

## THE FARM.

### Young Sows.

In order to keep up the number of sows it is often very necessary to use young sows for breeding. In nearly all cases it is the safest and best plan to keep a sow as long as she brings good litters of good thrifty pigs. In a majority of cases the true value of a sow will not be fully known until she farrows her second litter, but if she is given good treatment she can be kept for several years without changing.

A good sow should not be bred until she is reasonably well matured, and generally a safe rule to follow is to let her be a year old when she farrows her first litter. If sows are selected from the early spring litters and then bred to farrow in April they will be rather over a year old. One advantage in having them farrow thus late is that in nearly all cases grass and clover will have started up and this will help materially in securing a good flow of milk. One trouble with young sows is that they do not afford a sufficient amount of milk, and the feeding and care should be such as is best calculated to aid or develop this.

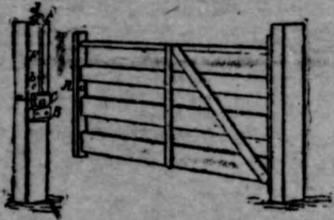
Generally it is best to allow the young sow to wean her pigs herself, letting them suck as long as she is willing, taking care to feed her as liberally as possible in order to maintain a good growth.

In order to allow her to do this and at the same time give her plenty of time to recuperate, it will not be advisable to breed her again for a fall litter. This is especially the case when she is to be kept as a breeding animal and the breeding is done to improve. While the sire is an important item in improving, the value of the sows should not be overlooked, and good care must be taken not only in the selection, but also in the feeding and management. Let the sows make a good growth and development before breeding, and feed liberally while they are suckling their pigs and give them plenty of time to recuperate. These points are important in securing the best results in improving. If they prove good breeding animals after a fair trial, they can be kept as long as they prove themselves profitable. A young sow is easily injured by being bred too young or too soon after she has farrowed her first litter, not having time to recuperate.

### Automatic Gate Latch.

The object of this improvement is to provide a fastening which shall give support to the gate when closed so that it can not sag, which shall be secure against the accidental disturbances of animals, winds, etc., and which admits the gate to swing either way in opening, the device being at the same time simple and easily operated by the hand.

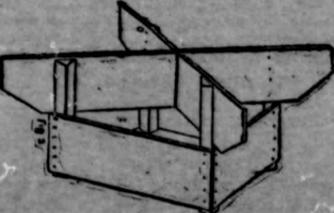
In order to effect these results an iron pin, A, is fixed firmly in the outer stile of the gate, from one to two inches in length and three quarters of an inch in diameter. The rest B and the slotted latch C are so placed with reference to this pin, that as the gate is closed from either side the pin passes between the two pieces, rising slightly (say



one-eighth of an inch) on the rest B, and pressing up the latch C until it comes under the slot A, when the latch returns to its place and the gate is securely fastened. The latch C is held in its proper position by means of the rod F, which passes through the guide B. To facilitate the easy opening of the gate, the rod F rises to the top of the level of the gate and is bent in the form of a loop, C, large enough to admit the hand. Over this loop and concentric to it is placed the stationary handle D. By grasping the two loops at once in the hand, the latch-rod F is easily drawn up and the pin released from the latch. The latch returns to its place by its own weight, or if that is not sufficient a helical spring may be added at E. Beyond the fact that the latch serves the purpose of a rest for the gate, it is especially desirable in that it will lock automatically and thereby save much valuable time to the pedestrian or driver.

### Feeding Rack For Cattle.

The device illustrated is to be used in feeding hay to cattle. The boards for the



lower part of the box should be five feet long, nailed to upright posts in the corners. The posts, each four feet high, are boarded from or near their lower ends half way to their tops, that is, two feet high, making a box without bottom, of sides only, with the posts in the corners extending two feet above the sides of the box. Then two boards ten feet long are taken and crossed centrally by notching and interlocking together edgewise perpendicularly. They are then placed lengthwise diagonally, or nearly so, from post to post above the side boards and nailed or bolted to these posts so that they will project beyond the corners of the box, forming guards at each corner, to protect the cattle from being hooked. This invention is useful since it is cheap and strong, for the diagonal interlocked boards brace it firmly, and at the same time it is light and portable. By its use a great convenience in feeding is secured, and it can be filled from either side without the labor of dividing the hay for four cattle, and the consequent waste. The crossboards, besides being guards for the cattle, serve to keep the hay or other food from being blown or thrown out.

### Too Upright Hoof.

A too upright hoof in horses is often a consequence of acquired deformity of the limbs, such as shortening of the flexor ten-

ons, consequent upon hard work, or inflammation of the tendons, whereby the horse assumes a crooked position of the knee, or a knuckling position of the fetlock joint, and in which case the wear of the toe of the hoof exceeds that of the heel. In colts this formation of the hoof may be due to congenital malformation of the lower parts of the limb, whereby the pastern generally assumes a vertical instead of a normal oblique or slanting position. If it is possible, by gradual paring down of the heels to remedy this evil in the latter case, it should certainly be done while the animal is yet young and the parts more amenable to rectification. The heel may be gradually lowered by fortnightly careful rasping or paring. A too sudden lowering is apt to be followed by evil consequences, on account of the strain it would produce upon the back tendons and ligaments of the limb. If a normal shape and position of the hoof has not been entirely accomplished by the time the animal is intended for use, the shoe to be applied should have no heel parts, but should be of the shape of what is known as a slipper, thick at the toe and thin towards the heel.

### Farm Notes.

One item in determining what crops are to be grown is to plant so as to distribute the work as evenly as possible through the season. In this way the necessity for hiring outside help will be greatly reduced. Generally the more nearly all the work can be done with the regular help of the farm, the more profitable the farm can be made.

There are many farms where bees could be added to the lines of work and materially aid the total profit without much increasing the labor. Many tons of beeswax are imported every year from Cuba, Spain and other points. There is no danger of the bee-keeping business being overdone very soon, as there never has been enough good honey on the market to make it seem other than a luxury. To double the supply would double the demand, as has been the case with fruits.

The manure can be drawn out to the best advantage while the ground is frozen and bare or when it is covered with snow enough to make the sled run easily. Upon land which was fall plowed, and is to be worked in the spring with wheel harrow or cultivator, or where the manure would naturally be spread on before plowing, it may as well be done in the winter as in the spring; while where the land is to be plowed in the spring, and then the manure spread on and harrowed in, something may be gained by putting it in heaps near where it is to be used. If the heaps are well made the coarse manure will get pretty thoroughly rotted, so that it will be easy to handle and available for plant food.

There is no good reason why the farmer should not do business in a business like manner, as well as the merchant or any other man. He should take an account of stock regularly every year, affixing a fair valuation to his animals, his wagons, tools and implements of all kinds, his hay, vegetable and fruit, and all other property on hand, and figure it up with his outstanding accounts on both sides, in order that he may know just what he is worth, and so be able to tell when the year comes around again whether he has made or lost money in his business; and he should, also, through the year keep an account of his sales and expenses, so that he may be able to tell very closely what crops or what branches of farming have been most profitable.

There are the same reasons for sowing the various kinds of grain together, as peas with oats, when they are intended for feeding purposes, as there are for mixing our grass seeds. A variety tends to a more close occupation of the ground, and a consequently larger crop. Peas and oats or peas and barley grow well together, as also do oats and barley, and doubtless the three would do well in the same soil, the grain holding the peas off the ground, as they have not the strength to stand alone. There is also the additional advantage of giving greater variety to the food. We believe in cutting oats green, to use as green fodder, as silage or as hay, and would advise all who intend to sow them for that purpose to sow peas with them next spring.

The treatment of grain seed with hot water for the prevention of the smuts has shown itself efficacious, not in this manner only, but also in the more perfect germination of the seed so treated. This is a result wholly reasonable, and which might have been predicted. A large portion of the ground ordinarily fails to germinate, although the seed may be good, but if there is not sufficient moisture the germ often shrivels and dies before it can penetrate the epidermis. By the hot water treatment the shell or husk is softened, and the plants start into growth more quickly and with much greater uniformity than they otherwise would. The writer has long practiced soaking the seed for early peas, beans, corn, lettuce, etc., in hot water, and with good results both as regards procuring earliness and an even stand, and the even stand has much to do with a good crop.

A carefully planned rotation makes agriculture a much more certain business than a haphazard planting from year to year. The man who pursues the latter method rarely has the right crop when prices are right.

If your clover freezes out it is because your land is too wet, or else you have cut or pastured it too close in the fall. For all these reasons the remedy is in your own hands. Do not condemn the seed, unless you are certain that is the cause of a poor stand. Use good seed.

Spices are not, as a rule, noisy, but you have all heard the gingersnap.

Jessie C. Mill, a girl of eighteen, committed suicide on Friday night near Edinburg, Ill., by throwing herself in front of a fast mail train.

Mr. Isaac Pitman, the inventor of phonography, replying to the many greetings he received on his eighty-first birthday, writes as follows in the "reformed spelling": "I am hapi to say that bei the Divoi merai. I am in ekselent helth, and enjoi desk wurk (at meir ezidans, 12, Royal Crescent, not nou going to the Phonetic Institute) from seven o'clock in the morning (in winter, and from six o'clock in summer) to six in the evening, talking a siesta ov an our after the mid-day meel; that mei ei is not dim nor mei hand shaiki; but I kanot say, with Moses and Caleb, that mei "natural forzis is not abaited." Mei daishan rekonzendz me to dw kontinui publik speeking, the hasi shoing seinz ov weakness."

## "HELLO, LONDON!"

It May Not Be Long Be'ore There Will Be a Telephone Wire Sunk Under the Atlantic Ocean.

### "HAY, THERE, LONDON, IS IT RAINING?"

It begins to look now as if we would be able pretty soon to "ring up" Europe over the phone. The question of ocean telephony is being earnestly studied, and for a month past experiments tending towards that end have been carried on. The results that have been obtained are the talk of the scientific world.

Keen attention to the subject has been caused by the invention of a new electric wire, and, according to some eminent authorities, it may revolutionize the present system of long-distance talking.

The problem of how to bring both sides of the ocean within speaking distance of each other has been rendered difficult because of the breaking up of the sound-waves, the leaking of the insulation and several other technical obstacles of a like nature. But it looks at present as if all these might be overcome, for the new wire carries sound perfectly and does not need any insulation at all.

Strange as it may seem, however, this very wire was known eleven years ago, and has actually been in use for that time, though its owners did not know it and remained ignorant of its great possibilities.

It is composed of a steel wire coated over with copper, and, simple as the combination is, it apparently solves the problem of long-distance communication. Another point in its favor is that it may be used with any style of transmitter, so that there will be no interference of valuable patents to increase the cost. Also, as communication can be made by it at the rate of 150 words per minute, the advantage over the present cable methods, which will only allow of twenty, is apparent.

Early in 1883 the American Postal Telegraph Company, in extending its lines to the West, employed, a wire consisting of a steel core upon which a thick layer of copper was deposited. This conductor had a tensile strength greatly exceeding that of any similar line theretofore employed, and, in addition, had a much greater conductivity. The results obtained with this wire were telegraphically so good that they at once suggested the possibility of employing the line for telephonic transmission as well.

The voice could be easily heard between New York and Chicago, and between New York and Cleveland the ordinary Bell magneto-receiver used as a transmitter was sufficient to carry on conversation. But these good results were attributed to the large amount of copper in the wire, and it was not thought that the steel had anything to do with the increased transmitting property of the wire.

To the general public these facts will be absolutely new, for it is generally supposed that the recent trials of the telephone between Boston, New York and Chicago were the final results of a long series of experiments.

Among those who witnessed the experiments on the wire stretched from New York to Chicago was William H. Eckert, general manager of the Metropolitan Telegraph and Telephone Company, and a brother of Gen. Eckert, president of the Western Union Telegraph Company. Mr. Eckert attributed the great success of the wire to its being composed of both steel and copper, but his theory was laughed at and the affair was dropped. During the last month he made a series of experiments with a similarly constructed wire, and the wonderful success obtained is what is now the talk of the scientific, and especially the electrical, world.

The experiments were carried on near Plainfield, N. J. A fine wire composed of steel and copper was laid without any insulation on it for a mile and a half through the water, mud and slush of a country road.

When that length had been stretched out a common, ordinary telephone receiver was placed at each end of the line and whispers were distinctly heard by the men at each end.

A heavy truck loaded with stone ran across the wire, but it was merely pushed deeper into the mud, and the talking still went on.

A remarkable fact about this line is that only one wire is used. The earth takes the place of the other wire. The fact that part of the line ran through a brook seemed to make no difference in its working; hence the inference of its working across the ocean.

Mr. Eckert, who helped to carry on the experiment, says regarding it: "From its performance I have no doubt it would work perfectly well across the ocean. Of course that is a point to be arrived at, but the little experiments that have been tried ought to demonstrate its practical utility. I was present when the experiments were made between New York and Chicago. The distance is, I believe, about 1,050 miles, and the line worked perfectly. Had it been stretched to San Francisco it would have done just as well. In fact, strange as it may seem, distance seems to increase rather than retard its working. The distance between New York and San Francisco and New York and the nearest point on the other side is about the same; therefore the scheme is feasible.

"The large and important point in favor of the new system is that it requires no patented attachments to work it. An ordinary telephone receiver will answer, and the conversation goes on just the same. Then the difference in the rate that words may be received is the largest point in its favor. Conversation could be transmitted from London to New York as fast as one could talk, while under the present system twenty words per minute is the most rapid rate that can be achieved.

"I may be a little enthusiastic concerning its great qualities, but I should like to hear an electrical or other scientific man tell me why the results cannot be accomplished. To review its good qualities, we can say that it does away with one wire, no transmitter is needed, any person can use it, the expense is greatly lessened and the whole system is placed within the reach of everybody. Just think of being able, for instance, to take up a telephone receiver in a New York office and asking to be placed in connection with its London office, and all as easily as though it were merely the Harlem branch."

The bimetallic wire, as it is called, is just now calling forth a great many opinions pro

and con in the scientific world, but all agree that there are immense possibilities back of it, and that in the near future we may be able to converse readily with our transatlantic neighbors, or with Kamtschatka or Queen Liliuokalani by telephone.

### MERRY MOMENTS.

A stage Coach—the prompter.  
Complaint of the stage carpenter—all work and no play.

"Her hair is just too sweet for anything."  
"Ah, indeed! Perhaps she dresses it with a honeycomb."

"Mr. Scribbler is a wonderful man—has such a variety of talents." "I've noticed that in society he is a lion and at home a bear."

May—"Fred, do you ever go to horse-races, or drink, or play cards for money, or swear?" Fred (gently)—"No, dear, I never swear."

Johnnie (seeing his twin cousins for the first time)—"Isn't it funny, mamma!" Mamma—"What dear?" "Why, this baby is a philopona."

Johnnie (to little sister)—"May, can you tell me when mamma's a papa?" May—"No; I don't see how." Johnnie—"When she's a sister" (sire).

De dentis "is er cunnin' gent—  
He'll never have ter beg;  
He goes ter work an' pulls yer tooth,  
And then he pulls yer leg."

Elsie—"I always knew he was too timid to propose." Alice—"But he got married a short time ago." Elsie—"Yes; but that's nothing; he only married a widow."

Mr. Dooley—"Gimme a bar of soap, please." Shopman—"Yes, sir. Do you want it scented or unscented?" Dooley—"Aw—niver moind; I'll jist take it wid me."

House-cleaning time is near at hand,  
When man will sadly roam  
And realize as ne'er before  
"There is no place like home."

Judge Welde—"Will you swear that the prisoner sold you whiskey last Sunday?" Witness—"No, your honor, I wouldn't like to swear to it; but that was what I paid for."

Chollie—"Are you fond of the sea water?" Elsie—"Exceedingly! At the mere thought of sailing over the bounding waves I can scarcely contain myself." Chollie—"Yes, that's the way it affected me."

"Don't you see, Sister Jones," says Brother Gardner, "de cause ob dis 'dustrial depression' am dat dere is too much money in buildings and dere ain't 'nuff in circulation; and dere am too many people in circulation and dere ain't 'nuff money."

On the hearse he sat and merrily smote  
His horses and made them run,  
For he had inside the man that wrote  
"Johnny get your gun."

Mr. Isaacs—"Hellup! Hellup me, Yakey. Hellup me get in dese cloadings. It is starting to rain and I can see dem shrink." Yakey—"Nefer mind, vader. Let some of der suits shrink, for we are just out of boys' cloadings."

First Man—"I think I shall go to the next fancy ball in costume, you know. What would you advise, now? I want something striking, you know." Second Man—"Something striking, eh?—er—ah—well, why not go as a clock?"

### Birds That Come and Go.

There are some birds that depend almost entirely for their means of subsistence upon the light-winged Summer flies that love the sunshine. These the economy of our cold season does not provide for. The treecreepers and the tits, insectivorous in their propensities, are content to seek food in the crevices of bark up and down the branches of old trees, in the cracks of walls, in and out among the stones and bricks of old buildings, peering, probing, pecking, at the creatures that have thought to get safely through the cold weather by hiding. Not so our migrant singers.

Many of them, like the swallows, eat only such things as they can catch in their swift flight open-mouthed through air; these are few and far between in the raw and cold atmosphere of Winter here. Swift and swallow, nightingale and cuckoo, warbler, whistler, whinchat, blackcap, wren, flycatcher—all the merry troops of strolling singers, must follow the sun and the creatures that dance in the sunbeams to lands that are sunny in Winter.

The movements of the birds that come and of the birds that go in Spring and Autumn are prompted by the abundance or the scarcity of certain kinds of food among the varied stores our land affords. The nomadic wanderings of our resident birds are also foraging expeditions. Only in the Spring and the early Summer are any birds able to find the food they require in one particular neighborhood.

Then insect life abounds, and round about the nesting place enough and to spare is to be found both for the busy parent birds and the insatiable chicks and squabs. But in the Autumn and Winter there is, strictly speaking, no such thing as a stationary population of birds in any place. Then all turn gypsies and hither and thither wend their restless way, eluding the famine of a frost here, the dearth of a snowstorm there, or the buffeting of storm winds, by continually moving on.—[The Cornhill Magazine.]

### Japan as a Coal Exporter.

For two or three years past Japan, with an annual output of about 3,250,000 tons, has had more coal than is needed for home consumption, and, with characteristic enterprise, the Japanese have been looking for foreign markets. Their exports now amount to fully 1,225,000 tons a year. There was some talk of shipping coal to America, which has not yet, however, been done to any extent, but several cargoes have been sent to Bombay and there found a market.

Whenever the ex-Empress of the French writes about her lamented husband, she invariably uses the diamond pen which signed the Treaty of Paris. Each of the fourteen plenipotentiaries wanted to keep the pen which signed the Paris Treaty, as a memento of the occasion. They, however, yielded to a request of the Empress Eugenie, who begged that only one pen should be used, which should be retained by her as a souvenir. Only one pen was according used; it was a quill plucked from a golden eagle's wing, and richly mounted with diamonds and gold.

### BRIGHT AND BREEZY.

There are 266,456 miles of telephone wires in Great Britain.

China is manning a chain of forts all along her sea coast with Krupp guns.

The estimated number of persons at present out of work in New York is put at over 70,000.

The membership of the Young Women's Christian Association of London has reached 14,000.

The Salvation Army has now in its ranks more than 200,000 "soldiers," 10,237 local officers, and 3,258 bandmen.

Professor Garner, who has been investigating the supposed monkey language, says that gorillas do not converse with chimpanzees.

The newest idea in table decoration is to match the colour used with foliage, and this is to be done throughout the coming season in a way that will be astonishingly lovely.

Prince Henry of Battenberg, Governor of the Isle of Wight, is taking great interest in a scheme for making a tunnel under the river Medina, to connect East and West Cowes.

The Skinners' Company claims to be one of the oldest in the City of London. In the reign of Henry VIII. many rich foreign furs were imported, and then the trade of the skinners was a flourishing and important industry.

A Chinese missionary states that sevenths of the natives of China are opium smokers.

Bull-fighting is in full swing in Spain just now, fights taking place in every village of importance.

At the present rate of increase, it is estimated there will be 190,000,000 people in the United States in fifty years.

British North American Indians live on reindeer meat almost exclusively. They are big and strong, many of them being six feet high.

Advanced views are being held in the States on the subject of the wedding ring. Brides are declining to wear it unless bridegrooms follow suit.

A new French submarine cable is about to be laid in the Red Sea. It is 31½ nautical miles in length, and will be laid by the despatch boat La Charente.

Mr. Rudyard Kipling is by no means dependent upon the fruits of his pen for an income. He has estates in Vancouver which bring him in a handsome amount yearly.

The eight unmarried ladies who hold of fice as the Queen's maids of honor have some privileges. They are given the prefix of "acountable," and, on marrying, receive from the Queen the gift of £1,000.

The mean annual temperature of a tree is nearly the same as that of the surrounding air.

Some of the largest ocean steamers can be converted into armed cruisers in thirty hours.

The Chinese wall is more than 1,200 miles long, generally over 30 feet high and 24 feet thick.

Mr. Gladstone claims to be able to pack more books in a given space than any man he knows.

Since the beginning of the century France has fallen from the second to the fourth place in point of population among European countries.

Charles Lewis Becan, who stands 6 feet 1½ inches, is the tallest soldier in the Belgian army. Because of Becan's size he gets double rations.

Over 65,000 people spent Christmas Day in the London workhouses alone, and 39,000 would have been added to that number if outdoor relief had not been given.

A wonderful nugget of tin has been discovered in the mines of North Dundas, Tasmania. It is estimated to weigh 2 tons 14 cwt. The assay of a small piece shows that the large mass of ore contains 67 per cent of metallic tin.

Whatever may be the faults of London cabmen, they are as a rule, honest men. The property that has been left in cabs and restored to the owners during the past five years is shown by police statistics to represent a value of no less than £100,000.

The number of horses and mules possessed by the British army is about 27,000. Of these rather more than 12,000 are with the European troops in India, and the remainder at home, in Egypt, and at the Cape. The cavalry regiments have 12,000 horses.

The total number of fever patients removed to the hospitals of the Metropolitan Asylum Board, London, last year was 18,496, as compared with 16,118, in 1892. 7,725 in 1891, and 8,235 in 1890. The removals of small-pox patients numbered 2,389, as compared with 306 in 1892, 64 in 1891, and 26 in 1890.

The conductor of a St. Petersburg paper had adopted the novel method of printing his publication on cigarette paper. It is asserted that its circulation has been increased by this means, as the Russians are addicted to smoking cigarettes, which they make themselves. We pity the newsboys on a wet day.

The largest place of amusement ever constructed is the Coliseum at Rome. Its external circumference is 1,628 feet, its long diameter 615, its short 510, its height 156. It had four stories, and could seat 87,000 spectators, while 60,000 more could find standing-room.

Bucaniquina is the name of a new species of fibrous material recently discovered by Senor H. Elvov Valenzuela in the United States of Columbia. It has many of the remarkable properties of asbestos, and is perfectly transparent as well as incombustible. It can be reduced to pulp and moulded.

Another literary man has followed Mr. R. L. Stevenson's example, and sought out an island amid sunny seas in which to found a home. Mr. Julian Hawthorne—a name well known in America—has left New York and established himself in Jamaica with his wife and family to combine farming with his literary pursuits.

The Britannic recently arrived in the Mersey on the completion of her 200th round voyage. The Britannic and Germanic have now both completed their 200th round voyage, and their 400th passage across the Atlantic. This means that each steamer has traversed a distance of 200 times 6,200 nautical miles, or nearly 1¼ million statute miles with their original engines and boilers, an achievement probably without parallel in the history of steam navigation.