

THE FILL'S O' BARLEY.
Lassie, when the gloamin' fa's
When night is young an' early,

TURNING STRAW INTO MANURE.

A great many farmers, especially in the western parts of this country, use only one-third, or one-half of their annual supply of straw for feed and bedding their stock; the remainder is converted into manure as soon as possible.

Every farmer keeps pigs, and they will do the job for him effectively. Scatter some grain or corn over the straw and manure, say once every two weeks, turn in the pigs and they will turn up the whole pile, in search for the grain, in a very short while.

But the pigs should not be allowed to lodge in the manure pile, as they are liable to contract disease by so doing. The manure is too warm, and when they get up and come in contact with the fresh air, they are apt to take cold or lung disease.

GARDEN NOTES.

Gooseberry bushes do best when they are well trimmed. They make rank growth. It is a fruit that does best in partial shade, and if the mildew does not attack it a crop may always be looked for.

John M. Stahl says fruit-growers do not place a proper estimate on the value of wood ashes. They are worth more to the horticulturist than the grain-grower, but cannot take the place of other manures.

To have a good crop of strawberries next year, there must be a good growth of plants this fall. To have this, work out beds immediately after bearing and work into the soil a good supply of well rotted manure or commercial fertilizers.

Good success may be had transplanting red raspberries and blackberries in every month from March to November. As for layers raspberries, the plants that came from layers last fall can be successfully replanted up to August if cut back at least two-thirds.

In pruning trees of any kind it is better to leave one strong branch or limb than two or three weak ones, says Popular Gardening. It is better to keep limbs thinned out than to cut back and make too close heads. Let the sun's rays in all through the tree.

In grafting nut trees on very large and strong stocks, the scions often make a very luxuriant, half succulent, growth the first season, and if this is not checked by pinching off the ends to hasten the ripening of the wood, there is always more or less danger of winter-killing, even of the most hardy kinds.

During the development of fruit the strawberry requires considerable water, but we never realized the importance of water as we did the past season. In this seeding although the spring was wet, the immediately succeeding weather was dryer than is often the case in the driest weather. Strawberries had bloomed, but there came a development of fruit. Finally rain came in frequent showers extending over a period of a week and wrought a wonderful change in the strawberries. On June fourth we picked ripe fruit where seven or eight days before no appearance of any could be seen. This fact shows that sufficient moisture is necessary for the full and perfect development of the fruit. There is no one but must have observed the effect of extremely dry weather in wholly obstructing the development of raspberries, blackberries and currants.

POULTRY NOTES.

Never let eggs get chilled that are to be used for hatching purposes. They should be collected during the cold weather every time a hen is heard to cackle. The rule is early and often.

The egg shell is porous, and any filth on it very soon affects the meat. Eggs should be cleaned as soon as gathered, if at all soiled, and those to be put up for winter should be eggs which have been gathered as soon as laid.

Accumulating filth is a prolific source of disease, especially gapes, which is essentially a filth production. After the hen yard has been cleaned to sprinkle it with a solution of two gallons of water to one gill of carbolic acid, and one pound of copperas will destroy disease germs.

The barnyard fowl does not thrive when massed in large numbers, and only reaches its highest perfection when allowed to follow the customs of the progenitors in the Indian jungles and wander at will in small

flocks. This is one great reason why many poultry farms become failures.

Hens like a variety of food, and we should aim to give them as much in that line as possible. On the off mornings give a feed of equal parts of corn and oat meal mixed with hot milk, or boiled turnips or potatoes mixed with a little wheat bran. All scraps from the table and refuse from the kitchen should be mixed with the morning feed. A daily allowance of a small quantity of meat, ground bone and oyster shells should not be forgotten.

The following is recommended as a disinfectant in chicken cholera: Dissolve three pounds of copperas in five gallons of water and add half a pint of crude carbolic acid. If the acid can not be had conveniently, use the copperas without it, sprinkle the floor, nests, walls and perches, or use a solution sulphuric acid, say thirty parts of acid to one thousand of water, and apply in the same way, or better if washed by means of a broom.

FARM DAIRY NOTES.

A slow, dilatory milk makes a great loss in the yield of milk, except, perhaps, when cows are going dry at the end of the season.

To be a good milker is an accomplishment which some persons can never attain. It requires a muscular hand, honesty or conscientious integrity in discharge of duties, good nature or complete control of temper, at least while milking, and a scrupulous regard to cleanliness.

Dairy heifers should always be handled familiarly from the first and there will be little trouble with them. But a heifer that has never been handled until she drops her first calf needs to be educated by gentle means. It is too often forgotten that such animals are timid and nervous and do not know what is required, and the boot or club is applied to subdue them. This is all wrong. If the heifer is to be made useful and pleasant beast for the dairy she should be handled and accustomed to all necessary manipulations from the time she is a calf. All dairy animals, whether old or young, should be taught to regard their master as their best friend. Rule by creating confidence and never by force.

The structure of the teat may be thus explained. In the centre are the lactiferous ducts which run into each other in precisely the same manner as the cells of a sponge; around these ducts and holding them, as it were, in place, is a fibrous tissue which is extremely elastic, which is a part of the fibrous structure of the udder. Around this mass of tissue and the connecting ducts which ramify through it, is a layer of glandular tissue which is the same as that of the udder. These glands are made up of vesicles clustered upon fine tubular ducts, like grapes upon their stalks, secreting the milk which flows through the fine ducts into the larger ducts, where the milk secreted from these glands meets the milk which flows down from the udder, so that the teat is really a part of the udder and does its part in producing milk, and is not a mere channel for its passage from the udder.

STOCK NOTES.

Coarse-wooled sheep are more liable to be infested with ticks than Merinos.

If swine are to be kept on the farm, the best profit will be found in the finest breeds that run into matured meat the first year.

See that your shoer fits the shoe to the foot, and not the foot to the shoe. It is the owner's own fault if blacksmiths are allowed to ruin their horses' feet.

Of all animals on the farm, the sheep is usually credited as being the best weed and briar eater known; but the long continued drought in Central Illinois is making for him hosts of competitors for honors in this direction. We see calves and pigs eating stumps, or button weeds, and cows browsing on burdock, where horses and colts eagerly devour almost anything green, even reaching for the leaves and small branches of trees over-head. Red clover pastures are the only ones affording feed worth the mention here now.

Swords and Revolvers.

Although as far back as the civil war in the United States, it was proved beyond doubt that cavalry armed with swords had not the remotest chance of success against those armed with revolvers, and although almost every nation in Europe arms its cavalry with the latter weapon, the English War Office, with even more than its usual inaptitude and obstinacy, refuses to furnish our cavalry with this weapon. The revolver is a weapon requiring much practice to be of value, but in the hands of one who has mastered its use it is a terrible weapon. A cowboy of New Mexico is not regarded as a good shot except when riding at full speed along a line of telegraph poles he can put a ball into each as he passes it; and the result is that, although the Indians consider themselves as more than a match for the regular cavalry, they will fly before a party of cowboys, even if they outnumber them many times, while a hundred cowboys would rightly consider themselves as a match for a whole regiment of regular cavalry. The sword was an admirable weapon in the old days, but a soldier armed with only a sword might be as well unarmed altogether were he to meet one armed with a revolver who was an adept in its use.

The Only Female Mayor.

Susanna Salter is the only female mayor that America has ever known. Argonia, where she is sovereign, is a Kansas town of 500 people. Syracuse, in the same State, rejoices in five women in the council, the mayor being the only man in the administration. Mrs. Salter weighs about 123 pounds, and four children, all under six years of age, call her mother. She has a good name for domestic virtues, and it is her boast that she has never been to but one convention of any kind. She is only 27 years old. Her husband is the son of a lieutenant-governor of the State. She has made all her own dresses save one. Temperance and Church work find in her a friend. Her neighbours say there is no misunderstanding in her house as to who has the right to wear the trousers. Her husband, who is now a well-to-do attorney, is the unquestioned head of the family. Anti-prohibitionists circulated tickets with her name at the head as a burlesque at the spring elections. Her friends took it up in earnest and elected her. She will be glad when her term has expired.

HOUSEHOLD.

PRETTY WHITE DAISIES.

Pretty white daisies, I love you so,
Beautiful buds of snow,
Nestling lovingly on my breast,

Pretty white daisies, I love you so,
Beautiful buds of snow,
Faded and withered, I lay you by,

Pretty white daisies, I love you so,
Beautiful buds of snow,
I stole from my breast one summer's night,

Pretty white daisies, I love you so,
Beautiful buds of snow,
A cluster of daisies, nearly white,

FLOWERS FOR THE BAY WINDOW.

The rock that the amateur flower dashes her hopes upon the soonest is to take some choice hot-house plant in bloom when bought, and try to make it grow in an ordinary sitting room, and with the small knowledge she may have of its nature and treatment.

Make one rule and stick to it. Never buy a plant in bloom. If your heart yearns to possess some lovely greenhouse darling, get a small slip and stick to the florist till he tells you exactly what to do with it. But stay your desire to grow wonderful plants and see what you can do with common things.

I have succeeded this winter with geraniums in bloom since Christmas, petunias that just "bloom," callas that delight the eyes of passers-by. But my success was a naturstium. Planted in a small willow basket on a bracket close to the window glass, its scarlet, sweet-scented blossoms have been a daily delight since February. Pink oxalis in a row of small pots make an upper shelf a blaze of colour. These, too, only succeed close to the glass.

An ivy geranium on a bracket is another success. Also Kenilworth ivy, and a lovely musk plant. Try these, my amateur popular gardeners, next fall.

HOUSEHOLD HINTS.

Glaze the bottom crust of fruit pies with white of egg and they will not be soggy.

Kid shoes may be kept soft and free from cracks by rubbing them occasionally with pure glycerine.

Put a small piece of charcoal in the pot when boiling cabbage, to prevent it filling the house with the smell.

A teaspoonful of kerosene in a quart of starch, of medium thickness, will keep clothes from sticking to the irons, and, besides, gives a desirable gloss.

White spots can be removed from varnished furniture by pouring on them a few drops of alcohol and rubbing briskly for a few minutes. Sometimes a second application is required.

Vinegar is said to be better than ice for keeping fish. Many think, too, that the flavor of fish is improved by soaking it a little while in vinegar before either boiling or broiling it.

Berry stains on the hands and clothing can be removed by the smoke of a burning sulphur match. Moisten the stained surface and expose it fully to the smoke, which will take effect at once.

Coffee pounded in a mortar and roasted on an iron plate, sugar burned on hot coals and vinegar boiled with myrrh and sprinkled on the floor and furniture of a sick room are excellent deodorizers.

To remove spots from carpets and make them look fresh and new, add a teaspoonful of ammonia and the same amount of beef-gall to every pint of water used. After rubbing well with this, wash in warm water.

For cleaning brass and copper vessels keep a solution of oxalic acid. Apply it with a soft woolen cloth, being careful not to have it so strong as to burn the hands. It is an active poison and should be kept labeled.

Paper bags, in which many articles are sent from the grocery store, should be saved for use when blackening a stove. You can slip the hand into one of those and handle the brush just as well, and the hand will not be soiled, and when through with them they can be dropped into the stove.

A Whitewash for trees and fences, or any out-door wood-work, can be made to stick by adding clean grease to the lime, when slackening it. To a peck of lime use a gallon of grease and enough hot water to mix well. Afterwards add water as needed to make it of the proper consistency to apply easily.

An economical substitute for butter can be made by melting a piece of nice fat pork and straining it through a fine sieve or cloth into jars. When cool, use it instead of butter. Another good substitute is beef suet, either tried out with lard or mixed with equal parts of lard when done. Some persons use the suet alone.

Washing Fluid.—We have used the following for several months, and like it well: 2 lbs. of sal soda, 1 lb. of lime, 2 gals. water, boiled together a few minutes. Let it settle until next day, when dip off into jugs and keep for use. Use half a pint of the fluid to a boiler of clothes, to be put in when the water is hot, as also the clothes, well soaped. We soak clothes in warm water half an hour, and rub slightly before putting to boil, then they need little rubbing after being boiled, and the clothes look white and nice.

Canning Tomatoes.—I notice there are several ways for canning tomatoes in tin cans, and I will give my way for canning in glass cans. I do not like tin cans for tomatoes, as the fruit will take the pewter off of the tin. One can see this for herself by stewing some in tin dishes. I peel by scalding, cut in such sized pieces as desired, put into earthen or porcelain, and stew quite a little time, say twenty minutes, stirring to keep from burning. I put them into cans while hot, and seal. The longer they stew the better success I have in their keeping. I have used this plan for years with good success.

A dog bitten by a rattlesnake in Nebraska, instead of dying developed hydrophobia, and bit fourteen head of cattle, all of which died.

STORIES OF ANIMAL LIFE.

STUDY OF THE SPIDER.

To a casual observer a spider is not usually a very attractive creature, and yet the repulsion generally felt at the sight of one, or even at the mention of its name, is quite unearned by the insect. There is a very great deal of interest in watching the motions of one of these animals when he is at his ease, and not frightened by our presence. Go into any garden on a June day—but choose one where the sun is bright, or, at any rate, when a shower is not falling—and watch one of the commonest of the species—Epeira diadema. There he sits in the centre of his geometric web. Note the marvellous patience with which he waits for a prey; he may get a victim every hour, or he may be days without a morsel of food; he will put up with whatever his fate may be, and must often suffer the pangs and pains of starvation. But suddenly behind him a fly gets entangled; as by electricity the news is conveyed to him, and with the quickness of thought he turns, and seizes the intruder. A very few minutes suffices for the killing, partial sucking, complete rolling up in silky shroud, and removal out of the spider's lifeless remains. The eyes of all spiders are eight in number; they are usually mounted on prominences in the head, so as to command a complete view in all directions, and are arranged in a different manner in different species of the insect. This slide of the eye of a foreign species shows us a capital view of the two front lenses; as we look at it under the inch object glass we are forcibly reminded of the two lights in front of a locomotive. By lamp-light in the evening the analogy is still more perfect, as the long surrounding hairs with which it is environed suggest the haze and steam often partially obscuring the front of an engine at night. We can imagine the feeling of horror overpowering the fly, which must have so much clearer a view of such an object than ourselves, when he views this fierce pair of eyes and dreadful body following, intent on his destruction. However, nature compensates in every thing; if there were no spiders we might be overwhelmed with flies, and, in any case, both spider and fly will provide us with many a charming and interesting object for our cabinet.

TOADS EXCHANGING SKINS.

"No one knows the funny things toads will do," said the Hon. James A. Sweeney, a naturalist and ex-member of the Pennsylvania Legislature. "On a recent cloudy day, after a hard rain, there was a cool breeze blowing. I was walking in a friend's garden near Hazleton when I heard a peculiar sound. Looking in the direction from which it came, I saw two toads in an open space in the garden. One was quite large, and the other was at least a third smaller. They were both standing on their hind feet, facing each other. The large toad had its four feet over on each side of the smaller toad's shoulders; the small toad his left fore foot on the large one's right leg. As they stood in that way they uttered strange guttural sounds, as if they were discussing some subject between themselves. Suddenly the small toad thrust its right foot, or hand, you might call it, against the large one's stomach, and the next instant the latter threw the former to the ground, and a lively wrestle between them began. "During the struggle on the ground the skins of both toads burst open on the back, and I supposed I was about to see the interesting process of toads taking off their old coats, rolling them up in little balls, and swallowing them, as naturalists say they do. I did witness the process of shedding the skins, but something much more singular than the swallowing incident then occurred. The day was raw and windy, as I said, and after the toads had rubbed their skins in a comical way toward their heads until they had both pulled themselves clear of them each one began to shiver very perceptibly with the cold. Suddenly the small toad hopped quickly to where the skin of the big one lay, and picking it up in his mouth hopped away several feet. The big toad followed the pursuer of his cast off clothing with his eyes, and gave two or three appealing croaks, but made no effort to recapture the stolen goods. When the small toad saw that he was not followed he deliberately set to work to don the skin he had taken. It took him some time to do it, but he finally accomplished his purpose and went masquerading around in the misfit garment exactly like a clown in a circus wearing the big baggy costume some of them appear in.

"The little fellow seemed to enjoy the novelty of the situation and hopped around the large toad in what must have been the most tantalizing manner. The big toad was shivering like a person chilled through, and bye-and-bye picked up the skin of the small one and began to force it on his body. The process was a difficult one, but after several minutes of unceasing effort he stood habited in the cast-off garments of his diminutive companion. If the effect of the big skin on the little toad had been comical, that of the little skin on the big toad was more so. The sleeves of the coat, so to speak, only came half way down the arm, and the legs of the trousers covered the toad's legs as though they had been knickerbockers. The body of the garment was so tight that the toad could not work either his legs or his arms, and he stood there the picture of comical despair. By-and-bye he began to swell himself up, and that apparently stretched the skin, for he was able afterward to move away slowly. He followed the small toad into the bushes in a dignified manner, and both disappeared. What the outcome of this curious exchange of clothing was I never knew, but the incident satisfied me that toads do funny things sometimes.

A KNOWING DOG.

The other day a Newfoundland dog was playing on the porch with a little girl, four years old. All at once she took a notion to go to a neighbor's house, and opened the gate and went out. The dog did not follow her. Some little time afterward the child's mother came out, discovered her absence and said to the dog, "Where is Nellie?" The dog looked as if he knew, and wagged his tail quickly. "Go this instant," said the mother, "and find Nellie and bring her home." Out over the gate flew the dog and started down the street to a neighbor's house not far off. Nellie was playing there, inside the house, and saw the dog come and scratch at a veranda window. "I know what he wants," said the little girl; "he wants me to go home, but I'm not going to do it!" The dog was not admitted, but he lingered near, like Mary's little lamb, and

when two ladies called presently, he brushed in past them through the door. Then, rushing up to Nellie, he seized her dress with his teeth and began dragging her to the door. An attempt was made to drive him off, but he growled and held on to her dress. The little girl, beginning to be frightened, gave up all resistance and trotted home by his side, and he delivered her, in triumph, into her mother's hands. Don't you think he was a smart dog?

A MULE THAT KNEW A THING OR TWO.

Last year, during the heavy rains, when every stream was swollen to its utmost, the writer had occasion to visit one of the swamp plantations lying some miles below Augusta on the Savannah River. Upon this hanging story. Arriving at our gentleman's place whom we knew we told him we were sorry that the high water would keep us from inspecting his fine swamp timber, having gone there for that purpose. To our surprise he told us that this need not interfere in the least, and that he had an old gray mule that knew the swamps better than he or any one else, and that we could ride her and if trouble came, whether we got lost or water-borne, we must give her the rein and she would bring us home safe; that she could walk a log as good as a dog; that she had on several occasions when these freshets came (his cattle being in the swamps and in great danger of being drowned) sent his mule after them saying, "Jane, go bring the cows home." The mule seeming to understand, would at once start for the swamp. This mule has been known to cross a log when it could not be seen, being two or three feet below the surface. Having done so, she would proceed to herd and collect all the cows. After that she would make a loud bray and start for the house. The cattle would follow in single file across this log to their master's house.

African Diamond Making.

As a romantic, precarious occupation diamond seeking is at an end. The whole business is reduced to a system, and is as prosaic and well organized as making calico or any other industry. The doctrine of averages has fixed within pretty close limits the yield of diamonds in carats per so many cubic feet of ground, and the value of the diamonds varies according to the fluctuations of trade. A good harvest in America means so many shillings a carat to Kimberley, and war rumors or panics on the Continental bourses, send down the barometer in the diamond market with surprising rapidity. The individual digger has long since disappeared, and his place has been taken by joint stock companies, whose shares are in great demand. The pick and shovel have been superseded by dynamite. Regular mining under ground is coming more into vogue instead of the open quarry system which created the huge pits and chasms that astonished the visitor. One thing only is constant—peculiar to the soil we tread. Now, as ever, all the manual work about the mine, is done by black labor; the white man is an overseer, a boss, perhaps a mechanic; but the actual work—the drilling, the striking, the manual labor, is done by the natives, of whom some 15,000 to 20,000 are constantly employed, and have been employed since the discovery of the fields, in constant changing relays. Every tribe in South and South-eastern Africa, meet in this vast labor exchange. They tramp down from regions where no white man has ever penetrated, work a few months, and plod wearily back, loaded with their modest purchases, and filled with such lessons as the compounds and the cantons of Kimberley can teach. Their wages are good—now 15s. a week. A few years ago they got 30s., but the supply of labor has overtaken the demand, and the necessities of life are cheaper. Only quite lately the companies have taken to shutting their natives up in large barracks or compounds to prevent the theft of diamonds, which took place to a ruinous extent.

How They Make Farmers in Denmark.

Young men are apprenticed to the best farmers all over the kingdom for two or three years, under the oversight of the Royal Agricultural Society. They work for good farmers for one year as learners, receiving a small sum besides their board and lodging. At the end of the year the apprentice is removed to a farm in a district where a different kind of agriculture is practiced. The society gives each apprentice a number of agricultural books at the outset, which become his property upon the completion of three years. The apprentices report to the society at stated intervals, and from these reports and other records where they have worked, the society judges of their progress and grants diplomas accordingly. The young men must get a thorough knowledge of all kinds of practical farming, but they have to work for it, as they are hard at labor from 4 a.m. to 7 p.m., except the meal hours. The society has started the system of apprenticing young men in the best of dairies for three months instead of three years.

The Bride Was up a Tree.

There's an eccentric old gentleman in a Connecticut town who recently married a somewhat hoydenish young wife, and who has been quoted as an awful example of senile folly ever since. Shortly after his return from the honeymoon he was waited on congratulatorily by quite a deputation of his fellow-townsmen and local magnates. He had been apprised of the intended visit, and was much annoyed that his girlish spouse was not on hand when the visitors arrived. Enquiry elicited that her whereabouts was in the garden, and he thereupon invited his guests out to be introduced to her. As they rose to accept the invitation, his son, a lad of 14, exclaimed:—"Don't do it, dad!" "Why?" he demanded angrily. "Because," answered the boy, half apologetically, "she is up a cherry tree."

Mrs. Martha J. Lamb advises women and girls to skip such reading in the daily newspapers as is not suitable and elevating, and "there will still be plenty of wholesome and well-written matter left."

An Australian exchange says:—A race for Chinamen's horses, Chinese riders, was included in the programme for the last meeting of the Vegetable Creek Jockey Club, Victoria, and the novelty caused no end of amusement and interest. There were three starters, and Ah Chow's Jim won after his rider had treated the spectators to a very comical exhibition of horsemanship.