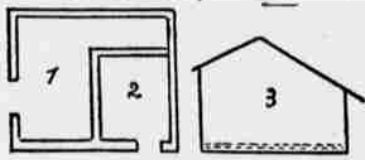


FARM AND GARDEN

Ice and Cold Storage House.
While many farmers consider an ice house a luxury that is not for them, a building such as is shown in the cut may be erected at small cost, and if the ice can be had for the cutting and drawing it will be found profitable. Even in sections where ice is scarce such a structure would be worth all it cost to a fruit grower who desired to hold back his products in cold storage. To make the house cheap build it of any lumber obtainable, the essential thing being to have it with an inner wall a foot from the outer wall



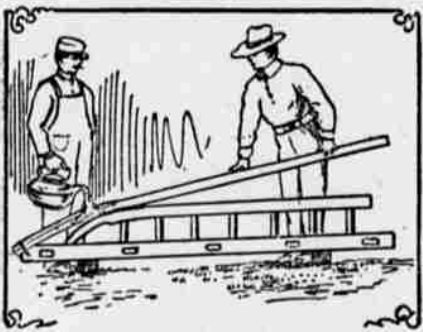
SIMPLE ICE HOUSE.

and this space filled in hard with sawdust, straw, leaves or any similar material. Then pack on the bottom of the floor a foot of straw or hay or sawdust and on this lay the cakes of ice, filling in between them cracked ice, and, if the weather is freezing, pouring water over each layer as it is filled in. Divide off a portion of the space for a cold storage room, as shown in the lower part of the illustration and one has a place where fruit, milk and butter may be kept in good condition during the warmest days of summer. Try an ice house, even though it be but a small one, and you will be surprised to see how little it will cost and how useful it is.

Half-Soling the Sled.

Soles made of poles are almost a thing of the past since the sawed ones have come into use. There are still some who do not use the sawed soles because of not knowing how to put them on, after they have become dry, without breaking or splitting them.

The most successful way of doing it is done. A teakettle full of boiling water, poured on very gradually while the sole is being sprung, is all that is necessary in almost every instance. The steam should be no larger than a lead pencil, and poured on continually. Any one who has never tried this method will be surprised how



BENDING THE SLED SOLE.

quickly the sole will bend down into its place.—R. A. Galliner, in Farm and Home.

Winter Fruit Tree Pruning.

While the early spring pruning and the summer pinching back of the small shoots covers the main pruning of the fruit trees, much good work may be done during the open days of winter which will, at least, save time in the spring. Broken limbs may be removed and many of the inside limbs which are overlapping the fruiting twigs can be cut off during the winter as well as in the spring. The work of pruning should always be done with a saw on limbs too large to cut with a sharp knife; in pruning saw from the under side of the limb first, sawing up a quarter or a half through and finishing from the top. This will result in a clean cut and there will be no splintering, as would be the case if a heavy limb was cut through from the top. In the winter pruning of orchards keep your eyes open and note the condition of the tree, so that at the proper time any remedy for any trouble found may be applied.

Maturity of Fowls.

The Leghorns may mature in six months, but with the larger breeds a fowl is not matured if under one year of age; and it is a settled conclusion that neither animals nor poultry should be used for breeding until the system has had time to develop and make complete growth. Pullets sometimes begin to lay before they are fully matured, but in such cases their eggs should not be used for hatching purposes. The use of eggs from pullets that have not completed their growth is sure to injure the flock if the practice is continued for several years.

Cost of Raising Corn.

The present low price of corn and the enormous quantity which is piled up in bins and warehouses everywhere in this country is the most emphatic evidence that corn can be produced at a very low cost, and it is plain from the experience of hundreds of corn raisers that there is a profit in producing corn on a large scale, even at the present low prices, for many thousands of farmers have made a good living and laid some profit by from their corn lands.

It is perfectly true that the man with a small farm, devoted exclusively to corn raising, can get only a very precarious living out of corn when the price is under 25 cents on the farm. But even the small farmer can assure himself of a substantial surplus with the prospect of a substantial surplus, some years, if he devotes a part of his land to raising the products which he needs for his family, and raises corn, well cultivated and carefully cared for, on the rest of it.

It must not be forgotten that the present low price of corn is due to two years of very extraordinary yields, and though this year's crop is moderate, by comparison with those years, the surplus in the country, added to what was produced this year, makes the supply in the country about as large as it was ever known to be, and the cost of production of the corn which most farmers have on hand at the present time, must be figured on the basis of large yields, so that, even at present low prices, the great bulk of the corn in the country represents a good deal more than what it has cost the farmer to produce it.

For Sitting Hens.

Mrs. Amanda Wilson writes to the Iowa Homestead: "I have been very much annoyed at times with persistent sitting hens. I have tried several methods of preventing them from becoming broody, and have at last hit upon a simple coop about two feet square and two feet high made of lath, and attached to a rope, as shown in the illustration. Place the hen inside the coop and let it swing about eighteen inches from the ground. The excitement of the curious chickens which stand around on the outside will quickly dispel the hatching idea from the most persistent sitting hen. Feed and water should be given the same as usual."



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Advantages of Farm Life.

It is the farmers' boys who are most likely to succeed, whether in business or in professional life. Spending most of their time under the open sky, breathing fresh air, and eating simple food, they are more likely to have vigorous health and strong constitutions than are their city cousins. Brought into constant contact with nature, they absorb a great deal of useful knowledge, and acquire habits of observation. Then, too, the regular farm work, the "chores" and numberless other little things keep them well occupied and enable them to feel that they are earning their way, thus giving to them a sense of independence and cultivating a spirit of self-reliance and manliness. The performance of a deal of drudgery is an indispensable preparation for all real success in life, whatever the occupation. A boy who is afraid of work or of soiling his hands need not expect to accomplish much in the world. Country boys have their full share of fun, but there are many disagreeable duties on a farm which farmers' boys learn to accept as a matter of course. Edward Eggleston, speaking of the value of his farm training when a boy, once said to me: "I learned one thing of great value, and that was to do disagreeable things cheerfully."—Josiah Strong, in Success.

Indiscriminate Feeding.

On some farms all kinds of poultry are fed together, old and young, and geese, ducks, turkeys and chickens. There are always domineering individuals in all barnyards, hence it will be an advantage to separate the older from the younger stock when feeding. The natural consequence of promiscuous commingling of fowls is that the largest and strongest take their choice and leave the refuse to be eaten by the weaker, whereas the best should be given to the poorest in order to help them to a condition of thrift and growth. It is also more economical to make some distinction when feeding, especially when a profit is desired.

The Milkman's Steady Job.

A veteran New York State dairyman who has been in the business over half a century says that commencing in 1876 he was away from home but one night in about twenty-two years. He always used to do his own milking. His average for many years was not less than twenty cows night and morning. He milked one cow nineteen years and about ten months in the year. In the year 1879 twenty cows gave him 180,000 pounds of milk, which netted him from the cheese factory \$1,600, besides having his whey to feed to the hogs and calves.

Science AND INVENTION

The migration of birds is being studied in a new manner by German ornithologists. Hundreds or thousands of crows are being captured at Rossitten, in East Prussia, and, after being tagged with a number and date, are again liberated. It is requested that when one of these birds is killed, the tag and date and place of killing shall be forwarded for record.

Some mysterious deaths of cattle in Alderney have been traced to a curious source. Mercury was found in the dead animals, and also in many meadows and gardens, and the presence of the poison is attributed to a recent explosion of a factory for fulminate of mercury. The fumes from the explosion were carried to a distance by a strong gale. As a result of the inquiry, the manufacture of explosives in the island has been prohibited.

A still unexplained effect of the electric light somewhat resembles mild sunburn and sunstroke. The heat of the electric arc employed in the reducing furnace is so concentrated that it melts steel like tallow, but the thermometer a dozen yards away is scarcely affected. Even at this distance from the heat, however, persons experience a burning of the face and other exposed skin much like that produced by intensely hot sunshine. The skin becomes deeply bronzed, and there is temporary blindness in natural light, with pain in the eyes, followed by headache and insomnia.

There is now in operation, on a commercial scale, at Port Chester, N. Y., an artificial camphor factory, the product of which is intended to compete in the market with the natural substance. It is maintained that it does not differ, except in the manner of its origin, from that extracted from the camphor trees of Formosa. Artificial camphor is made from essential oils derived from turpentine. Chemically the only difference between turpentine and camphor is the possession by each molecule of the latter of one atom of oxygen which is lacking in the former. By a chemical process the needed oxygen is supplied. Three-fourths of the whole supply of camphor is used in the arts, and one-fourth is medicine.

The people called the Todas, living in the Nilgiri Hills, India, have a curious religious ritual evolved out of the ordinary operations of the dairy. The priest, says Dr. W. E. Rivers, is the dairyman, and the temple is the dairy. Only the milk of the sacred buffalo is churned in the dairy temple. The milk of buffaloes that are not "sacred" is churned in the front part of the huts in which the people live. The dairy temples are of different degrees of sanctity corresponding to the different degrees of sanctity of the buffaloes tended in each. Even the vessels used in a dairy temple vary in sanctity, those that contain the milk being more sacred than those that only receive the products of the churning.

The N-rays of R. Blondlet should interest us especially because they are so common about us. They were discovered while the light from a Weisbach burner was being concentrated by a quartz lens on a sulphide of calcium screen, the lens causing the luminosity of the screen to persist after the light was removed. They are now known to exist not only in the incandescent gas, but also in the ordinary gas flame burning without a chimney, and in the radiation from a red-hot plate of silver or talc, and they excite radio-activity in various substances, such as a plate of lead. The invisible rays can be detected by the slight increase of luminosity of a phosphorescent screen or of a very small gas flame. These rays seem to be given off by the human body, and D'Arsonval has shown that a screen of platinum-cyanide of barium, made slightly luminous by radium, lights up on approach to a muscle, and is so sensitive that it can show the course of a nerve under the skin.

ANIMAL INSTINCT.

President's Opinion on the Question of the Day Among Naturalists.

I am convinced there is nothing in the notion that animals consciously teach their young. Is it probable that a mere animal reflects upon the future any more than it does upon the past? Is it solicitous about the future well-being of its off-spring any more than it is curious about its ancestry? Persons who think they see the lower animals training their young supply something to their observations consciously or unconsciously; they read their own thoughts or preconceptions into what they see. Yet so trained a naturalist and experienced a hunter as President Roosevelt differs with me in this matter. In a letter which I am permitted to quote he says:

"I have not the slightest doubt that there is a large amount of unconscious teaching by wood-folk of their off-spring. In unfrequented places I have had the deer watch me with almost

as much indifference as they do now in the Yellowstone Park. In frequented places, where they are hunted, young deer and young mountain sheep, on the other hand,—and of course young wolves, bobcats, and the like,—are exceedingly wary and shy when the sight or smell of man is concerned. Undoubtedly this is due to the fact that from their earliest moments of going about they learn to imitate the unflinching watchfulness of their parents, and by the exercise of some associative or imitative quality they grow to imitate and then to share the alarm displayed by the older ones at the smell or presence of man. A young deer that has never seen a man feels no instinctive alarm at his presence from merely accompanying its mother. If the latter feels such alarm, I should not regard this as schooling by the parent any more than I should so regard the instant flight of twenty antelope who had not seen a hunter, because the twenty-first has seen him and has instantly run. Sometimes a deer or an antelope will deliberately give an alarm-cri at sight of something strange. This cry at once puts every deer or antelope on the alert; but they will be just as much on the alert if they witness nothing but an exhibition of fright and flight on the part of the first deer or antelope, without there being any conscious effort on its part to express alarm.

Moreover, I am inclined to think that on certain occasions, rare though they may be, there is a conscious effort at teaching. I have myself known of one setter dog which would thrash its puppy soundly if the latter carelessly or stupidly flushed a bird. Something similar may occur in the wild state among such intelligent beasts as wolves and foxes. Indeed, I have some reason to believe that with both of these animals it does occur—that is, that there is conscious as well as unconscious teaching of the young in such matter as traps."

Probably the President and I differ, more in the meaning we attach to the same words than anything else. In a subsequent letter he says: "I think the chief difference between you and me in the matter is one of terminology. When I speak of unconscious teaching I really mean simply acting in a manner which arouses imitation."

Imitation is no doubt the key to the whole matter. The animals unconsciously teach their young by their example, and in no other way.—From John Burroughs's "Current Misconceptions in Natural History" in the Century.

A SAFE DIET RULE.

Eat the Smallest Amount of Food that Will Preserve Good Health.

How shall one determine how much food to eat? Too much mystery has been thrown upon this subject. Let your sensations decide. It must be kept in mind that the entire function of digestion and assimilation is carried on without conscious supervision or concurrence. It should be entirely unfeared and unknown, excepting by the feeling of bien-etre which accompanies and follows its normal accomplishment. Satiety is bad. It implies a sensation of fullness in the region of the stomach, and that means that too much food has been taken. The exact correspondence, in a healthy animal, between the appetite and the amount of food required is extraordinary. As a rule, the meal, unless eaten very slowly, should cease before the appetite is entirely satisfied, because a little time is required for the outlying organs and tissues to feel the effects of the food that has been ingested. If too little has been taken, it is easy enough to make it up at the next meal, and the appetite will be only the better and the food more grateful.

No one was ever sorry for having voluntarily eaten too little, while millions every day repent having eaten too much. It has been said that the great lesson homeopathy taught the world was this: That whereas physicians had been in the habit of giving the patient the largest dose he could stand, they have been led to see that their purpose was better subserved by giving him the smallest dose that would produce the desired effect. And so it is with food. Instead of eating, as most people unfortunately do, as much as they can, they should eat the smallest amount that will keep them in good health.—Century.

An Accommodating Cook.

Mrs. A (at the phone)—Wait a minute till I ask Bridget. If she has no objections I'll be delighted to lunch with you tomorrow. (A moment later): Oh, hello! Mrs. B., yes, I can. Bridget says I can. Isn't it lovely? Thanks, ever so much. Good-by.

Mrs. B. (soliloquizing enviously)—What wouldn't I give for a cook like that!—Detroit Free Press.

Statue for the First Volunteer.

A statue of Colonel Josias R. King of St. Paul, said to be the first volunteer in the civil war, will surmount the monument to be erected in Summit park, St. Paul.

People who are trying to succeed are so much more agreeable than those who have succeeded.



The way to catch a woman is not to chase her.

Man makes money and the money makes the man.

It is not courage to admonish the cook; it is suicidal irresponsibility.

Marrying for money is as easy as cashing counterfeit bills at a bank.

Maybe the good wouldn't die so young if they weren't so lonesome.

It is dumfounding how interesting a wife can be if she's somebody else's.

Generally we wait till our bread gets stale before we cast it upon the waters.

It takes a great deal of belief to make one feel as comfortable as a little bit of faith.

Nothing makes a woman so proud as to see the point of a story after she has laughed at it.

The prose with the poetry is that the same hand that rocks the cradle spans its contents.

It is a good thing for a man to have a temper, so his wife will think one in the family is enough.

After a man in politics has been whitewashed he looks as though he had fallen into an ink barrel.

It beats anything how natural it is for a girl in the dark to make a mistake and sit down on a man's lap.

What keeps most people poor is the fear that they can't afford to appear not to afford things other people have.

The devil gets pretty nearly what he is looking for when he hits upon a foolish woman who means to be good.

It takes a widow to look so scared when the lights begin to go out that a man hasn't heart to disappoint her.

No man can ever understand women till they can explain why girls string so many ribbons where nobody ever ought to see them.—New York Press.

BACK IN 1781.

The two most notable military revolts in the history of the Revolution occurred in Northern New Jersey. On New Year's day, 1781, most of the Pennsylvania line revolted at Morristown. Thirteen hundred men marched to Princeton, declaring that they would have money, or blood, from Congress, which was then sitting at Princeton, having been driven from Philadelphia. Joseph Reed, president of the council of Pennsylvania, with a congressional committee, met the mutineers at Princeton. The difficulties were arranged, the men being paid, so far as possible, and many of the Pennsylvania troops, 160 men of the New Jersey brigade left their huts at Pompton Jan. 20, 1781, and marched to Chatham, with similar demands. Five hundred New England soldiers were quickly sent in pursuit, an adjustment was effected, and the revolting troops returned to their duty. On their way back to Pompton a few of the ring-leaders again revolted, and were promptly arrested and executed. This put an end to the spirit of mutiny.



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Rather Hard to Please.

Mrs. Moke Smith, of Calway county, has perhaps the most varied and remarkable matrimonial career of any woman in Missouri. Her life shows what may be accomplished under the marriage and divorce laws of this State by a woman who is active, industrious and not slow about falling in love or falling out again. Mrs. Smith has just been married for the third time. Her maiden name was Fannie Terrance. Her first husband was Moses Shaffer.

After living with Mose a while she got tired of him, secured a divorce and married Moke Smith. Tiring of Moke, she got a divorce from him and united herself to Ferd Altheiser. After living with Ferd a while she concluded Moke was a better fellow than she had thought and she left Ferd and was remarried to Moke. Tiring of Moke a second time, she again separated herself from him and in due course of time was wedded to J. H. Berry. Berry, however, suited her no better than Shaffer or Smith or Altheiser and she soon left him. Not long afterward she was remarried to Berry, only to soon weary of him and get a divorce from him. Now she is trying Moke again.—Kansas City Journal.

"We used to think she was a lazy girl." "Yes; that was when she was poor." "How about it now?" "Why, now that she is rich, we merely note the evidence of lassitude and ennui."—Chicago Post.