

## ORCHARD and GARDEN

### THE DRY FEED PROBLEM.

Professor Rice of Cornell Agricultural College has been experimenting with the dry feed for poultry line, and while he seems to have confined the experiment more especially to whole grains his findings will be read with interest and his conclusions at the end of the twelve months' experiment will be looked for by both large and small holders of poultry. In the course of his talk he says: We have tried three pens of White Leghorns. We knew the strains, and we divided them equally among three pens, and we fed them on the same kind of grain and the same amount of soft feed. The soft ration was made up of wheat bran, corn meal and meat scraps and wheat middlings, about equal parts, and the grain ration was for part of the time wheat and oats, with a little corn and the rest of the time equal parts. Whatever applies to one pen applies to the other three. The experiment has been running now about nine months, and the result is that the first pen, which was fed whole grain in a litter morning and night with soft mash feed at noon mixed up with water, led the procession in egg production for the first five months right straight through. My heart went down, because I must tell you that although we were after the truth, and did not care where the lightning struck, yet I had personal feeling, and I hoped that the easier way of putting the feed out in the hopper and just opening it up once a day or leaving it open all the while would have the best results.

The second pen got their grain morning and night just the same as the first pen, but they got the soft feed in the hopper in the afternoon every hour or two, and in the third pen we fed with the whole grain in the morning and whole grain in the hopper day and night right straight through. The pen that had the hopper open all the while gave us better results, but at the end of the five months the dry feed pens began to pick up just about moulting time. The hens that had soft mash did not moult for four to six weeks, and then when the cold weather struck it put them nearly out of business, and the two dry feed pens have been ahead ever since.

What the result will be at the end of twelve months I do not know. I think we can afford to take a few less eggs, because it saves a lot of labor, and the only question is whether it will keep up the vitality. We can afford to sacrifice almost everything before sacrificing that. Vitality is the beginning and end of the whole business. If we once lose vitality it will commence getting worse year after year.

### USEFUL GARDEN HINTS.

Too late for this season's use perhaps, but handy to tuck away in memory or the scrap book for next year's work, are the remarks of Frank Wells in "Michigan Farmer". He writes: The possibilities of the garden are not half understood. Many of the vegetables could be made much more serviceable than they are if their good qualities were better known. If the string beans are kept picked off and none allowed to ripen, then the tips cut away, the roots will send up new shoots which will bear a crop in the fall, not a large one, but at that time of the year a large crop will not be desired. The fact that the neighbors will not have any may give them a relish, as it often does. The stems of Swiss chard are large and fat. If the blades are stripped off these midribs may be cooked and served like asparagus, so the plant's usefulness is not limited to "greens" merely, though that is the first consideration. Endive and lettuce are first of all salad plants. Few people think of them as pot herbs, yet they are useful for this purpose. A large bulk of them is needed for they shrink in boiling. Chicory is becoming one of the important winter salads.

Celery plants should be set by this time and bleaching will soon begin. Four-inch drain tile make good bleachers. Large growers object to them on account of the inconvenience in putting them on, but in the home garden they do very well. They should be put on when the plants are half grown. Another way of doing is to wrap the stalks with paper before banking up. This keeps the soil away from the stalks and saves them from rusting. Heavy brown paper is best, but any kind may be used. It serves the purpose better than boards, but there is more work about using it. Good celery can be raised on sandy soil if it is made rich enough. The flavor is superior to that grown on muck. But an abundance of moisture is required. To the lack of water is chiefly due the failures with celery on high land. In the irrigated districts of the west celery of fine quality is produced.

### BETTER THAN SPRING BREAKING.

Farmers frequently make a mistake by not plowing more of their cultivated fields in the fall than they do. Some are constantly crowded with work and "can not get around to it," others are somewhat negligent and fail to realize that crops too often give poorer yield from spring than fall plowing. Deep spring plowing is likely to result in diminished crops, especially if followed by a period of drought. The loosening of the soil to a great depth admits air and facilitates the loss of soil moisture. It breaks off capillary and the moisture from lower depths is not readily drawn upon. Consequently, in a dry summer, there will not be enough moisture to support a good crop. The advantage in plowing, particularly loamy soils, in the spring, when the land is still moist, is not merely that the ploughshare slips easily through the soil but rather that the furrow-slice, as it dries, falls down of itself and forms loose earth. It is evident that fall plowing can not be recommended for all soils and all localities. The plow does not grind the soil to powder, but merely throws it up into little ridges, or furrows, and while in this condition in the winter and through the action of the frost the particles of earth are loosened and torn apart. This is especially true of fine clay soils which run together and of those that pack easily. Loosened soils admit air more readily and thereby increase chemical action upon vegetable and mineral matter. Manured sod or covered crop lands turned under in the fall will have some time to decompose and render plant food available for the crop of the following spring.—Indianapolis News.

**NEW FERTILIZER HAS NEW VALUE**  
Every gardener likes to use a stimulating fertilizer to hurry the crops along. For this purpose nitrate of soda and sulphate of ammonia are most frequently employed. Nitrogen is the element chiefly sought and all known means of obtaining it cheaply have been tested. Lately much interest has been shown in lime nitrogen or calcium cyanamid. The results of recent experiments with this fertilizer indicate a high value for it. In some tests it has shown only 80 per cent of the effectiveness of nitrate of soda while in other tests it proved superior.

Lime nitrogen seems to be harmful if placed in direct contact with the seeds or roots of plants. It should preferably be mixed with the soil and applied from eight to fourteen days before seeding. It will then greatly hasten the growth and maturity of garden plants. Some gardeners have found that it is best to mix the lime nitrogen with the soil five to ten inches below the surface. The best results have been obtained by mixing the fertilizer with twice its weight of dry soil before applying. Lime nitrogen should not be applied at a greater rate than 135 to 270 pounds per acre.

### KEEP THE SWINE HEALTHY.

The veterinarian of the Indiana experiment station gives wholesome advice as to cleanliness in the swine's quarters. Doubling up on applying whitewash—say giving two or three applications during the year—would be even better. Some of the spraying instruments will do the work nearly as effectively as the slower hand-brush operations. The doctor says: In no place on the farm are disinfectants so necessary as in the hog houses and the yards. Whitewash should be used about the houses at least once during the year. Every two or three weeks the houses, feeding floor, troughs, etc., should be sprayed with a disinfectant. The tar disinfectants are the most convenient to use. These should be used in not less than 2 per cent, water solution. An occasional spraying or dipping of the hogs in a 1 per cent, water solution should be practiced.

Young hogs should not be given crowded quarters. In order to keep them in a healthy, growing condition, a proper diet should be fed. Healthy individuals possess a certain amount of power to resist disease, and this plays no small part in preventing

### MAKING A COLD FRAME.

If a cold frame is to be used during the winter it should be made this month. To make it simply construct a frame of boards the desired size, and dig a hole so that it can be sunk into the ground about half the height of boards. Choose the sunny side of a building or a tight board fence for the location of the cold frame. A regulation hot-bed sash can be used to cover it or a covering of unbleached muslin cloth can be used. The muslin will answer very well if tacked tightly to a light frame. Lettuce and spinach can be grown during the winter and a frame of this kind will be found sufficient protection for various flowers if covered at night, during the cold weather, with a heavy matting. It is good plan to do the preliminary work this month involved in the construction of the hot-bed. The pit should be dug in the fall and the frame placed in position, as weather conditions will not be at all favorable for this sort of work at the season when the hot-bed should be started. Indianapolis News.

Denatured alcohol is used in a hat factory at Manchester, England. The manufacturers use the spirit, recover it, and redistill the produce in their own factory, and use it over again until it is used up.

The indicted leemen throughout the country are seeking delays. It will take a vengeful jury, indeed, remarks the Baltimore Sun, to send an leeman to jail in the middle of winter.

## Women Who Work For Wages

Are They Injuring Their Chances of Marriage by Going Into Business?  
By Juliet Wilbor Tompkins.

One will marry you, my dear!" says the alarmist to the young women of business. If they are young enough, they answer, in their hearts, "Nonsense!"—whatever their lips may say, as they grow older, the inner repudiation may become tempered with a faint doubt. It is certainly true that the modern man—of the educated world—marries less early and often than did his grand-father, and any grandmother can give you the reason. But, in spite of the turn given by sport to energies that once knew no outlet but love-making, and in spite of the comforts of clubs and bachelor apartments, still many men do marry. I wish I could say that the modern preference is for the alert, self-helpful woman of affairs, the girl who has mastered a profession or the one whose trained mind can put through a real estate transaction or a deal in May wheat; in time I believe that this may be true, but, as yet, a limited personal experience says otherwise. We have travelled a long way since the odious Dr. Magin made his name as a parrot, because he heard a few words of sense from a woman and is still outrivalled by the curly heads, whether we like the admission or not. Statistics may prove the contrary, but it has seemed to me that the women who work and who are thrown with men in daily practical contact are less apt to marry than those who meet with men only by lamp and candle light. Vanity suggests that this is the woman's men only by lamp and candle light. Vanity suggests that this is the woman's men only by lamp and candle light. Vanity suggests that this is the woman's men only by lamp and candle light.

To the frank this would seem like an argument against going to work, but there is an argument for it so vastly greater that it overwhelms this—which is, after all, only a general tendency and need not apply to the particular case. On the other side lies the splendid fact that the woman with a trade of her own does not need to marry. She may wait till love comes, with no anxious thought of "chances," no compromise with her heart or head; she may keep the door open for the best thing of all, instead of shutting it on a possible half best. If she misses altogether, she is not an economic hanger-on, a maiden aunt to be passed about among relatives, but an independent and a factor in the world's processes. When hope goes, she still has dignity and a purpose; she still has her independent personal importance. Whatever the risk, the sum of the argument is all on the side of work.—Success.

## Inaccessible Wealth.

By J. Marvin Nichols.

The eyes that have looked upon the Grand Canyon of Arizona feed upon the wondrous vision as long as life endures. Old Capt. Hance, a genial, sunny soul, made that canyon his home for eighteen years. His perfect knowledge of it, and his absolute fearlessness, has made its descent by different trails comparatively easy. After years in the Apache and Comanche country, in many a hard-fought Indian war, he wanted to live alone. Hence, in his summer and winter he made this great canyon his abode. For seven years his nearest neighbor was seventy-three miles distant. For five long months in the winter he heard no human voice. "Were you never lonely?" "Lonely in the Grand Canyon? No, indeed," was the invariable reply.

And that canyon, who can describe it? Valuable minerals are found hidden in this mighty abyss—copper, galena, gold and various forms of iron. But they do not readily yield their treasures to the explorer. Capt. Hance has discovered several mines, and owns a valuable asbestos claim. But these are so difficult of access as to render them almost valueless. The wealth and happiness of Capt. Hance were not in his mines, but in riches which he made his own and used, even in the lonely place.

Do you grasp the message? What is a gold mine or an asbestos claim worth when inaccessible? What are the rich resources of divine grace worth when locked up in the human heart? To use a commercial phrase, you must put your goods on the market. An unused talent is worse than no talent at all. Away with inaccessible riches!

After all, is there not a sense in which the great endowment proves a real danger? The man to whom was given the one talent had riches to that degree. But it was inaccessible wealth. The very possession of it was his ruin. Inactivity is self-destructive. Unused power is always dangerous. Negative righteousness and positive sin, so far as results go, are one and the same. He who voluntarily starves and he who voluntarily commits suicide reach the same end—they die.

Don't profess too much. Be careful how you give in your holdings! Riches are not always resourceful. You may own piles of ore in some mountain-gorge and then be very poor. Real wealth is dependent on accessibility.—Christian Register.

## Select Your Wife With Care

By Tom Masson.

In selecting a wife many men go on the principle that, it being a matter of small consequence, almost any young thing will do. This is a great mistake.

The careful man, even in details like this, will still be governed by proper circumspection.

There are various kinds of wives to be had for the asking. She who is well made, stylish, ready in social emergencies and gives much pleasure in showing her around. Under cover she is disappointing, and is apt to run up bills, but for certain purposes is in large demand.

The domestic wife sews and mends nicely, makes mustard plasters and griddle-cakes, is a poor cloak model, saves money, raises children and is useful in illness.

The literary wife reads, writes and talks. She entertains people you hate, gives functions you dislike, makes cozy corners and trouble.

The economical wife makes over her own clothes, starves you nearly to death, and saves enough money so that you can have a good time with her successor—if you're lucky enough to have one.

The extravagant wife gives you a good time at twice what it's worth. In selecting a wife always, of course, pick out your opposite. If you have a large, generous, whole-souled nature, that loves company and is fond of travel, stag parties and demijohns, marry a combination cook, housekeeper and trained nurse. Some one should watch the home.

If you are a mean, contemptible, petty, niggardly human shrimp, marry a lovely, sweet, angelic, patient, deserving womanly woman. Her character will be developed by suffering, thus giving you the opportunity to do some good.

Do not marry any woman just because she has money. Become instead her confidential adviser. You will make just as much out of it in the end without having to live with her.—Life.

## The Passing of the Buffalo.

By Ernest Thompson Seton.

The buffalo as a wild animal is gone. The great herds will never again be seen roaming the plains.

Who is there of the present generation that does not feel profound regret at the thought and ask himself: "Why was I born too late? What would I not give to have seen the buffalo days and people in their romantic prime?" All the hungry regrets and people in their romantic prime? All the hungry regrets and people in their romantic prime? All the hungry regrets and people in their romantic prime?

Why was it allowed? Why did not the Government act? And a hundred sad "might have beens" spring forth from hearts that truly feel they have lost a wonderful something when the butchers drawn from the dregs of border towns were turned loose to wipe out the great herds that meant so much to all who love wilds and the primitive in life.

There is one answer—the extermination was absolutely inevitable. The buffalo ranged the plains that were needed by the out-crowded human swarms of Europe; producing buffalo was not the best use for those plains; possessed of vast size and strength, and of an obstinate, impetuous disposition, that would stampede in a given line and keep that line to the utter destruction of all obstacles or of himself, the buffalo was incompatible with any degree of possession by white men and with the higher productivity of the soil.

He had to go. He may even achieve success as a domestic animal, filling the gaps where the old-time cattle fail. But the buffalo of the wild plains is gone forever, and we who see those times in the glamor of romance can only say: It had to be; he served his time and now his time is past.—Scribner's Magazine.

A member of the Smith family | pines. You can't keep 'em down, de-  
now Governor-General of the Philip | clares the Montreal Star.



## HOW NELSON TOOK GRANDMA ROWING.

When Nelson as 7 years old his biggest present was a boat. Not a toy but a real rowboat with seats and oars. Nelson was a strong-limbed, wiry little fellow, and he soon learned to manage his boat very well indeed. Of course he was anxious to take everybody out rowing, until nearly all the people in the cottages around his home had had at least one ride with him out in the cove.

Grandma alone had not accepted his numerous invitations. To tell the truth, Grandma was a little afraid. She did not like the water, and besides she dared not risk herself with only a small boy like Nelson. But one beautiful October morning his persuasions were too much for her tender heart, and she yielded.

Once in the boat, her fears returned, and she grasped a rope that was stretched overhead from the shore far out into the water.

"Wait a minute," she said to Nelson, trying to establish herself more firmly on the seat.

But at the same instant the boy had seized the oars, and being anxious to show Grandma how well he could row he did not hear her words, but pulled out at once.

There was a frightened scream, and Nelson, turning, saw that he had left his passenger behind—right in the water! The boat slipped away, leaving Grandma still holding to the rope. Although there was not much danger, the water being shallow, she had fallen in such a way that she could not rise without help, and Nelson was badly scared. He hurried to her assistance, holding her head out of water until somebody else came, which was very soon; then with much laughter on Grandma's part she was rescued from her uncomfortable position.

There was no more rowing that morning, and Nelson was a very grieved and penitent little boy when he realized that but for his heedlessness the accident would not have occurred.

The next week Grandma did have a row with him, for to his great joy she said she was not going to give it up that way. And a very pleasant row it was, for nothing happened to mar the hour, Nelson paying the utmost attention to every wish of his beloved passenger.—New York News.

### A FUNNY BRIDGE.

Right in the middle of a city in Ohio one river empties into another and so the city is divided into three parts. It is really three towns sitting "catacorned" to each other, with the waters between them. One river is the murmuring Muskingum, hurrying along between its big echoing hills, and the other is the lazy Licking, flowing quietly between green garden banks and osier fields and overhanging trees. Both of them have mills to turn. The blue Muskingum spreads out in the sun and shines like a mirror above its mill dam, and then it tumbles down with a roar as it turns the mill and hurries away over the rocks as if it were angry at being caught and put at such a task. But the Licking spills itself smoothly into its work. So you see even the lazy Licking does not get past here without doing some work, for the inhabitants are very industrious. Then the rivers unite their waters and make a stream deep enough to float barges full of crockery, and steamboats laden with all the things they make here, down to the Ohio and thence to the Mississippi and away to the Gulf of Mexico.

Now when it came to building a bridge to join that city together the wise men of the place saw that it would have to be a bridge with three ends. A queer bridge that would be, indeed, for who ever heard of a bridge with more than two ends to it? There was not such a thing in the United States. But they had to have it, and so they made it. And it was the only bridge of the kind in the world, except one in Switzerland that it somewhat resembled. To look at it, one would think that each town had started to build a bridge out to the others and all three bridges had met in the middle of the river. Each part of the bridge had four hallways, two big ones for horses and two little ones for people walking. It had a shingled roof over all the length of it, and windows in the sides, so that it was a sort of housebridge. When it rained you could go out on the river and be out of the wet. Where the bridges came together there was a big room out in the middle of the river, with the twelve hallways opening into it. Can you imagine what a roomful of horses and wagons and people of three towns all was with the people of the town crossing from hall to hall as they came and went in different directions? Everybody in the three parts of the city had to come out here whenever they went to any of the others. And so they all met in the room out in the middle of the river no matter where they were coming from or where they were going to.—St. Nicholas.

### DOCTOR NED.

Ned's uncle was a young physician and Ned admired him beyond meas-

ure. Hadn't he cured people whom it was thought would die. That was worth being proud of.

Once when Ned was sick his uncle had ordered for him a very hot bath. He fell in love with it at once, and afterward wanted to take one on the least pretext.

Ned often stayed in the office while his uncle was away, and he was there when a little girl called.

"My mother said he'd cure my headache," the child told him, "So I've come."

"O he can cure anybody!" Ned declared, and he invited the girl to wait. She wore a pretty dress, but it looked soiled and limpy. Ned wondered if it would wash.

"Talk was not brisk, and after a pause Ned asked: "Did you ever take an awful hot bath?"

"I guess not," the girl answered. "I did," Ned went on—"once when I was sick, and it cured me. I just love 'em now! I make 'em real soap-sudsy you know, and it's lots of fun. Maybe they'd cure you."

"My head aches hard—dreadful hard! Did yours?"

"Yes, I ached all over! I was sick!"

"I suppose I might try it," the girl drawled. "Don't it hurt a mite?"

"Course not! It's jolly!"

When the doctor returned his patient had gone, and he was told of the prescription that had been given. He burst into a hearty laugh.

"Good for you!" he exclaimed. "I know who she is, and I've longed to give the whole family that same advice, only I haven't dared."

"She looked so dirty," said Ned. "They all do," laughed Uncle Edward. "They are nice people but they aren't educated up to the bathtub, and they don't realize how much handsomer and healthier they'd be for a daily plunge. I hope you have started them on the right track."—New York News.

### THE SEA URCHIN.

The Sea Urchin is a strange animal. It has four thousand spines, two thousand suckers and five hundred plates arranged in radiating zones so that every alternate plate is perforated for the passage of the suckers. It moves easily over the rocks, the stones acting like creepers on a wall.

The Sea Urchin has only five teeth supported by thirty-five muscles. When worn off they fall out, but grow rapidly again.

The mouth of this urchin is called Aristotle's Lantern.

The Sea Urchin lives in the sea near the rocky banks.

Once upon a time a large Sea Urchin got stuck on one of the ledges projecting from the rock shore.

For many days the poor Urchin worked and struggled to dislodge himself, but without success. One day when almost exhausted he heard a strange noise, a scratching and rattling of plates, and he saw the Key Hole Urchin.

It was only a few moments before the poor prisoner was released from his perilous position.

The Key Hole Urchin had unlocked the spines that had become attached to the rocks. The monstrous Sea Urchin ever afterward remained devotedly united with his deliverer.

### THE MOLE.

He is extremely retiring. He always lives underground. He constructs avenues under the sod.

His nest is about six inches under the surface. He appears above ground only after darkness has fallen.

He has been altogether wrongfully blamed by the farmer.

He lives chiefly upon insects and earthworms.

He was one of the original tunnel excavators, undoubtedly.

His fur has become very fashionable in the last few years.

He is a splendid swimmer, and is not phased by a freshet.

He is very industrious, having tunneled as much as 100 yards in a single night.

He varies in color, a deep brownish hue being natural, but he has been seen in orange and in white.

His eyes are remarkably small, as he has very little need for such luxuries while his nose and claws (he digs with them) are highly developed.—Philadelphia Record.

### AN INDIAN HUT.

Boys, do you know how the Indians built their huts? They selected trees abounding in sap—usually the linn. The trees, being cut down, were stripped of their bark from top to butt by the use of the tomahawk and its handle. The bark for hut building was cut into six or eight-foot lengths and pieces dried and flattened by laying heavy stones upon them.

Now, to build the frame of the hut, poles were driven into the ground six or eight feet apart, according to the length of the bark pieces, and these poles were strengthened by cross-beams. This framework was then covered inside and outside with the pieces of bark bound together with leatherwood bark or hickory withes. The roof ran upon a ridge, and was covered in the same manner as the frame. A hole was left in the roof for the smoke to escape, and one on the side of the frame for the door.—Philadelphia Record.

Drilling native Malay levies by word of command emitted from a gramophone is the latest instance of modern ingenuity.

New York city has seventy-one women on the police force. They are known as "police matrons."