AGRICULTURAL.

The Ball of Justice.

There was a king long years ago.
His name historian doth not know.
He lived beneath Italian skies,
A noble monarch, just and wise.
That he might serve his people well,
In a high tower he hung a bell.
He who was wronged had but to ring
The bell of justice for the king
Was bound to make the humblest prayer
The subject of his royal care.
At first man rung it every day,
Rotted at last the rope away,
And, growing shorter by degrees,
Swayed lightly to each passing breeze.
For many a month it idle hung,
No longer needed. No one rung
For justice; men had learned to fear,
And dreaded now the bell to hear.
At length a wandering grape vine clung
Tight to the rope that idle hung,
And firmly held it, sweetly grasped,
As if one hand another clasped.
A starving horse turned to die,
One summer day was passing by,
And browsing where the grape vine hung,
The bell of justice loudly rung.
Straightway a royal herald came
And saw the horse half starved and lame.
He told the king who rung the bell,
The monarch answered: "It is well,
The brute for justice doth appeal;
For starving brutes I pity feel.
Go seek his owner out for me,
And tell him this is our decree:
Long as he lives this horse must fare
On oats and grass of his. Beware!
If he again for justice call
My wrath shall on his owner fall."
Would God to-day there were a bell
That brutes could ring and thereby tell
The story of their cruel wrong,
And win the justice that belongs
To every creature, great and small:
For God their Maker loveth all.

—Robert L. Bangs, in the Independent.

Carelessness About Utensils.

One of the most dangerous germs that can infest milk is that found in old rotten milk in the seams, joints and corners of pails, and in and under the many patches of thickened up milk fixings. Old butter bowls and old wooden churns are as a rule cooked full of fats that for ten or thirty years have been nests for the propagation of these bacteria. The only plan to pursue is to have as little patching and mending done as possible in dairy utensils. Discard at once all suspicious machinery and get new. Thousands of tons of butter that now finds final sale at the soap-makers was well made, but the utensils were old and germ-laden with more or less of these enemies of good produce, and as soon as the butter was made they commenced their destructive fermenting and corroding, and went faster than freight or express trains, and when the butter reached the market it was worthless for food. Had this butter been made in new and well cared for apparatus it would have reached market a prize to the maker.

Eggs in Cold Weather.

The art of feeding may well be applied to poultry in winter, if eggs are expected.

True, feeding is an ordinary matter, but how many consider what they are trying to accomplish when feeding? There should always be some object in view, and the feeding, if properly done, should conform to the realization of that which is sought. We said the "art" for feeding is quite an art, and has science to keep it company. What do we feed to secure? Eggs—and in doing so we must look into the egg. We see it well filled with rich, nutritious substance and of variety. Then we must adapt the food to the egg. If the hen is kept warm and comfortable, the food required to provide her with animal heat will be correspondingly lessened. Knowing that the food should not contain an excess of carbonaceous, or heat-producing elements, we look to those substance that furnish the albumen. All food contain these, but they vary in proportions.

When the farmer throws down corn and feeds his hens liberally he may secure but few eggs, as he is then feeding for the market, and not for eggs. A fat hen will not lay, and is as unprofitable as a fat sow for breeding. What they mostly need is nitrogenous matter, for they can, if fed any grain at all, easily provide the yolk, lime, phosphoric acid, etc., but the large amount of the albumen in an egg calls for more nitrogenous food than usually allowed. Some, improperly, ascribe the failure to secure eggs to a lack of green food. While some, kind of bulky food (such as clover-hay, chopped fine, and scalded, as well as cooked potatoes and turnips) is excellent yet the great desideratum is animal food, and if less grain be fed, and more meat, either raw or cooked, there will be more eggs. Milk and curds are also suitable, but meat is better than anything else. As a pound of meat daily will be sufficient for a dozen hens, and almost any kind of meat will do, the expense is a small matter, compared to the high prices obtained for eggs in winter. It is not necessary to feed grain more than once a day. A morning meal of scalded, chopped hay, with some kind of animal food, and wheat at night, will give more eggs, if the hen house is kept warm, than any other method, and it will be cheaper than feeding three times a day on grain.

A pan of warm water in the morning should always be allowed.

Fast Walking Horses For Farmers.

In purchasing or hiring a plow horse, take off a mile of road. Mount the horse and see how many minutes it will take him to walk a mile. A horse that will walk three miles an hour is worth at least three times as much as a horse that walks but two miles. The three-mile horse not only does as much work in two days as the two-mile horse does in three, but he enables the man behind the plow to do fifty per cent, more work in a day than he can do behind the two mile horse. And the man and horse consume with the slow team fifty per cent. more rations in doing the same work than the fast walker does. In twelve months, the man would do no more carting and plowing with the slow horse than he could do in eight months with the fast walker.

Suppose a farmer hire a man and a two-mile horse to do an amount of plowing and carting that takes three months to perform, and pays $3 a month for a horse, $3 for his feed, and $15 for the man who boards himself; $24 a month; three months, $72. If he hires the same man at $18 a months, and pays $3 for horse's feed and $4 for a fast walker, he will do in two months what the slow team would do in three. Two months' fast team and feed and plowman at $25 a month, $50. Direct loss by slow horse $22; besides the work done by the slow horse is not so well or seasonably done—the seed may be put in too late, the grass may get ahead of the plow; and the indirect loss by the slow team may be serious, besides the $22 loss stated above.

Water for Cows in Winter.

An interesting series of experiments has been carried out at the agricultural experimental station attached to the University of Wisconsin, these relating to the comparative value of warm and cold water for milch cows in winter. In plan this experiment contemplated, as its chief object, ascertaining whether it is true, as many farmers believe, that warm water for milch cows produces a measurable increase in the yield of milk over that of cold water, and, if so, whether the increase affected the volume simply, or the weight of the solids contained, to an extent which would make it remunerative in general practice to warm the water for cows. On the night of January 21, 1889, six cows were placed in stanchions side by side, in groups of three each, and given a daily ration of 5 lb. of bran, 2 lb. of ground oats, 6 lb. of hay, and as much dry cut (mixed) fodder as they would eat up clean, this being continued until March 25. In every case the treatment was the same, with the single exception that one lot had water at 32 deg. F., while for the other lot it was warmed to 70 deg. F. The time of the experiment was divided into three periods of sixteen days each, having intervals between them. At the close of the first and second periods the temperature of water were reversed for each of the groups, in order to eliminate so far as might be individual differences of the two groups. The results, which have been voluminously worked out in a closely-printed pamphlet of thirty pages, are in favour of warming the water. The animals on cold water ate more and gave less milk—a result that any physiologist would expect. To put the matter shortly, it may be said that the whole question is one whether it pays. The cows—five out of six—preferred the warmed water to that icy cold, so we may take it that, on the grounds of comfort to the animal, it is best to take the chill off the water. Where labour is expensive and the difficulties of heating are great, it is not at all certain that the operation will be profitable—except at periods of very severe frost. Then the animals may be injured by taking ice water, and to avoid a loss it is best to warm the water given.

How to Keep Fowls.

Some evening, when you have nothing else to do, make a shallow box, say eighteen inches long, four inches wide, and four inches deep; divide this into three compartments; fill one with gravel, another with charcoal broken into pieces about the size of a kernel of corn, and the third with crushed oyster shells. Fasten this box up in your hen house, just high enough for the fowls to reach it easily, and see that it is never empty during cold weather. Old plaster or burnt bones will do instead of oyster shells, but I consider the oyster shells the best. Where fowls are kept in large numbers it is a great saving of time and labor to buy the shells already crushed.

Another essential in the hen house, in winter, is a dusting box. A shallow box four feet square, one foot in depth, and filled two-thirds full of dry road dust and wood or coal-ashes, with a sprinkling of sulphur, makes the best arrangement that I know of for a dust-bath. If you can place it in front of a window, where the sun will shine on it, the hens will like it all the better. This will be all that is necessary to keep your hens free from lice during cold weather, that is, if they went into winter quarters free from the pests.

If you keep but few hens you will find that the scraps from the table will make the best morning meal that you can give; the bits of meat, potatoes, crumbs of bread, and all the odds and ends from the table are just what laying hens need, and it will pay better to turn the scraps into eggs than it will to feed them to the hogs. Eggs are worth something now, and twenty hens, if properly cared for, will shell out, at a moderate estimate, a dozen eggs every day. The "scraps," a half peck of oats or barley and a peck of shelled corn will be sufficient food for these twenty fowls for a week; do your own figuring.

Get some china or porcelain nest eggs. Hens like to have an egg left in their nests. Gather the eggs often during extremely cold weather; if they freeze and crack open, the hens are apt to pick at them and learn to eat their eggs. If you find an egg-eating hen among your flock, cut her head off; it is the only thing that will cure her.

Breed From the Best.

This should be your motto, brother farmer. Have it printed in large type, frame it and hang it up in your stable until it gets the sentiment so deeply impressed in your ideas of breeding that it becomes a fixed principle in your life. Study the various breeds of all farm animals, carefully note the points of excellence in competing breeds, examine as carefully for the defects. Don't be carried away by some strong point. Cultivate an ideal combining the properties of the modern standard, and when you make your selection of a breeding animal bring your test to bear closely in this selection and take the best. In breeding horse stock, accept no horse as a sire that has bad feet, defective gait, weak knees, curb or any noticeable weakness take no risks. There are plenty of sound horses. Examine just as carefully for defects in the bull and boar. Unless you are exacting in your demands you will be imposed upon. If every farmer would demand sound breeding stock and openly condemn these prominent defects, the country would soon be rid of the greatest curse the improvement of stock has to contend with.

How to Build a Dairy Herd.

"How shall I proceed with a herd of native cattle to build a dairy head?" asks a reader. The first requisite is a pure-bred sire of Friesian, Jersey, or Guernsey blood, strong in butter-producing line. The better bred the bull the more rapid the dairy qualities will show themselves and the more marked the improvement. Get the best advice you can from an expert as to the selection. With the Friesian sire a large flow of milk will result. With the Jersey and Guernsey look for a small flow of milk. Veal the bull calves. Keep the heifer calves and when they reach the proper age breed them to their sire and fix the superior dairy qualities by a double cross of dairy blood. For use on the heifers resulting from the double cross, be sure to obtain a sire that will still further develop the special dairy qualities you have aiming at, so that there will be no going backward. Stick to the dairy breed in first selected, and do not mix the blood of different breeds. A few years of careful work with a definite purpose will give you a herd equal to pure-breds for all practical dairy purposes.

To Propagate Roses.

Good cuttings says the London Garden, are placed in a bottle containing water, and this bottle is hung on the sunny side of a wall, and there left, additional water being supplied as it is evaporated. The water often becomes warm in the sunshine, and in a comparatively short time the cuttings form a callus, in fact, it is claimed, and should be more certainly than in soil. They are then planted in pots in the ordinary way. Some good hybrid perpetuals on their own roots have been raised in this way. The experiment is very easily tried.

Agricultural Notes.

Where the milking is done in a feeding stable the drop should be cleaned and thoroughly dusted with plaster before each milking. Its odor absorbing quality is of great use to the dairyman.

In feeding calves skim milk don't forget to make up for the butter taken out in the shape of cream, some supplementary feed should be given with the skim-milk. Linseed oil-cake, cotton seed meal, bran, oats and peas are all good.

A cow should not be exposed to storms or inclement weather, or any conditions that will give her discomfort or pain. She must have no anxiety in regard to food or drink, which should be given at regular times and in quantity and kind to suit her appetite and needs.

If your pumpkins are not all gone here is a good way to feed them. Split them open with a shovel and remove the seeds, then run them through a root cutter. They are then in good shape for a cow to relish. Fed in the manger it pays by increasing the flow of milk and giving a deeper yellow tint to the cream.

This is the season for looking up seed supplies for next spring's planting and it is of the utmost importance to know that you get what you have paid for. But one can not guard for the farmer, and that is to buy from firms of known reputation. We have enough of these right here at home in our own country and these are the men we should patronize.

A convenient arrangement for scalding hogs is a box with a sheet-iron bottom placed over a furnace; the top of the box should be on a level with the cleaning table, and the fire can be regulated to keep the water at the desired temperature. The box should be of sufficient length, depth and width to admit a to be turned from one side to the other without throwing out the water.

In 1889 there were 4[illegible] sales of Shorthorns in England, 2 323 head in all were sold for £79 571. In 1888, 1,294 head were sold for £44 013. The average in 1889 of £32 193 is the highest since 1883. The Duke of Cleveland's selections from his celebrated herd at Holker, had the best average, viz, £101,13 The highest price made in the year was £535 10, at the late Mr R. Loder's sale at Whitchelbury.

If it costs no more to feed blooded fowls than common, what economy is there in keeping the latter? Many imagine that the care bestowed upon the finer strains of poultry makes them much harder to breed and keep. And this extra labor never pays. You make a mistake! you think this way. Experience will teach you the wisdom of breeding choice blooded stock, and why it pays best. Farmer can do no better than test this matter thoroughly and be satisfied but this advice is worth heeding.

A mutual understanding between man and horse is necessary in order to insure the largest per cent. of profit to the stall-owner, says a leading writer If friendly word and kindly act are see as messengers, the equine nature moves quick response; if angry words are those first to be offered, they are treasured up in silen, vengeful mind, and at the moment last expected are tendered back in most distrous manner. The prudent stallioner kindly wins his horse. His nature is made be subject of careful study; his peculiities of temper are learned; his faults se skillfully corrected, and his vices, if unfortunately there be, are mitigated.

An invention likely to interest all breeders and horsemen, has just been brought out at the Vienna Military Veterinary Institute. Prof. Polansk and Dr. Schindelka have constructed an instrument admitting of the inspection by mirror of the horse's larynx. This apparatus is used with a tiny electric lamp, and the examination is made, not as heretofore, through the animal's mouth, but through its nostrils. Only three men have been required to hold the horses during the experiments which have been made at the Vienna Institute The new method has the advantage of allowing the nostrils to be thoroughly examined at the same time as the larynx, which for certain diseases is all important.

The London (Eng.) Farmer and Stock Breeder remarks that ensilage proves to be good food for ewes in lamb. Last year on the home farm of the earl of Bective, at Underly the ewes were fed from early in December till Bruary 1 on a few swedes on pasture, a little hay, and one-half pound of oats daily. The swedes then failed and 145 ewes received till March 1st 10 cwt. daily of chopped clover ensilage, with the same quantities of hay and oats. Then the lambs began to sell, and the ewes received the ensilage as before, mixed with four stone of bran, one pond of oats each day, daily, and hay, of which last however they took very little. They did exceedingly well on this mixture, ewes which both ewes and lambs continued to bed till they all went to the butcher fat.

It is estimate that the diamonds shown at the Paris Exposition were worth from $35,000,000, and $40,000,000. There were many specialtie, such as a model of the Eiffel Tower, made entirely of diamonds, 3½ feet high, which is to come America.

LEPROSY.

How It Raged in Europe During the Middle Ages.

We have no certain knowledge as to the manner in which leprosy was conveyed into Europe, says the "Fortnightly Review" but there is evidence to the effect that in the last century before Christ it had established itself in the Roman empire. Its subsequent spread throughout Europe can easily be accounted for; wherever the Roman eagles went the germs of the disease would necessarily accompany them. From this source Spain, France, and Germany sooner or later became infected, and although there are no records which enable us to trace the progress of the malady in Europe during several hundreds of years afterward, the steps that were taken to check its spread in the seventh and following centuries sufficiently indicate the alarming frequency of the disease and the virulent character it had assumed.

Leper hospitals would appear to have been established in Norway somewhat later than in other European countries. History tells us that in the Frankish kingdom these institutions were founded in the eighth and ninth centuries, in Ireland about the year 869, in Spain, 1007 in England in the eleventh century, in Scotland and the Netherlands in the twelfth, and in Norway in the thirteenth century. During and after the crusades leprosy spread with extraordinary rapidity, and lepr hospitals were rapidly multiplied all over Europe. It is estimated that in the twelfth century there were 9,000 such hospitals in France alone and 19 000 in the whole of Christendom. So terrible were the ravages of the disease that it seemed as though some altogether new plague had been sent to punish mankind. Indeed some historians have asserted that the leprosy of the middle ages was introduced for the first time from the east by those who returned from the crusades. As a matter of fact, however, leper hospitals existed in England centuries before any of the crusaders retraced their steps westward. The soldiers of the cross doubtless brought with them many cases of severe leprosy, and an extremely virulent form thus became ingrafted upon the disease already prevalent throughout Europe.

How to Carry a Watch.

A watch must be kept in a clean place. Dust and small particles of the pocket lining gather continually in the pockets, and even the best fitting cases cannot protect the movement from dirt finding its way to the wheels and pivots of the movement. Watch-pockets should be turned inside out and cleaned at regular intervals.

A watch ought to be wound up regularly at about the same hour every day. The best time to do it is in the morning, for two reasons. First, because the hours of rising are more regular than the hours of dinrobing and retiring; second, because the full power of the mainspring is more likely to reduce to minimum the irregularities caused by of the movement of the owner during the day.

When not carried in the pocket, a watch should always hang by its ring, in the same position that it is worn. As a rule, watches will run with a different rate when laid down. Only high-grade watches are adapted to position, and will show only a few seconds difference in twenty-four hours, while common watches may be out of time several minutes in one night.

Never leave a hunting case watch open during a considerable length of time. A careful observer will find in the morning a layer of dust on the crystal of a watch that has been open during the night. The dust will find its way into the movement. The dust on the outside of the case will be unconsciously rubbed off by the wearer, but when the watch is closed, the dust inside of the case must remain there. The oil will change. It will become thickened by the dust that cannot be kept out of the best-closing case. The dust will work like emery, and grind the surfaces of the pivots of the train.

How Seals Keep House.

"Just as of old the seasons come and go," and just as of old, year after year, as regularly as the globe completes its annual circle, there occurs what is termed the "landing" of the seals. What scenes of peace or war transpire among the seal family out in ocean depths we may not know, but we know what takes place after the heads of the various families arrive, which is in the "merry month of May." The seal army of occupation early since there seems some more or less dramatic, and which indicate that there is a good deal of human nature in the seal, as there is in fact, to more or less extent, in every creature that walks the earth.

About the middle of May, usually, the males, which are the first of the breeding seals to arrive, crawl from the water and establish the rookeries in readiness for the cows that begin to come somewhat later. It seems probable that the rookeries are occupied by the same bulls and cows from year to year, as they, the rookery grounds, change but little, either in size or form; but it has been proven that the bachelors do not return to the same hauling grounds, or even to the same island, with regularity from year to year.

Western Farmers.

Evidence is accumulating of greatly diminished prosperity, and, indeed, of serious trouble, amounting often to actual distress, amongst the farmers of the Western States. Low prices of produce—the great especially—and heavy taxation are the chief cause of adversity. To these must be added the charges for mortgage indebtedness, which have been steadily increasing in recent years. A table has been prepared from the reports of the Secretary of State of Ohio which shows for each year since 1870 the number of new mortgages recorded, the amount secured, and similar particulars of the mortgages released. The table shows on balance a continuous though varying increase year by year of debt. Within the last eighteen years the mortgage indebtedness of Ohio has been augmented to the extent of £92,566,990, after allowing for repayments and foreclosures. In view of the fall of prices of almost every kind of American produce, except cotton, it is not strange that farmers in the Western States are complaining of bad times.

Cut warm bread or cake with a warm knife.

The king of Spain has got over his illness, but his constitutional weakness is so great that it is extremely unlikely that he will live to grow up.

Some Interesting Scraps.

The statistics of wild beasts in India for 1888 show that they do not grow any less deadly. Twenty-two thousand nine hundred and seventy persons were killed in 1888, an increase of 690.

Many salmon of the rivers of Finland contain copper hooks of a peculiar form. It is now known that these hooks are used in the north of Germany, and that salmon of the Finnish rivers must descend in winter to the Baltic coasts of Germany.

A baron of beef for Queen Victoria's sideboard on Christmas day, weighing 300 pounds, was roasted at Windsor castle and dispatched to Osborne on Christmas eve along with the boar's head (from one of her majesty's wild pigs) and woodcock pie, which are the customary luncheon dishes at the palace on Christmas day.

A snake kept by a Zurich naturalist was fond of entering a small pond and lying in ambush for goldfish. It seized its prey by the belly, when, very curiously, the fish became stiff and apparently dead, though it was found to be uninjured, and if liberated readily swam away. The naturalist thinks the snake had a hypnotic influence on its victim.

A Scranton man who gives his attention to raising pigeons says that the only bigamist he has ever seen among pigeons is a male now owned by him. During the breeding season the bigamist maintained two separate wives and households, devoting just about as much attention to one as to the other. He helped raise the broods of each female, and his affection for each was equal. The double duty kept him very busy, but he seemed to take pride in having so much responsibility.

Up near Hartford, Conn., last week a young man who had set a trap for a mink went out to examine it, and could not find it. He heard a growl, and looking up in the branches of a tree, saw his trap hanging to the leg of a peculiarly shaped animal. A discharge of his gun brought down a Canadian lynx, which measured four feet from the tips of his fore feet to the tips of his hind feet when stretched out at full length. There have been a number of sheep killed in that vicinity recently, the marks of which could not be attributed to dogs. This lynx was probably guilty of it.

A citizen of Elberton, Ga., has a pet goose which keeps a better watch around his house at night than most dogs would. The citizen recently said to a visitor: "I've got the worst pet goose you ever saw, and if you come around without hallooing or striking a rock with your stick you'll think something's taking you off like a bear saw; she's a bad one, and after we go to bed she makes a path around the house like a circus ring, and every forty feet she yelps out "kaap quick, kaap quick, kaap quick!" I don't mind she'll be tearing off your pants and giving somebody a job of patching. She's the best watch dog I ever had, and we wouldn't feel safe if our pet goose should die."

Russian Military Discipline.

A German was boasting in the presence of some Russians about the obedience and disciplined of the German army, citing numerous instances from the war between France and Germany.

"Gentlemen," replied one of the Russians, "what you say about the discipline in the German army amounts to nothing at all when compared with what occurs continually in the Russian army. But I will merely recite one instance of what occurred at the beginning of the reign of the Czar Nicholas, when the discipline in the Russian army was comparatively lax. At that time, before the telegraph was discovered, the Russians used signal stations, which were a few miles apart. The soldier made a signal which was repeated by the soldier at the next station, and thus the news was conveyed thousands of miles.

One day a soldier at a station near St. Petersburg did not see the signal in time, and dreading the punishment that awaited him for negligence deliberately hanged himself on the signal tower. The soldier at the next station mistook his for a signal, so he deliberately but promptly hanged himself also. In consequence of the discipline which prevails in the Russian army next day it was discovered that all the soldiers at the signal towers from St. Petersburg to Warsaw had hanged themselves on their signal towers. Of course a much stricter discipline prevails at present, and—

"That will do," replied the German; "I give it up."—[Texas Siftings.]

Truffles in Epping Forest.

Every gourmand in London, writes a correspondent, has had his mouth set watering with desire by the appearance of a basket of truffles gathered in Epping Forest which have all the stiffness and resistance to the pressure of the finger deemed by connoisseurs necessary to insure conviction of their having been dug from the ground only twelve hours before. "For a long time past the inhabitants of the little villas that border the forest have had their curiosity excited by the frequent visits of a party of Frenchmen, armed, some with trifoards and some with queershaped pointed spades and rakes, but what excited the most curiosity of all was the strange pack following them in the chase, consisting of three or four extraordinary looking pigs—small animals with long, peaked snouts, and mounted upon long, lean legs, which trotted along, grubbing hither and thither, and flopping their ears in disdain as they slipped into the cut of their masters, urging them on their road. The sport generally took place before dawn. Those Frenchmen were truffle hunters, and the queer-looking pack following at their heels were French pigs from Perigord, whose scent is never at fault when truffles lie hidden beneath the ground."

Pigeons With Whistles in Their Tails.

The Chinese have many ingenious methods to save their fowls from being caught by the hawks. The pigeons in North China have tied to their tails whistles which make a whirring noise as they fly through the air, and which frighten hawks away. I was for a long time at a loss to know what the sound was. I heard it many times a day in every city of North China, says a writer in the Agriculturist. The goose-herder protects his charge in much the same way. He has a sort of bamboo whistle or tube fastened to the end of a rope-whip, which he swings from time to time around his head to scare away the hawks. Inasmuch as some of the goose-herds number as many as a thousand birds and as the hawks are numerous and bold, it will be seen that this is not an unnecessary precaution.