FOR THE FARMER.

Feeding "Store Cattle."

One great specialty of agriculture is the breeding and feeding of beef cattle for market. The expert in this business has learned that there must be, for the highest profit, no standstill in the life of the beef animal. Where there is no growth, the food eaten is lost. All growth comes from the extra food; if only enough is given to support the animal, it must remain stationary, without any increase in weight or in value. A numerous class of farmers keep what they call "store" cattle through the cold season, in a standstill condition; and they do not seem to realize that they have been throwing away all the food consumed through the winter, because they have not given food enough to produce any growth. This ought to be so plain to them as not to need explanation. The store animal that makes no growth, is actually becoming less valuable because its capacity for digesting food becomes impaired, and it often takes a month, on good grass, to get these store cattle into a thrifty condition again. If these farmers would study this storing system carefully, they certainly would not repeat it. As we have often shown, it takes two-thirds of a full ration to keep the animal alive, without growth, and this is lost unless the other third is added, to produce a vigorous growth. It costs from $10 to $15 to store a steer through the winter, and if the farmer has ten head, his loss will be from $100 to $150; while had he fed $50 to $75 worth more of feed, the growth would have paid a profit on the whole feed. This system, then, shows a great want of foresight.—[National Live-Stock Journal, Chicago.

Fruit Garden in December.

Gather up all stakes, labels, boxes, and store whatever may be of future use, and make kindling wood of the rest. Surface drainage should be provided to carry off water from rains and thaws. Young trees planted last fall or spring, need a mound of earth at the base of the trunk, to steady them against the heavy blows, and also help to keep off mice. Cut cions in mild weather, always taking vigorous last season's shoots. Pack with sawdust and moss, first carefully labelling them. Strawberry beds, if not yet protected, should be covered with straw, hog hay, or leaves. Prune in mild spells currants, gooseberries, grapevines, etc. If trees or small fruits are to be planted next spring, decide upon kinds, where they are to be bought, and order early. Fruit, if stored in the house cellar in large quantities, may give off so much carbonic acid as to contaminate the air of the rooms above. Provide ventilation, conecting with a chimney if possible. Keep a thermometer in the fruit cellar to aid in maintaining a low temperature—just above freezing. Manure should be drawn to the orchard while the ground is frozen, ready for spreading in early spring. Gates and fences should be in condition to keep out animals. Rabbits are most readily kept from young trees, by sprinkling the trunks with blood. Set traps. The eggs of the tent caterpillar, which are glued to the twigs in a band near their ends, should be got off and destroyed.

Swine-Farming.

We are more and more impressed with the value of hogs on the farm. Many farmers make their cows the main feature; the buildings are constructed with reference to their management, and the rotation of crops is fixed to promote the same end. We also have farms devoted to horse breeding, and whole sections of country where sheep breeding is the leading industry. To make these different branches of husbandry a specialty, is the right course for success. In the great corn districts of the West, hogs are raised in large numbers, but we are forced to say, from observation, that it is generally corn, more than care, which gives the business its degree of success. Often enough corn is wasted if fed with care to fatten the entire stock. The western hog does not fill the entire place for which he was designed. He is simply a condensed corn crib, with a great many rat holes. This business basis may possibly answer where corn is cheap and land requires no fertilizer, but in the largest portion of this country corn is not so abundant that the farmer can afford to waste it, or is land so rich but that it can become more productive. Hogs should be made a factor of improvement on every farm. We should have swine farms the same as dairy horse and sheep farms, with the fields and buildings adapted to them. Hogs should be fed in the fields, with a rotation in their feeding grounds, the same as in crops. In this way, in a few years, the whole farm can be gone over, and every field enriched. There is room here for solid missionary work, both in improving the condition of the pigs and of the people.

Litter Swine Lightly.

There is but little danger of horses, cattle, and sheep being given too much litter; but where swine have a shelter that wards off winds and rains, and where the hogs are allowed to herd together, they require very little litter. Giving them too much is a common error, and is the source of nearly all the bronchial and pulmonary diseases which affect hogs in the late winter and enrly spring. The body of the hog is of such a nature, and these animals lie so close together, that if they, have for litter a poor conductor of heat they become overheated in the shelter and chilled when they come outside. But the liquid exerement of swine is too valuable to be lost, and they should be supplied with dry earth. This affords a convenient means of saving both solid and liquid excrement and does not lead to disease. When hogs rapidly foul their bed, the litter should be removed each morning and a new quantity supplied.

To be profitable, the litter must be properly composted. Build a four square pen of poles in any convenient situation, and place a roof over it that will effectually ward off the rain. Into this keep the mass level or lowest in the middle. There is no drainage from the pen, as there is a roof over it. Use enough litter to hold all the urine; it rots well, rarely requiring forking over before using. It is, however, easy to build another pen at one side, and throw the compost from one to the other. Frequently fork over the surface, going as deep as possible, scatter shelled corn over it and turn in the hogs being careful to turn them out as soon as they have done rooting. If the hogs do not go deep enough, make holes with a sharpened stick, and fill them with shelled corn. An enterprising hog will go to the bottom.

The Witch's Ring.

A curious, sleepy old village is Adlingtune. In the course of my ramblings in the old disused burial ground I found an old stone, and on it I read the words:

BARBARA CORNWALL.
BORN 1620, DIED 1680. AGE, 60 YEARS.
Lawfully executed for witchcraft.

I inquired of several persons as to the history of this woman. Finally I found an old woman who told me the story.

Old Barbara was tried, condemned, and hanged, protesting innocence to the last. The little money found in her possession was used to buy that gravestone; and to this day if anyone was bold enough to go to her grave at midnight on the same day of the year on which she was hanged and say: "Barbara, I believe you were innocent," at the same time stretching out a hand over the grave, she would appear to him and place in his hand a talisman.

This talisman would bring good fortune as long as he retained it, but at some time in his life the witch would return to claim he, own.

I found myself almost unconsciously wandering back through the old burial ground to the witch's grave. Carelessly glancing at the inscription, I was surprised to find that very day was the 200th anniversary of her death.

The world was wild and weird that night when I stole forth from the village. Climbing the low stone wall, I made my way to that dark, dreary corner where the old witch reposed. By and by the village clock tolled twelve. Mechanically I strove to speak the words I had been told, but my lips refused to form a sound.

Still I stood, in that awful, black silence, chilled with fear, until with a mighty effort I reached out my arm over the grave and grasped—a hand.

It was only for an instant—not that, for it was jerked away in a twinkling—but long enough to feel how warm and velvety it was, and how very small. I cleared the old wall at a bound and was out on the moonlit road, walking toward town. The touch of those fingers thrilled me as with an electric shock. Gradually the consciousness forced itself upon me that I held something in my clenched hands—a ring set with a flashing stone. On reaching my room at the little inn I sat down and examined the ring.

It was curiously carved and massive. The setting was composed of several small colored stones set in a circle about a large diamond, the name inside, "Barbara."

Fortune smiled upon me from that night. Two years of busy life had passed and old Barbara's talisman was still unreclaimed.

Do you believe in love at first sight? Well, if the first appearance of Walter Wynam's sister had not conquered me the touch of her hand when she welcomed her brother's friend would have enslaved me for ever. Never had a touch so thrilled me since—since I held the witch's hand in the graveyard. The same peculiar shock passed through me, and the memory of that spectral night came over me like a flash.

The end came about through my asking the young lady if she believed in ghosts.

"I suppose I should," said she, laughing, "considering my experience."

I implored an explanation, and she related the following story:

It was about two years ago when a party of girls, just home from school, were visiting a friend down in the country. One of the girls had heard a foolish story about a witch's grave, and some nonsense about her annual appearance and a talisman, and when I expressed my incredulity they braved me to put it to the test. What is the matter? The place? A little town called Adlingtune.

"Foolishly I accepted their challenge, and received a terrible fright. I carried out the instructions, and stretched my hand out over her grave. It was so dark I could see nothing, but some one seized my hand. I was so benumbed with fear that I could not cry out, but could only fly through the lonely graveyard to where my trembling companions were awaiting me in the field. It was a foolish adventure, for I felt ill, and it cost me a valuable ring which was left me by my poor Aunt Barbara. 'For her little namesake,' she said, when she sent it across the sea to me. You see, the ring was a little large for my finger, and was pulled off by—by——"

"By me," I interrupted, taking the lost ring from my pocket.

It was time for Barbara (I forgot to say that was her name) to be startled now. I told my story, and, finally, not only offered to return the ring but to give myself into the bargain. She took both.

The administration of government, like a guardianship, ought to be directed to the good of those who confer, and not to those who receive the trust.

TOPICS FOR WOMEN.

ADDRESSED TO MOTHERS.

Bear in mind that you are largely responsible for your child's inherited character.

If you have lost a child, remember that for the one that is gone there is no more to do; for those remaining, everything.

Make your boys and girls study physiology; when they are ill try and make them understand why, how the complaint arose, and the remedy, as far as you know it.

Impress upon them from early infancy that actions have results, and that they cannot escape consequences even by being sorry when they have acted wrongly.

Respect their little secrets: if they have concealments, worrying them will never make them tell, and time and patience will probably do their work.

Allow them, as they grow older, to have opinions of their own; make them individuals, and not mere echoes.

Find out what their special tastes are and develop them, instead of spending time, money and patience in forcing them into studies that are repugnant to them.

Take your children yourself, if you can, to places of amusement; let them associate you with their enjoyment; when they are parents themselves the memory of it will influence them in their treatment of their children. For their sakes, enjoy life with them if possible; clouds will come soon enough.

If you say no, mean no. Unless you have a good reason for changing a given command, hold to it.

Take an interest in your children's pleasure, mother's participation is a great delight.

Remember that trifles to you are mountains to them; respect their feelings.

Keep up a standard of principles; your children will be your keenest judges in the future.

Be honest with them in small things as well as in great. If you cannot tell them what they wish to know, say so rather than deceive them.

WOMEN IN A SLEEPER.

There are more hatreds engendered between women on sleeping cars than anywhere on earth unless it be in a church. Suppose there are a dozen women in a sleeper and one toilet room. Passengers are awakened say an hour before the train arrives at its destination. The first woman who gets into that toilet room will lock the door and stay in there until she has made as elaborate a toilet as she would at home, while the other eleven women are waiting, with their hair in one hand and hairpins in the other, and satchel on their arms, and they hate the woman in the room. When she comes out the one with the most gall gets in the room next, and though she has talked outrageously about the one who went in first, she stays quite as long, until the other ten women hate her worse than they did the first. The ten ladies who are waiting will by this time have concluded that there is no show for them, and they will try and fix up so they can go to a hotel before making their toilet. The only two who will be fixed up will be those who have been hoggish, crowded in and remained regardless of the comfort of others. Many ladies who travel on sleepers never try to get in the toilet room in the morning, because there is always one or two who have seemed to lay awake all night in order to make a rush on the wash room before anybody else. Some ladies who travel a good deal can pick out the one, the night before, who will monopolize the toilet room in the morning. There is a demand for apartments, certainly, in sleepers, where women can be comfortable and at their ease without annoying each other. They do not annoy men, because men can go in the wash room and "register on the towel," put on a clean collor and pair of cuffs and make room for a cartload of dirty passengers.

How a Chinaman Gets into Business.

Wong Ching Foo, the Chinese ex-journalist, tells how his countrymen get into business in America. He says: "One of my race arrives here with no money and in debt to his friends or to bankers for the steamer and railroad fair. He generally engages himself as a green horn or apprentice to some successful laundryman. Although the compensation is small ($4 or $5 per week and board), for the six months or one year of his contract, he learns the business, pays off his debts, and gains a good name for integrity and capability. At the end of his term, if he is a skilled workman, he can either secure first-class wages ($18 per week), or open a laundry of his own. The latter is his usual course. He may see, for example, a laundry for sale for $600, whose looks and location he likes, and he himself has but $50 to his name. He goes to Mott street and there on the bulletin boards puts up a notice calling for a "whey," or syndicate of twelve men with $50 each to meet him at a certain time and place. The meeting is had, and if he be regarded as honest and capable the requisite $550 is given to him, he in return acknowledging the indebtedness, and promising to pay a certain interest on the money advanced (generally 20 per cent. per annum). This money is paid back in monthly instalments, so that at the end of a year the borrower is free from debt, his credit unimpaired and the laundry absolutely his own."

To enter safely into the married state, the contracting parties should understand human nature, and above all, their own dispositions, and then compare them frankly and candidly.

How A Great Industry Arose.

The civil was had not long been in progress, when it nearly extinguished the cotton flour sack manufacture; but necessity was never more truly the Mother of Invention, than the war was the cause of the making of the paper flour sacks at that time.

Cotton was not king, as had been written across the length and breadth of the land; paper was found to be a substitute better and cheaper than cotton itself. As energetic as the firm of Arkell & Smiths had been in extending their business at the start, they still had unused resources of mind and energy to attack the paper problem and bring it to a highly successful solution.

From 1863 to 1865 the manufacture and trade in cotton sacks had almost wholly dried up, and this firm, seeing clearly that its business was fraying down to more than a ragged edge, commenced a series of experiments in several paper mills, to produce a power of the requisite toughness and tensile strength to bear the abrasion and strain incident to the transportation of flour. The paper grocery bag was then just coming into use, but the paper of which it was, and is still made, is so tender and fragile that i would have been useless for anything except the lightest contents, and for the shortest transportation.

Every known and available fibre was tested—Australian and Spanish grasses, Canadian wild rice straw, Kentucky hemp, Northern flax, Hindu jute, manilla, linen waste, and many others.

No material gave such strength as the manilla used in the manufacture of rope and cordage. This material however, was so obdurate and kinking that the first sheets of paper made from it would roll themselves up as snug as a watch-spring, and it was only after months of chemical persuasion and mechanical castigation, that this contrariness was overcome. This paper was found to have a surprising tensile strength, for an inch ribbon of it sustained a weight of one hundred and twenty pounds. Some of the bag paper now made is strong enough to hold toward two hundred pounds on an inch ribbon. The same size strip of cotton cloth gives way at twenty-eight pounds.

Manilla, however, was found too costly, being worth in those days sixteen cents per pound in gold, with gold at 210, and it required two pounds of the fibre, exclusive of the chemicals, to make a pound of paper. Manilla could not be cheapened, for, though the labor employed in getting the fibre was excessively cheap, the distance of the transportation from the Philippine Islands could not be shortened, and the material was too expensive for an ecomical paper material. It was not long, however, before it was found that old manilla rope, that had been used in rigging on water craft, had all the requisite strength, and was cheap enough, while a large part of the stickiness of the new fibre was worked out of it by the usage. So the old rope, that paper-makers had hitherto considered a nuisance, and thrown away, was utilized for the new paper flour sack.

This manilla stock is made into the desired paper by a peculiar process of felting. The rope is cut into lengths of three or four inches, and beaten out while dry into a mass that looks like the hair of a mattress; it is then boiled in limewater, beaten for hours in great pounders, whose iron ribs comb out the fibres without mashing them, and then, by one step after another, it is carried floating in water to the face of revolving wires, where it is tucked up against their moving faces, all woven, tangled and interlaced, and so passes upon a continuous moving belt of flannel, where another soppy, wet sheet, made in the same way, joins it, and the two, now beginning to unite, are passed under and over a long double row of steam calenders, which sqeeze out the water, dry and pack the fibres tightly together, till at last the hairy-looking pulp that surged out at one end of the machine like a foamy sea, is rolled up at the other end in big drums of paper weighing four hundred and fifty pounds to the roll. —[Paper World.

A Dog's Devotion.

"I had only got my harvest done when one night I awoke to find my room brightly illuminated. I understood its meaning at once and made all haste to dress and get my wallet of money, nearly $3,000, and get out of the cabin. It was as I suspected, the dreaded prairie fire. Away in the horizon I could notice its rapid advance. I knew that my only way of escape was in hasty flight. My horse was raming over the prairie, and I could not afford to look for him, so along with my faithful dog I plodded my way as rapidly as possile towards the Bow River. The distance was ten miles, and whether I could make it or not I did not take time to consider, but ran as I never did before. How I lasted the distance is a problem to me. I reached the bank of the river as the raging flames were within a hundred yards, and as I was standing there, dazed my dog took hold of me and with a sudden jerk pulled me head-foremost into the river. The cool waters revived me and I stayed there until the flames leaped the river and were licking the dry grass on the other side. Several buffalo were in the river, having been driven by the flames. I had no home any more and knew not what to do. I wanted to go back and look at the place where my home was, but I knew there was nothing there for me any more. Then the first thought dawned on me that I had no means of sustenance, not even a firearm to assist me in securing game. I started down the river, intending to keep by its course until I reached the Saskatchewan, thus making sure of something to drink if nothing to eat. The route was a good deal the longest, but the safest, and I plodded on. That night I was tired and hungry when I laid down to rest. Strange to say I slept sound and awoke with a prodigious appetite. To appease it my dog had a fine prairie rabbit lying in front of me. He had not touched it himself after killing it, but by the wishful way he watched the dead animal I knew he was as hungry as myself. I shared with him and continued on my way. I reached Fort Walsh in five days after, my dog always having something fresh each morning that would last us the rest of the day."—[St. Paul Day.

A CURE FOR HUMAN PASSIONS.

What a Homœopathic Physician Proposes to do in Science.

A physician of the Homœopathic school at Lyons professes, seriously, to have discovered a remedy for human passions—those moral diseases, such as envy, hatred, malice, anger, jealousy, obstinacy, avarice, etc., which render so many homes unhappy. On a pamphlet to show "How homœopathy may improve the character of man and develop his intelligence," he gives some wonderful instances of the cures alleged to have been affected by his special treatment, which he declares to be infallible.

In one case a suspicious, jealous, and violent husband, who ill-treated his wife for a period of sixteen years, was cured, unconsciously to himself, by a few globules of nux vomica dropped quietly into his broth, and his wife was soon delighted to hear him humming some operatic airs and addressing her as "cherie," "ma pouponie," etc. After a few days' experience of this *regime* the terrible Bartholo was transformed into the tenderest of husbands. By a skilful alternation of other mendicaments a rascally husband was corrected of his inherent faults and wilful outbursts of anger. A miserly father, on being subjected to a few doses of calcarea carbonica, gave his consent to his daughter's marriage, which he had previously resisted. By the same medicine, varied in its preparation, a young student who was backward in mathematics was enabled to master the science without further study. The calcarea carbonica, it will be noted, cured a miser and a dolt—both suffering from the tyranny of sums and figures.

The Lyons physician has an antidote for everything; nux vomica for jealousy; sulphur for drunkenness, salicea for obstinacy, arsenica album for malice, and belladonna for imbecility. Those patients who do not happen to be laboring under these infirmities, and for whom the remedies just mentioned might be prescribed for other ailments, will probably protest against their use. But unhappy partners, who believe in the efficacy of this latest application of the science of homœpathy, may be tempted to resort to it as a means of avoiding a divorce, and certain husbands invoke its aid against their mothers-in-w.

ROUGH BUT NOBLE.

How a Western Man Found a Relative by a Courteous Act.

"You will have to go into the forward coach," said the conductor, as he tore off a coupon from a second class ticket.

"But the tobacco smoke is so bad and I have such a headache," said the little woman timidly, and the pale face was raised pleadingly.

"Can't help it, ma'am. Rules of the road require passengers having second-class tickets to ride in the forward coach," was the uncompromising reply, as he passed on.

"Hang your rules!" blurted out a big man with a fierce mustache.

"Stay where you are, madam. You look tired; here let me turn this seat over so you can lie down. Put your head on this grip. Here's my overcoat; put put it so," and he had her nicely tucked away before she could object.

"Your ticket? All O.K. Take mine; it's to the same place, first-class, unlimited. I love to smoke. Always ride in the smoker anyhow." And he went forward. Dinner was announced in the dining-car, and the big man came bustling in and insisted on her having dinner. She objected, evidently thinking it improper to receive so much attention from a stranger. "Kate Adams," read the big man, looking at the name on her valise.

"Not Dick Adams's wife? You are! Well, by——! Why, come here, I'll kiss you, my girl. Dick's my youngest brother. Well, I'll be——? Well, well. Why, I was just going out to see him. Heard he'd got flat broke and kind o' want to set him up again."

And the big man looked so happy and the little sister-in-law so pleased that the passengers forgot to kill the "straw" lunatic that was taking a vote of the passengers on the presidential question for a daily.

Fifteen Hundredweight of Gunpowder to a Charge.

The gun which Colonel Hope is making for the British War Office is to be, it appears, a 100 ton gun, firing the enormous and unprecedented charge of 15 cwt. (three-quarters of a ton!) of powder concentrated behind a 1,200 lb. shell in a 12-inch gun. We hear that the calculated velocity is upwards of 4,000 feet a second, and the theoretical penetration through wrought iron about 5 feet. Assuming this gun to be a success, it would have a value beyond that of other guns, because owing to the immense range and penetretion, it would afford such protection to our harbors and coaling stations that it would set free a large number of ships for their legitimate work of cruising which otherwise would be compelled to remain in port. We hear that Colonel Hope expects to finish his first gun in ten or twelve months, including the time necessary for the construction of the enormous plant required; but as he makes his guns in one single forging, the actual construction of the gun itself is not expected to take quite three months.