

## PRACTICAL FARMING.

### THE WAY TO WORK BUTTER.

The use of a barrel or box churn is now quite general, yet many cling to the old-fashioned dash variety. With the latter it is almost invariably customary to churn until the butter comes in a hard lump, or solid mass. Granular butter can be made in a dash churn as well as in the most approved of modern models. The whole secret lies in stopping the churning at the proper time. This is when the butter particles appear about the size of wheat kernels. The old rule used to require a steady motion of the dasher until the butter had gathered sufficiently to hold this up when rested upon the top of it. By lifting the butter in granules from the churn with a ladle or skimmer, the buttermilk can be easily washed out in the butter bowl.

Too much washing undoubtedly injures the flavor. While it is generally conceded that washing until the water comes off clear assists in retaining its quality, if it is not to be consumed in the month or six weeks first following its manufacture a middle course is advisable. Wash the butter in two or three waters, then salt to taste and work into shape.

Probably no single feature in connection with the new and improved methods of butter making which have been advanced of late years finds so slow acceptance among farmers' wives as that recommending only a single working. This is the rut in which many of them stick. They have always worked their butter twice and consider this indispensable, when the fact is one working, and that at the time of salting is all that is required.

When gathered in granules, only sufficiently to allow the butter to float upon the surface of the buttermilk—and, by the way, this is greatly facilitated by adding a handful or more of salt to the contents of the churn when the separation begins—the washing free from the milk is an easy task. Every grain is distinct and separate from every other grain. The cold water prevents their adhesion and each is individually brought in contact with the cleansing fluid. Then when drained and while still in granules, add the salt, scattering it over the mass and incorporating it thoroughly with the ladle. The action of the salt will be to start the brine formed by its dissolving. Drain this off and work exactly as would be done had the butter been previously salted. (Work until all excess of moisture is removed, and the butter is a smooth, waxy mass. One test of sufficient working is to make a wafer-like pat with a portion of it, using the ladle of course, then lift one side and fold together. If it almost folds over without becoming broken yet finally does break, it is worked enough.)

Overworking butter is injurious, rendering it salty and spoiling the grain. Insufficient working leaves an excess of water incorporated with it and also leaves the butter mottled and streaked in appearance after standing a few hours. The whole operation may as well be done at once as to let it remain with the salt insufficiently blended for several hours, then work it. Every butter-maker knows how difficult this is when the butter has become hardened. It is well-nigh impossible to get it properly worked. Try the once working plan and you are sure to like it, especially in very cold weather.

### PLANNING AN ICE HOUSE.

The proper requirements of an ice house are first, a dry foundation perfectly sealed against entrance of air; second an air-tight, non-conducting wall around the ice of such a character that any damp that might exist or happen in the wall, says Massachusetts Ploughman, may be evaporated from the outside and thus tend, by the influence of evaporation to cool the wall; third, a well ventilated cover or roof, through which a current of air may pass by which moisture gathering in the covering over the body of the ice may be evaporated, with the result of keeping the covering dry and cool; fourth, a solid body of ice packed so that all blocks, closely fitting, or having the spaces between them filled with small ice or the powdered fragments made in the filling swept into the crevices, make a single solid block of ice. These requisites are best secured by a wooden house with double walls filled in between with any dry, porous substance, so as to secure as many minute air spaces as possible. Dry sawdust answers this purpose better than anything else. Dry tan-bark comes next; fine charcoal next and after these dry forest leaves closely pressed down will serve the purpose. The house should be placed on elevated dry ground, exposed to the wind and air and having no shade. It should have a tight roof with gables open to the air, so that a free current of air may pass through and over the covering of the ice, keeping this covering dry and perfectly sustaining its porosity, which would be destroyed if the covering should be wet and soggy. Inside the floor should be sealed against the entrance of air with the greatest care. This is the weakest part of an ice-house and is to be looked after particularly. A cemented floor is the best. There should be a good drainage on the floor by making several small channels all conveying to one corner, where a perfect air-trap made like an S laid on its side is placed, in which water will always stay thus preserving the bottom from access of air which would

otherwise enter and soon cut a way through the ice. If these requisites are secured, no inside packing is needed; the ice may be packed close to the inner wall. Another safeguard is to have the ice cut in blocks so that the joints are broken, as for instance, 16 by 24 or 12 by 18, three feet lengthwise crossing two thus effectually preventing circulation of air through the mass. To illustrate the advantage and effect of this, it may be mentioned that ice cut in this way has been packed out of doors in a pile and merely covered by a heap of refuse tan-bark and simply enclosed in a rough boarded enclosure and it kept perfectly well all the summer. If these necessary conditions are secured, any sort of shelter above ground in an airy location will keep ice, but an underground storage will fail, because the conditions required cannot be secured.

### STRAWBERRY DEVELOPMENT.

The improvement of the strawberry has been slow, but as Prof. W. J. Green points out there has been progress nevertheless. No perfect berry for all purposes has been produced but the intensification of desirable traits and characteristics is going on continually. The station has grown thousands of seedlings but all have been discarded, although many were more valuable than the majority of those offered for sale. While good varieties are of great importance to fruit growers, there is danger of making the variety question unduly prominent. It would be well to give more attention to intensive culture, as there are but few crops that offer greater inducements in this direction than the strawberry.

The use of water for irrigating strawberries is another means of intensive culture, especially during the season of fruiting. The conservation of moisture is best accomplished, the first season by fall or early plowing, and thorough cultivation. It is quite as necessary to stir the soil after light as after heavy showers, even though no crust is formed.

The following are the most promising of the new varieties: Aroma, Anna Kennedy, Beauty, Copernicus, Clyde, Carrie, Enormous, Glen Mary Hall's, Favorite Portage, Ruby, Rio, Staples, Tennessee Prolific. Of well known kinds that can be recommended for general cultivation, Bubach, Brandywine, Greenville, Haverland, Lovett and Warfield are the best.

### QUALITY OF FRUITS.

It is a somewhat common notion that the trees of the finest flavored varieties of fruits are unhardy, weak in growth, and unproductive, that the fruit itself is of small size, and that these qualities are necessarily associated.

It is true that some very fine fruits grow upon trees deficient in natural vigor and hardiness, and that some of the finest varieties for eating purposes are small. But there is no necessary relation between the quality of the fruit and its size or the hardiness of its tree.

Many fine dessert fruits are large, and their trees hardy and productive; and not all small fruits are of good quality. Many seedlings are small and of poor flavor, and therefore do not often appear in fruit lists.

Facts show that high quality and small size do not necessarily go together. And the fact that all the small-sized, unhardy and unproductive varieties listed by nurserymen are of superb quality, merely shows that a small or weak variety is not introduced unless its fruit is of such exceptionally fine quality as to warrant its cultivation, notwithstanding its delicate constitution.

### PIGS NEED SUNLIGHT.

A young pig is much like a flower; it must have plenty of sunlight to make it develop and grow into usefulness. Many a fine litter has been seriously injured for the lack of it. A writer makes the following sensible remarks: "Where farmers have a hog house in which a number of brood sows are having their litters, we advise putting in cheap sash on the south side, which can be done very easily and, at present prices at small cost. A brood sow should never be allowed to produce a litter in a dark place. The north side of a building is no place for her at all. Choose the south side, or the east if nothing better can be done, and let there be plenty of glass windows to admit the sunlight. In the summer time these windows can be removed and their place taken by some kind of screen, or, if nothing better, a coarse gunny sack, which will admit the air and keep out the flies if pigs are to be kept in the building. A little attention to this matter of light will save plenty of money and prevent serious disappointment."

### BARN VENTILATION.

An ingenious way of securing ventilation on a long barn with two cupolas was as follows: There were large windows in the cupola, and a stick run across from one window to the other, that was six inches longer than the cupola was wide. The stick fastened onto these windows. Now, when the south wind was blowing hard, it shut that south window and fastened out the one on the north side, and when the north wind was blowing hard, it shut the north window and pushed open the window on the south side six inches and in that way formed a certain amount of ventilation in the top of the barn. From the stables there ran ventilating flues that opened out near the roof, it was a very ingenious way of securing automatic action by the wind.

### FALL TOP-DRESSING.

There are positive advantages in fall

top-dressing with manure as compared with any other way of disposing of it. In no other way can it be so thoroughly incorporated with the soil, nor can it be in any other way made so useful in giving crops the early start in spring that is always most important in securing a large yield. If we give a plant a vigorous growth early, its roots will strike deeper and extend farther than if its first growth was stunted. This is a very important point with corn and potatoes, which would always be best if manure were early in the spring so incorporated with the soil that they could be planted early and make a strong growth from the first. Most of our spring crops are sown and planted too late, because it is only by late planting that the soil can be got to proper warmth and condition for vigorous growth. But if this ground were top-dressed with stable manure, the ploughing of it under in the spring would fill the soil with warm air even before the seed was planted, so that it would mean both warmth and fertility for the young plants as they are starting into growth.

### FIVE REMARKABLE TREES.

Which Rank Among the Curiosities of Plant Life.

The "whistling tree," or acacia fistula, is found in Nubia and the Sudan. The Arabs call it "soffar" or pipe, because of the whistling sound that it produces, and the specific name of "fistula," a word also meaning pipe or flute, has been given it for the same reason.

Insects infest the tree, and deposit their eggs in its shoots. A gall-like excrescence, about an inch and a half in diameter, is produced at the base of the shoots, and when the larvae have emerged from circular holes in the sides of the shoots, the holes, played upon by the wind, produce a whistling sound equal to that produced by a sweet-toned flute.

The "cow tree" is so called because it yields an abundant supply of milk. To obtain the milk, deep incisions are made in the tree, from which the fluid flows into vessels placed ready to receive it. This vegetable milk is white, somewhat viscid, and has an agreeable flavor; and an analysis of it shows that it is very much like the milk of a cow in its composition. The cow tree grows on the slope of the mountain chain bordering on Venezuela.

### THE "CLOTH TREE"

is found at Otaheite in the South Sea. The bark is taken off in long strips and put to soak over night in running water. The soaking softens it, so that the inner fibre may be easily separated from the rest of the bark. The fibres are put together in lengths of about eleven or twelve yards, and the lengths are placed side by side until they are at least 12 inches in width, and two or three layers of fibres are put one upon another.

The fibres adhere together in one piece, and the material thus formed is beaten upon a smooth piece of wood until it becomes as thin as muslin. It is then bleached in the air for a time, when it is ready to make up into clothing.

The "stinging tree" of Queensland is pleasing to the eye, but dangerous to the touch. Its effects are curious; it causes great pain to the person or animal that has the misfortune to get stung by it, but it leaves no wound, no mark of any kind. And for months afterward the part stung is painful in rainy weather, or when, in any way, it gets wet. Frequently, it is necessary to shoot horses and dogs that have been stung by the tree, so maddening is its effect upon them.

The "angry tree" grows in Nevada, Eastern California and Arizona. When in the least disturbed, this highly sensitive tree shows its anger by ruffling up its leaves and emitting a disagreeable odor.

### TOBACCO, MAN'S FRIEND.

A Celebrated Physician's Opinion as to the Value of the Weed in Certain Cases.

Dr. Norman Kerr, an English physician, says it would be impossible for him, without disloyalty to science and to truth, to denounce the smoking of tobacco as always injurious. There are some persons who find relief from the agony of their asthmatic paroxysms, as there are others who, inheritors or subjects of the narcomaniacal intoxication mania, are enabled to ward off these morbid and well-nigh overpowering impulses by a smoke. There are occasions, such as in the trenches during military operations, when, worn out with exposure and fatigue, or when exhausted by slow starvation, with no food in prospect, a pipe or cigar will be a welcome and valuable friend indeed, resting the weary limbs, cheering the fainting heart, allaying the gnawing hunger of the empty stomach.

Tobacco is somewhat of a disinfectant. If he had to see patients in a yellow fever ward, long as it was since he last smoked, he should smoke again as a prophylactic against this dire disease. Tobacco smoke, on being passed through the interior of hollow bulbs lined with gelatine containing disease germs, had destroyed the microbes of cholera and pneumonia. Further, when any father utterly worn out and irritable with the worries of the day, is ready to find fault with everything, from the prattling of the children to the cooking of the dinner, if his wife is wise enough to persuade him to smoke, the bear becomes a lamb, and domestic peace is assured.

## REMARKABLE DISCOVERY.

### NICOLA TESLA'S ELECTRICAL CURE FOR SKIN DISEASE.

Envelops the Human Body in Luminous Flame with Wondrous Results—Experiments Have Reached Most Startling Results.

Nikola Tesla is now in the midst of intricate electrical experiments which promise most valuable hygienic results as soon as he declares himself ready to put his recently acquired knowledge into practical operation, for the ridding of the human skin of all extraneous matter, including parasites of every nature, whether they are virulent disease germs or not.

These experiments have been conducted by Mr. Tesla for some time within the secret precincts of his laboratory, and all of the matters involved, from the first inception to the last experiment, have received most careful consideration, and a number of times in his published writings he has hinted at what he believed and what he expected to accomplish, but only incidentally, and in a manner that has made his readers anxious to know just what it is he expects to do and how he intends to accomplish it.

Mr. Tesla was found in his laboratory with head and hands full of matters electrical as usual, and when spoken to of the interests his hints and suggestions of what he was doing had aroused he hesitated for a moment before answering.

Then as a foundation, the electrician explained that it is a fundamental electrical law, well known, that two bodies charged with the same kind of electricity, either positive or negative, repel each other; that if a body be charged with electricity from a static machine the electricity accumulates on its surface.

"Now," continued Mr. Tesla, "if there are small bodies of the minutest weight on that electrically charged surface, and if they are conductors capable of taking electricity, they will also become charged with the same kind of electricity."

"This repulsion under the pressure I have referred to is increased the more under the law that governs it, for if a given electrical pressure is doubled the repulsion is increased fourfold, and even more than this, on account of another law, because electricity preferably accumulates on points, and an extremely small body is practically a point. So the normal accumulation on the surface referred to—say it is of brass—is exceeded by the accumulation on the small bodies that may be on that surface."

"I have found ways of producing all degrees of pressure, even to a degree that approaches more or less to that of lightning; and the repulsion exerted on the small particles—when a body is charged with such a tremendous pressure—is so great as to actually tear asunder not only the firmly adhering small objects, but the very particles of the metal on which they rest. Now, for an illustration, if a brass ball is painted with bronze paint—which is conducting—the whole of the paint is almost thrown away when the pressure is turned.

"But further, you know how firmly bronze paint adheres when it has dried. It requires great force to tear it away, but under the pressure I refer to not only is the bronze torn from the brass surface, but the hard brass itself is subjected to such a pressure that its particles are torn asunder, scattered with great force and thrown away, not only to distances measured by feet, but measured by miles. Keep up the action, and finally the entire solid brass ball would be carried away, but ages would be required to accomplish this result with the present apparatus, because of the smallness of the particles. Still, if the pressure was sufficiently great—as in the case of a lightning stroke—the brass ball could be destroyed in an infinitesimal period of time."

"Now we will see what all of this leads up to. I know that

### THE SCIENTIFIC FACT

of the result described is accomplished, and we will consider its application to the human body in cases of skin disorders or any disorders that may arise from the skin being attacked by disease germs or parasites of any sort. Since small particles on a body can be thrown from it by the means I have told you of, it is thinkable or even very probable that a human body may in this way rid itself of any extraneous particles that may be on it, and as the disease germs, if any, would be among these particles, the possibility and practicability of such treatment naturally suggests itself.

"I have tried experiments in line with this suggestion and have reached most remarkable and startling results, that impress me as being of great value. They will be continued and their actual value positively ascertains before the method is unqualifiedly recommended."

"By means of my apparatus I have

applied an electrical current from a static machine so as to agitate the air surrounding a human subject in a most extreme and remarkable manner. The startling effect was to make the person when operated on in a darkened room appear to be clouded in a haze of luminous mist.

"The electrical pressure not only violently agitated the air around the body, but the repelling force threw off all particles with such violence that their extremely rapid motion through the atmosphere caused a friction that consumed them, and for the fraction of a second making them luminous so much so as to cause them to appear like myriads of infinitesimal meteors shooting in all directions away from the repelling body."

"I have gone far enough with these experiments to suggest the possibility of completely enveloping the human body in an actual sheet of flame, without injury to either the skin or the nerves."

### THREE HEROINES.

Heroic Conduct of English Young Women Praised by Humane Society.

The report of the Royal Humane Society is more than usually interesting this month, says the London Standard. If evidence be wanted of the strength and courage and hardihood of our young women, here it is—with a vengeance, old-fashioned folks would add. The silver medal is granted to Miss Fullerton, of Dudhope Terrace, Dundee; of such a heroine every detail is worth note. Miss Fullerton was strolling on the Forfarshire coast, apparently, when she observed a manufacturer in great distress out at sea. We are not told whether she threw off any of her clothes, but since the man was seized with cramp and was drowning, it is to be supposed that she did not. The distance was 300 yards, and the sea "heavy," but Miss Fullerton swam out, and "exhorting the manufacturer to preserve his presence of mind"—also "holding him up"—she conveyed him safely until a boat picked them up midway. This is something like a "record." "Our fathers would not have believed it possible for a girl to swim a quarter of a mile in her clothes through a heavy sea, but this brave young athlete actually supported a manufacturer—who run to weight as a rule—in the agony of cramp."

Miss Joan Harris, of Belfast, also plunged into the sea without undressing and rescued a grown girl; further circumstances are not given, but swimmers know that it was a feat, anyhow. Miss Louisa Bright, of Reading, too, did not waste time in preparations when she saw a schoolboy drowning in the Kennet. It is not many years since swimming was regarded as a dubious sort of accomplishment for women.

### BRITISH ARMY SURGEONS.

Although the pay is liberal and the military rank substantial in the army medical department of the British service, it is found difficult to get army doctors, says an exchange. At present the establishment only numbers eight hundred and ten, while, in spite of the lowering of the standard by abolishing the rule that those who have already failed twice at the entrance examination shall not be permitted to compete again, there has been an insufficient number of candidates for the advertised vacancies of the present year. This does not refer to the army medical service of India, but to the home service. The whole matter is being very freely discussed in the English papers.

### DON'T MOPE.

There's Nothing Wears a Man Out So Quick as Dwelling on His Tares.

"The worst possible thing for a man to do when cares oppress him," said Mr. Gratebar, "is to mope; to sit down and think it over. If there is anything on earth that will milder a man and make him good for nothing, that's it. What he wants is activity; to keep moving. If he can't work, or thinks he can't, let him get out and take a walk, and start his circulation. It's amazing what a little fresh air and exercise will do for a man. Keep moving, and the first thing you know you'll find yourself whistling, or humming a tune, and then you laugh to yourself a little, and go back and go to work."

### HER VIEW OF THE MATTER.

Talking about happiness, observed Aunt Maria, severely, do you know what I think about the matter, John Samuel? John Samuel didn't know, and mildly admitted as much. I just think it all comes down to this, that mostly everybody's for locking up their house and a-searching the world for that contentment they've thrown away in their own lumber room.

### AT BOTH ENDS.

Isn't Mr. Dumpley light on his feet for a big man? she asked of her escort, who regards Mr. Dumpley as a rival.

Not a particle lighter than he is in his head.

### WELL-NAMED.

Papa said a school boy who had been badgered by his schoolmates they are calling me names.

What are they calling you son? asked the solicitous father.

Corns, corns, that's what they call me.

And when papa interviewed the schoolmaster the next morning the pedagogue was put on his mettle.

They call your son 'Corns' because he's at the foot of the class.

And papa kicked his brilliant son