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THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. III.

HAMILTON, DEC., 1871.

No. 12.

The Farm.

HINTS FOR THE MONTH.

December brings the indubitable winter, as surely as July does the summer. Whatever dreamy expectations we may have had of possible Indian summer, vanish now. Pleasant weather indeed we may have, but it will be pleasant wintry weather, with perhaps now and then a day so fine and warm that it seems to have lost its proper place in the year. Clear, bracing, but chilly, air will quicken the pulse, and send the blood coursing through the veins with unusual vigour. The snow will wrap the earth in its white coverlet, and all things will yield to the sleep of winter and to the reign of the forest king.

We are accustomed to think and speak of winter as a season of comparative rest and leisure for the farmer. But how far that is true and applicable to individual cases, depends on a variety of circumstances. Winter affords but little respite to the man who has a large area of wild land to clear, or a numerous herd of cattle to feed. These, however, are exceptional cases, and most farmers, when winter fairly sets in, feel that they are less driven than at any other period of the year. But while "broken weather," as it is often termed, lasts, every one has enough to do. That charming writer on rural affairs, "Ike Marvel," says: "Even in December the work of country improvements may go safely forward; the clearing of new land, the thinning of over-crowded forest growth, the building of walls, the construction of

walks and roads,—for these, severally, or together, no better time can be found than that which immediately precedes the locking frosts of winter. And when the dead-lock is fairly established,—so far as treatment of the land goes,—the open sunny weather of December still invites us many many a day out of doors. If we have rocks to move, they glide easily over a frosted and stiffened turf; the brambles and waste growth of outlying pastures cut easiest when the earth is locked unyieldingly about their stems; the woods, despoiled of their leaves, give free insight and outlook to their most sequestered nooks." These are but examples of the thousand and one things that may be done just at the setting in of winter, and there are few so beforehand with their work as not to be caught by the "dead-lock" with some needful preparations or unfinished undertakings that must needs be postponed or until another year. Most people, in regard to work, are like children in respect to tempting food; too greedy. The child's eye is proverbially larger than his stomach, and even so the farmer's eye readily takes in more work than his hand can accomplish. Indeed, generally speaking, plans and achievements too often correspond very poorly. "To will is ours, but not to execute." Happy are those on whom winter does not shut down with a host of half-accomplished schemes of preparation and improvement.

The hints given last month, as to the care of stock, are just as applicable this month, and will become more so as the temperatures goes down into mid-winter.

In fact, the care of his animals may be put down first on the list of the farmer's winter duties. Whatever arrangements are expedient can be contrived to make this duty easier, and secure its being faithfully performed, should by no means be neglected. Convenience of access to food, well hinged and securely fastened doors; ventilation without currents of cold air from unstoppered cracks and openings; ready means of clearing out manure; are things that should by all means be secured. Manure-making is also a December as well as November job—indeed, it is a job for all the year round. The great want of every farm in the land is more manure, and no opportunity of making it should be let slip. One valuable material for manure-making can on some farms be better got at and hauled in the winter time than at any other season, namely, swamp muck. Any farmer who is fortunate enough to be within a mile or two of any ashery, would find it pay to haul as much as possible of the leached ashes on to his land, in good sleighing. It is heavy material, and far more of it can be hauled in a sleigh, when the winter roads are at their best, when on a waggon, however, good the wheeling may be.

Wood-cutting and hauling is another item of winter work on the farm. The year's supply for the family should be thought of now. To burn green wood, and to bring it load by load from the bush as required, are among some of the most disgraceful points of slipshod farming. The wood-lot should be prudently managed, and made to last as long as possible. There are few, if any, parts of the country to which this advice is not applicable, now that the consumption of our forests by increasing population and extending railroads is rendering firewood a valuable market article all over the land. The days of reckless cutting, slashing and burning, it is to be hoped, are over for ever. Little as some think it, the time is not far distant when

we shall find it needful to replant forest trees in localities where but a few years ago there was prodigal waste of timber, while it was abundant. Not only firewood, but fence material, should be got out in winter, for use in early spring, where new fences require to be built, or old ones need repair.

When out-door work cannot be done, indoor jobs may well claim attention. Where is what the Irish labourer calls "ridding up," or what Mrs. Stow's "Aunt Chloe" styled "claring up." An air of neatness should characterize the barns and stabling. If there are boys or hired men about, they are apt to display a wonderful faculty for getting things into disorder and out of place. Every now and then the places they haunt will need putting to rights. The law, "a place for everything and everything in its place," will often be more honoured in the breach than in the observance. Nevertheless, every effort should be made to have it obeyed. Farmers who have tools and a shop of some kind, may improve winter leisure by making racks, gates, rollers, drags, and a variety of other articles that will be in request when the busy season comes round again. This, too, is the time for balancing up farm accounts, taking stock of the year, considering the improvements that may be made on past operations, and laying wise plans for the future. The long evenings are favourable for reading, for attending farmers' clubs, for making social visits, and for indulging in home recreation. A moderate amount of time may very properly be given to innocent entertainments by which the spirits are enlivened, and the powers of body and mind freshened for a resumption of the stern business of life. There is no reason why winter should be either a dull or an idle time.

Last, but not least, early winter is the time for renewing subscriptions to Agricultural journals, and making efforts to extend their circulation.

DOES FARMING PAY?

We often hear it said there is no longer any money in farming. In the course of our experience we have heard similar statements concerning other occupations. A printer, adhering in these days to the old-fashioned hand-press, might make the same complaint, and with as much justice as the present farmer, who carries on operations in the old style, or a carpenter who makes his mouldings by hand and planes boards. The improvements in machinery of all kinds have so quickened the demand for labour in every branch of industry, that the farmer as well as the mechanic must abandon hand labour and use machinery, or his profit must be eaten up in expenses. Hay may be made and put in the barn by machinery now at the rate of one dollar per acre. By hand the cost would be four dollars. The old style of crop is half a ton per acre; now three times that is a fair crop. The difference is just that between eight dollars per ton and sixty-six cents. The wide-awake farmer has this difference for his profit, eight dollars being about the market price for hay in many places. The same is true of most other crops, grain and roots especially. In feeding stock and making and using manure, equally large differences result. So of breeding stock; the old style rooster, and the modern Berkshire, are not more unlike than are their several values when made into pork. The same of the ill-fed, rough-coated native heifer or steer, and the sleek, well-fed grade Jersey or Ayrshire. The same is true of many farming communities in respect to roads, fences, and schools. All these must be fitted up with modern improvements, or farming as a business must suffer. We know whereof we speak, when we emphatically deny that farming is an unprofitable business. The capital invested will, if rightly used, return in this branch of industry as good an interest as in any other, besides having the invaluable merit of indestructibility. A workshop or factory may burn up, but and remains not only intact, but from uncontrollable circumstances is ever advancing in value. So the labour of the farmer is sure of some remuneration if properly directed. Poor farms and poor farmers are the ones whose crops fail through drought or excessive wet. On a properly conducted farm these may damage the crop, but will never destroy it. The divine promise of seed-time and harvest is for the especial benefit of the farmer; but it rests with himself in a great measure whether the fulfilment comes to him individually, or whether his more enterprising neighbour secures it.—*American Agriculturist*,

DIVERSIFIED FARMING AND HOME.

We would urge upon our dairymen the importance of adopting a somewhat diversified system of farming. Every farmer should raise his bread, vegetables, meat and fruit. Wheat, corn, potatoes, oats, &c., should be cultivated so that you may not be wholly dependent upon one single crop, a failure in which would be most disastrous. If you grow what articles you want to use, you will not be subject to the fluctuations of the market, and possibly have to pay dear for them when you are compelled to take low figures for your butter and cheese. Keep a few sheep for stocking-yarn, and for mutton, and

to have a few pounds of wool to sell or to exchange for cloth. In short, farm it so as to be as independent as possible, and to keep your hand in, so that you and your boys may know how to do something else besides take care of stock milk and churn, or run to the cheese factory.

And, above all, seek to make your homes attractive and pleasant. Don't forget the good woman in the house, and leave her and daughters to drudge and get along in the old-fashioned way, while you use the mowing machine, horse-rake, reaper, threshing machine and other labor-saving machinery. Give her the benefit of the washing-machine, sewing machine, and all the possible accessories which lighten the burdens of the household. Don't be afraid of nice furniture, or even the piano. There is nothing more pleasing and refining than music. Consider the intellectual and moral natures of those around you, and do something to gratify their tastes and cultivate their love of the beautiful, which is very closely allied to the true. Remember that the soul is of more consequence than the body, invisible and immortal, which suffers and enjoys—which has its likes and dislikes, its joys and its sorrows, and that if you fail to please and develop this, you fail in everything for which this material existence was designed.—*Utica Herald*.

FARMERS' ICE HOUSES.

There is no more pleasure adjunct to the farm during the heat of Summer than plenty of good ice. Permanent structures for keeping this commodity are now so common that any country carpenter knows how to build one. But many persons put off the building of this necessary convenience to the household, until it is too late; and so the want of it is felt every Summer, and the erection of the permanent building is put off every Fall until it is again too late. If so, put up a temporary ice-pen this season, and be prepared to build the permanent house next year at your leisure.

Select a place as near the house as convenient, and shaded if possible. Have the drainage perfect. Level the surface and cover it a foot or more with ordinary straw, or better, flax straw; then make a pen of rails, or some other suitable material, so that the stack of ice will not be less than twelve feet square. The larger, the better it will keep. Cut the cakes of uniform size, and as perfect as possible; pack closely together, filling the interstices with pounded ice.

Around the outside between the ice and rails, two feet wide, pack with straw thoroughly trodden down, but do not mix any straw with the ice. Cover all with straw two feet thick, and over all a good roof of boards, letting the ends project well over the sides.

Now if in the Spring, you set posts on the outside, with something within them, to keep the straw from falling away, and fill the place with straw, you will have a cheap structure that will keep ice perfect. Flax straw, or flax trash, is the best non-conducting material that you can get for that purpose. With this structure, an ice box will be more necessary, than with a permanent one, since it is not advisable to open an ice stack oftener than is absolutely necessary.

Make an ice-box with double sides, and six inches space for saw-dust or tan-bark between. Fix a pipe

in the bottom, for drainage, which may be run into a pail or pan. Have the inside box not less than 2 x 2 feet and twenty inches high, with an inside cover next to the ice. This will give you room for a cake of ice, of at least one hundred pounds, and still leave room for meats, milk, &c. If you have a full supply of ice for one Summer it will thereafter become one of the necessaries, without which a family would feel lost.

BUCKWHEAT AS A FERTILIZER.

A correspondent of the *N. E. Farmer* has been experimenting with buckwheat as a fertilizer and sends that paper the result, as follows:

Believing that all carefully conducted and minutely described experiments in agriculture are useful to the farmer and ought to be published, I purpose to give a little experience in the use of buckwheat to renovate an old field.

Early in the Spring of 1869, I plowed up a piece of grass land that was so entirely reduced as not to yield more than three or four hundred pounds of hay to the acre. After the furrows were smoothed it was treated to about three cords of green manure and one barrel of Coe's Superphosphate, and sowed to wheat at the rate of one and three-fourths bushels to the acre. The yield was a good crop of straw, but, the heads being not well filled, the amount of wheat was only eight bushels.

The ground after the wheat was taken off, remained untouched until June, 1870. At this time a considerable crop of clover and other grasses had grown. This was plowed under, and the land sown to one bushel of buckwheat and harrowed in. This came up and grew to be as fine a crop as one could wish to see, and after it had come to the full bloom I had intended to turn it under, but the weather being so extremely hot at that time, the plowing was delayed until the Fall. By this time the seed had matured so as to grow a second crop. The following Spring, (1871,) the ground was cross plowed, and portion planted to peas and potatoes, with nothing but a half shovelful of weak compost of barn manure and muck. Both the peas and potatoes grew beyond my expectation. Another portion, say a little less than half an acre was planted to fodder corn, in drills about forty inches apart. This portion was treated same as the potatoes, plowed and hoed once. The yield of corn was 300 bundles of good size; of the potatoes, fifty bushels. After the plowing, the buckwheat that sprung up between the rows was harvested, and yielded about four bushels.

DISSOLVING BONES.

I beg to submit to you a few hints on the decomposing of bones, for the guidance of those of your readers who may be unacquainted with the process.

In the old country, where bone manure is extensively used, various plans have been adopted to secure their ready decomposition. But to chemistry the practical farmers is chiefly indebted for that method of effecting their decomposition which has of late years been adopted, with the most signal success. To Baron Liebig the agriculturist owes a

deep debt of gratitude for the service he has done the agricultural world in pointing out the benefits which science is capable of rendering to the farmer. He says, in his report on the Chemistry of Agriculture: "The most easy and practical method of effecting the division of bones is to pour over them half their weight of sulphuric acid, diluted with three or four parts of water, and after they have been digested for some time, to add about one hundred parts of water, and to sprinkle the mixture before the plough. In a few seconds the free acids unite with the gases contained in the earth, and a neutral salt is formed in a state of very fine division."

But the difficulty of applying liquid manure suggested other methods, which are now generally adopted. It is found that by mixing the liquid with dry saw-dust, or even dry earth, it is converted into a form more conveniently used by farmers.

The following method for the preparation of bones can be recommended:—

The bones to be used should be broken as small as possible; they cannot be too small as the smaller the pieces the greater the surface presented to the action of the acid, and consequently the more rapid and perfect will be the solution. Having broken the bones into pieces from one to two inches in length, place them in a large cask or sugar hogs-head, add a quantity of water sufficient to moisten the bones, and allow them to soak in it for three or four hours before adding the acid; if the water be boiling, so much the better; then add the acid, and stir it well with the bones. Sulphuric acid is the acid most commonly used; its specific gravity from the manufactory ought to be 1.845; it should be kept in closed vessels, as it attracts moisture rapidly from the atmosphere, and becomes weaker. When strong acid is added to water, a considerable amount of heat is produced. If we mix vitriol and water in the proportion of 5 lbs of acid to 2 lbs. water, the temperature will rise to 266 degrees.

The proportion of acid to be used in making vitriolized bone manure is one hundred weight to acid for every two hundred weight of bones, and the proportion of water should be fully three times that of acid. The water must be applied first to the bones, afterwards the acid. The reason of this is, that when undiluted sulphuric acid is poured upon the bones, violent action ensues, but continues only for a short time, as a coating of gypsum, which is the first new compound formed, covers the surface of the crushed bones with a crust, which prevents the acid from coming in contact with the unaltered portions, and consequently preventing a perfect solution. But by applying the water first, and afterwards adding the acid, the action in complete
—*Cor. Globe.*

A FINE IOWA FARM.

Nettie Sanford, of Iowa, gives *THE PRAIRIE FARMER* the following concerning Oakhill Farm, belonging to M. Briggs, Esq., near Keillogg, Iowa:

"The farm consists of 1,000 acres of woodland, prairie and tilled fields. It has fifteen miles of good pine board fencing inclosing and dividing it. The house is a handsome two-story frame, with wings and porticos, and is situated in the centre of the tract. The barns, tenant houses, sheds, etc., give the premises a look quite like a beautiful village.

"I have visited many farms in Iowa, but, on the whole, for complete culture and tasteful surroundings, this is certainly at the head of the list. Mr Briggs has wealth, a refined taste, and by personal supervision, Oakhill Farm is made indeed the gem of the prairie.

"Among its attractions is a herd, about twenty in number, of handsome full-blood Short-Horns. They are mostly a dark red, clean limbed, with such bright clear eyes—enough to set a painter wild with admiration. Royal Competitor, that took the sweepstakes prize at Cedar Rapids over Illinois and Iowa cattle, is a four year red bull, and weighs 2,000 pounds—altogether the finest animal I have seen in the West.

"Persons will go a great ways to view fine scenery, but I do not know of a more beautiful sight than these broad thousand acres, these beautiful cattle, and last though not least, a flock of Cotswo'd, South Downs and Merino sheep, all in healthy condition. Out of 1,300 sheep I saw none in bad health, and I believe Mr. Briggs can raise them and make it as profitable as any department of farming. The farm has other attractions in the shape of splendid Berkshires, Poland-Chinas, etc.

"Mr. Briggs uses platform scales, has fine spacious granaries, a complete boiling establishment for preparing food for his many domestic animals. He has also fifteen head of horses, some of them with pure Morgan blood which might be added to the catalogue of attractions to visitors, while the old-fashioned hospitality which mine hostess dispenses, is royal and peculiarly grateful to tired people coming to see the beauties here displayed.

"Mr. Briggs has a mode of culture of winter pasturage—rye and clover intermixed—that is of great benefit to growing stock, and gives a great attraction to the landscape, from its intense green in contrast to the somber brown of the November forest."

LARGE FARMS.—A writer in the COUNTRY GENTLEMAN gives the following, among other arguments, to prove that large farms are relative more profitable than small ones: It is estimated that five per cent. of the wear of mowing machines in New England comes from turning the corners, ten per cent. from natural decay, and ten per cent. from lack of skill, experience and care in the operators and teams—all of which would be largely obviated by increasing the size of the farms so as to employ the machine, the team and the operator, constantly from the beginning to the end of the season. There is also economy in housing and feeding large herds of animals over smaller ones, and in fact the arguments, theoretically, are almost all in favor of the large farm.

The Live Stock.

POULTRY AS PROFITABLE FARM STOCK.

TURKEYS.

In many parts of the kingdom the rearing of turkeys is followed with great advantage, whereas in other localities a turkey

in a farm yard is a rarity. There is no doubt that turkeys, properly managed, are amongst the most profitable of live stock, and it is difficult to account for their absence from many places were they could be advantageously reared. Turkeys consume a much larger proportion of green food than fowls, and grow into size almost without cost; when fattened, they realize a high price in the market; and, as they are chiefly in demand in cold weather, can be sent to distant places without risk of loss. Many farmers and farmers' wives, however, dread engaging in the rearing of turkeys, believing them to be exceedingly delicate when young. I believe properly managed turkeys are not more difficult to rear than common fowls, and I am quite certain that they can be raised to much greater profit. My own method of procedure is to follow nature as far as possible. I make my turkey nests on the ground; or if in a paved house, in large shallow boxes half filled with mould that can be damped at intervals. The hens, unless they come off regularly, are lifted off to feed, and then supplied with grain with a liberal hand. When the young ones are hatched they are left undisturbed under the hen until the next day. No attempt is made to cram them—an absurd practice, which interferes most injuriously with the due digestion of the yolk that is absorbed into the intestines at birth, and constitutes all the food required for twenty or thirty hours after hatching. The first food given them is egg beaten up with an equal bulk of milk, and baked into a soft custard; this is alternated with crumbled bread mixed with milk, to which oatmeal is added in a gradually increasing proportion. Ants' eggs are given if I can get them; but if not, the custard is continued for a fortnight or three weeks. Quite as important as any other part of the dietary of young turkeys is the supply of green food, and many persons chop up nettles, onions, &c., with the meal; but if young turkeys are watched when grazing, it will be observed that they prefer eating bitter herbs belonging to the natural family *Compositae*, or compound flowered plants, such as the dandelion, &c. The common lettuce belongs to the same tribe, and I have this year fed largely on it. The greediness with which young turkeys devour this plant is remarkable. At three weeks old a dozen turkey chicks will eat four or five large lettuces in a day, and they even seem to prefer them when running to seed, at which time

there is abundance of bitter milky juice in the plants. At the age of a month they will begin to peck a few grains of wheat or barley; but bread and milk and meal should form the staple of their food for the first two or three months of their lives. Most persons say that young turkeys are particularly delicate when they are "shooting the red." This is not to be wondered at, when it is remembered that they are generally put on whole grain, without milk, long before they arrive at that age, and suffer accordingly. Another point of the highest importance in feeding turkeys, or young birds of any kind, is the hour at which they get their first repast. In summer it is daylight at four o'clock in the morning. If the birds have their first meal deferred until six or seven o'clock, they have been hungry for two or three hours, and suffer very much. To be successful in rearing these, and any other young birds, they must either be supplied overnight with their first meal, or the poultry-maid must be up with the lark. There is no better plan than putting the hen and chicks for the first month or two, in a closely-wired aviary at night, which is open to the early sun; and lettuce and a good supply of soft food can be put under a coop, so that the hen cannot eat it, and there will be but little left an hour after daybreak.—W. B. TEGETMEIER, in *Mark Lane Express*.

MOULTING FOWLS.

The moulting is the most critical period of the year for old fowls; and yet in ninety-nine cases out of a hundred there is less care taken than in the spring, when everything is in their favor. The idea seems to be, that now the young stock is out of harm's way, they can all shift for themselves: and until cold weather sets in, they are left to get fat (?) on what they can find lying around loose.

Some have much more difficulty in moulting than others. Spanish are a long time naked. All the non-setters feather more slowly than the others. It may be because they lay a greater number of eggs, and that the production of them causes more exhaustion of the system, than the twenty-one days of the setters. Certain it is, however, that moulting is an effort, and taxes the bird so much, that at such a time any old weakness, or partially cured disease, is sure to show itself again. Thus

where roup has existed in a poultry yard, it always re-appears at moulting time.

Perhaps many readers have never considered the great drain upon the system of the fowl during this change of covering. Not only do the regular flesh-forming, life-giving processes of nature have to be fulfilled, but an entire new coat of feathers has also to be manufactured. These feathers consist not of flesh and blood alone, but of component parts of animal and mineral substances. These substances are assimilated from the food, and unless birds can obtain such food as contain the necessary qualities, the work drags, is prolonged, and the poor fowl droops and grows thinner in the vain endeavour to fulfil nature's requirements, without the proper means to work with. I doubt if one person in ten—yes, twenty—has ever given this a thought, and yet it is of the utmost importance to thorough and complete success in raising first class-stock.

Birds that have their full liberty and are well fed, always moult well; but when they are kept in confinement, care and precaution are generally necessary. The effects of food may be proved by a fact. Quails are exceedingly fond of hemp seed. This is of a very heating nature, and if they are allowed to eat too much of it, their plumage becomes nearly black. If they are fed entirely on it, their bodies are so heated that everything is dried up, and no nourishment is possible. The feathers, like plants, die for the lack of moisture. If proper food has this effect, then judicious feeding ought to assist; when birds are moulting, they must have plenty of cooling food, and there is none so good as lettuce; if it has gone to seed and stalling, so much the better. Seeds of growing grass, and plenty of fresh earth with them, are also excellent.

A little treatment of this kind not only benefits the health of the fowl, but shortens the period of moulting one-third. In addition to that, the growth of feathers is stronger and heavier, and the fowls are thus better able to stand the cold winter. The appearance of the fowl is also vastly better, the feathers are lustrous, and appear as if oiled; the bird takes on fat at once, and meets the cold weather with a vigorous health and strength which otherwise it might not have.

Sometimes a fowl will be seen while moulting to be continually pecking or scratching at one spot of its body. On ex-

amination if will be found that one or more feathers have failed in passing through the opening in the skin that is provided for the purpose. They keep on growing, but they grow beneath it. This causes much pain. It is common in the top-knots of Polands, but the remedy is a very easy one; take a stout needle and pass it under the quill end of the covered feather, then draw the feather from under the skin.

Not only is an abundance of warming, nutritious food needed at this time, but a tonic of some kind may be given. Stale bread, sopped in old ale, given two or three times a week, is said to be beneficial; but perhaps one of the best things to use is one half pound sulphate of iron (green vitriol), one ounce sulphuric acid, two gallons of water. Put a teaspoonful of this mixture to each pint of water in the drinking fountain, and keep it by them during the whole time of moulting.

One thing requires to be watched; they will sometimes, in a dissatisfied habit of body, begin to peck and eat each others feathers. If a fowl does this, it should at once be removed, as it will teach others the same habit.—*Cor. Amer. Stock Journal.*

WINTER CARE OF STOCK.

BY ALEXANDER HYDE.

The first thing demanding attention is the stables. See that they are warm, and at the same time well ventilated. Much food is wasted every winter in keeping cattle warm. Animal heat is kept up by the union of the oxygen of the air with the carbon of the animal. There is a slow combustion constantly taking place in the interior of the animal, and one of the products of this combustion is carbonic acid, which is breathed forth at every exhalation. A cow breathes out from three to five pounds of carbon every 24 hours, varying with the degree of cold and the amount of exercise she has. The animal eats, therefore, not only to support its body and add weight to it, but to supply the carbon wasted by respiration. In case the animal is not fed for a time or is fed scantily, the fat which has been previously stored in the body is drawn upon to furnish carbon for the lungs and heat for the animal. It follows, therefore, that much food may be saved by keeping animals warm. Every observing farmer must have noticed that his hogs and cattle fatten faster on the same amount of food in mild than in cold

weather. It is much better economy to keep the temperature of the stables up to 60 degrees than to supply the extra food which cold stables demand.

In securing warmth many farmers neglect the equally important consideration of ventilation. Pure air is just as essential to vitality as food. We have been in a parlor where the good lady of the house was shivering with her shawl on, the thermometer at the same time ranging from 70 to 80 degrees. The trouble was, she was sitting and had been sitting for years by a close stove, with little circulation of fresh air, and her constitution had become demoralized by this abnormal mode of living. Neuralgia, which comprehends all human aches, was the torment of her life. We have been in stables where the cattle were suffering from the same want of fresh air; and the stables being worse in one respect than the parlor, inasmuch as the air was not only close, but reeking with the vile effluvia from the fermenting excrements. The remedy for this defect in our stables is simple. Just run a wooded tube a foot square from the stable to the roof of the barn; and, if the stable is large, two or three such tubes. The heat of the animals will cause the air to rush up these tubes, as it does up a chimney, carrying the carbonic acid from the breath of the animals and effluvia from the manure along with it. If the stable is very tight, it may be necessary to put in a tube letting in fresh air from the side, taking care not to let air blow directly on the stock.

Much saving of food may be secured by using loam, sawdust or dry earth for bedding, instead of straw. There are few farmers in the Eastern or Middle States that can afford to use straw for this purpose. The price has ranged, near our cities and large villages, from \$20 to \$40 per ton; and, much as we value manure, we cannot afford to make it from such costly material. Leaves make just as good bedding and a much better fertilizer, and the straw can be cut up, sprinkled with a little meal, and fed to the stock. Treated in this way, it is a much better fodder than much of the hay that is harvested late in the season. All late-cut hay should also be passed through the cutting machine, watered, and medicated with meal. The virtue of this hay has gone into the seed, and most of this seed is scattered before the hay reaches the animal. It is right, therefore, that the tough, wiry stems should be cut, softened

with water, and enriched with meal. The process aids the cow in her mastication and digestion, and also furnishes her with some material from which to make milk or flesh. We know it is a question with farmers whether it pays to cut hay for stock; but we think this depends upon the time when the hay was cut. Early-cut hay and rowen need no cutting. They are soft, full of succulence, and easily masticated without being cut.

Feed regularly. All animals are creatures of habit. We care not much whether stock is fed twice or three times a day, provided it is done at stated times. A cow fed irregularly is all the time on the *qui vive* for her food, and wastes much vital energy in unnecessary worrying. Feed by daylight, and never at night. Some farmers make a practice of going to the barn at nine o'clock in the evening, and again before the dawn of the morning, giving the cattle each time a bit of hay. They forget that "sleep is kind Nature's sweet restorer," and is just as essential to the thrift of the animal as food. Cows accustomed to be fed an nine o'clock in the evening get up as soon as the barn-door is open and the lantern gives its glittering light. It is much more economical to give them a through ticket for sleep, and never take a lantern into the barn.

By all means keep the stock in good, thrifty condition. It is miserable economy to let the cows run down during the winter, and come out "spring poor." The summer is half wasted before they can be restored to good milking condition.—*Independent*.

CURE FOR BEE STING.

On this topic, of such poignant interest to many, whether bee-keepers or not, Mr. S. Way, of Batavia, Ill., writes as follows; "To cure a bee-sting, let the patient drink half a tumbler of whiskey as soon as stung. This will keep the poison from going to the lungs. A wet sheet or pack is good after the whiskey. I have used this and the pack for years in my family with perfect success."

We fear that if this remedy be popularly accepted as a specific, some inveterate topers might find it agreeable to get into a habit of being stung.

We have the following remedy also from Mr. F. S. Dougall, of Stouffville, Canada:

"I find the best thing for the sting of a bee is alcohol. Bathe the part stung with it

immediately. It will kill the pain and stop the swelling. It has proven itself to be the best thing I ever tried. It was by accident I found it would give relief."

Another correspondent recommends the immediate application of pure spirits of turpentine.—*American Bee Journal*.

I find strong aqua ammoniæ (hartshorn) the best remedy. Apply immediately, but do not rub the spot stung.—J. H. THOMAS.

NOTE BY ED.—The above is a fair specimen of amateur medical prescriptions—a mixture of good practice with the broadest absurdity, and betraying utter ignorance of physiology. The idea of "whiskey keeping poison from going to the lungs," could never occur to one who knew anything of the circulation of the blood or the process of absorption. A person must be badly stung, or badly frightened, who would have recourse to a wet blanket or "pack sheet" for such a trifle. As most of these animal poison depresses the nervous system, any stimulant is useful, and in severe cases, especially those occurring from the attacks of a large number of bees, the readiest and most efficient restorative would be indispensable. This would account for the good effect of the whiskey. But we quite agree with the editor of the *Bee Journal* that to accept that remedy as a specific would be a convenient excuse for dram drinking, to which the humor of the thing would add a superfluous zest.

The external application of alcohol would be beneficial simply as a cooling lotion, the result of its evaporation.

Mr. Thomas's remedy is the most rational. The acid poison of the bee is neutralized by the alkaline ammonia, which also acts as a stimulant and cooling agent. We have often witnessed its good effects, and except in severe cases arising from special idiosyncrasy or the sting of a swarm, nothing else is required.

A TEST OF THE DZIERZON THEORY.

The Baron of Berlepach, in the late revised edition of his work on "*Bees and Bee Culture*," speaks of the evidence of the correctness of the Dzierzon Theory as to the production of drones, as follows:—

"If the male or drone egg does not require impregnation, all Italian queen bees, of pure race, must certainly produce pure Italian males or drones; and all queen bees of the common or black race, must as constantly produce black males or drones—

even though such queen bees were fertilized by males or drones of the opposite race. And such, too, is found to be the fact. I will not, however, refer to the Italian queen bees for proof of this, because here we may easily be deceived, by regarding as a pure Italian one in which there is, from birth, already an admixture of black blood. But the pure black or common queen bees, fertilized by an Italian drone, always furnish unmistakable and conclusive evidence of the truth of this statement. Of more than thirty such queens which I have had an opportunity to observe, there was not among all the *drones* produced by them, a single one to be found that bore any resemblance to an Italian drone. All of them were obviously of the pure black or common race; whilst the *workers* proceeding from the eggs of those queens showed diversities of marking and coloring. To which of the races a drone belongs is distinctly shown by the central or lower sides of his abdomen. If that be *yellowish* in color, the drone is either a pure Italian or a hybrid; if it be *whitish*, he is a pure black or common. The dorsal or upper side of the abdomen is deceptive, as some pure common drones show brownish rings."—*American Bee Journal*.

HOW TO JUDGE POULTRY.

As cold weather is coming on, and the time arriving for purchasing poultry for the table, it may not be out of place to give a few general rules by which the age of fowls of all description can be judged. In following these rules no reason need be assigned by any grocer, much less house-keeper, for purchasing other than good, wholesome and tender fowls.

TO JUDGE THE AGE OF FOWLS.

If a hen's spur is hard, and the scales on the legs rough, she is old whether you see her head or not, but her head will corroborate your observation. If the underbill is so stiff that you cannot bend it down, and the comb thick and rough, leave her, no matter how fat and plump, for some one less particular. A young hen has only the rudiments of spurs; the scales on the legs are smooth, glossy and fresh coloured, whatever the colour may be; the claws tender and short, the nails sharp, the under bill soft and the comb thin and smooth.

TO JUDGE THE AGE OF TURKEYS.

An old hen turkey has rough scales on

the legs, callosities on the soles of the feet, and long, strong claws; a young one the reverse of all those marks. The old turkey cock has a long tuft or beard, a young one but a sprouting one; and when they are off, the smooth scales on the leg decide the point, besides the differences in size of the wattles of the neck and in the elastic shoot upon the nose.

TO JUDGE OF THE AGE OF GEESE.

An old goose, when alive, is known by the rough legs, the strength of the wings, particularly at the pinions, the thickness and strength of the bill, and the fineness of the feathers; and when plucked, is known by the legs, the tenderness of the skin under the wings, by the pinions and the coarseness of the skin.

TO JUDGE THE AGE OF DUCKS.

Ducks are distinguished by the same means; but there is this difference, that a duckling's bill is much longer in proportion to the breadth of its head than the old duck's.

TO JUDGE THE AGE OF PIGEONS.

A young pigeon is discovered by its pale colour, smooth scales, tender collapsed feet, and the yellow long down interspersed among its feathers. A pigeon that can fly has always red-colored legs and no down, and is then too old for use.—*Rural New Yorker*.

QUALITY OF CORN FODDER.

The *Boston Journal of Chemistry* gives the results of some experiments, intended to show the great superiority of the corn fodder when cultivated in drills, with plenty of air and light, over that raised by broadcast sowing in a dense mass. That journal says:

"Stalks were collected from a field where the seed was sown broadcast, and also stalks growing in drills upon the same field, and they were dried in a drying closet to expel the moisture. Both specimens were planted at the same time (the 6th of May,) and it was found that the plants from the broadcast sowing contained 92 per cent. of water, those from the drills 83 per cent. Thus it was shown that the difference of solid matter in the two was 8 to 17 per cent. The solid matter was composed of starch, gum, sugar and woody fibre. There was an almost entire absence of sugar and gum in the stalks from the broadcast sowing, while the stalks that had

grown under the influence of light and air held these nutrient principles in considerable quantities. The stalks were collected at the period of growth just before the ear begins to form, a period when most farmers begin to cut the fodder for their cows."

There were some influences not taken into account, which should have been included, among which is the greater degree of rapidity with which the plants approach maturity and become richer in quality when well cultivated, as every good farmer knows, the ears ripening earlier on the best cultivated land, and later on that which is infested with weeds. The broadcast fodder, therefore, should have been examined later than the other, to give a fair test, and the result might have afforded less difference between the two. The same rule, undoubtedly, applies to corn plants as to grape vines and fruit trees, where large trees and well developed shoots, give a richer product in fruit than a crowded mass of small foliage. But there are opposing advantages on both sides; for when the stalks grow so thick that no ears can form, they are so small and soft that cattle will eat the whole, and in doing so, probably obtain more food from a given weight of fodder, than when the stalks are large and coarse, and the leaves only are stripped from them by the cattle, leaving all the stalks with the sugar they contain untouched.

The course we have adopted for twenty years may perhaps be regarded as a sort of compromise between the two—namely, to sow the fodder so thickly in drills or furrows that the stalks will be small enough for the cattle to eat them, but giving the plants while growing the advantages of good horse cultivation. They often bear small ears, but little grain. The quantity sown is two or three bushels per acre.

The Journal of Chemistry further states that stalks cut before reaching a certain stage of growth, are deficient in nutriment, and therefore should not be cut too early and that the best time is usually four or five weeks after inflorescence. We have generally adopted the rule to cut when the edges of the leaves show the first indications of dying from age, and while the great mass of the leaves are yet green. If farmers will chow a portion of the stalk at the different degrees of maturity, the sweetness of the taste will enable close observers to judge with some accuracy when the fodder is richest and best.

In order to secure the greatest amount of

benefit from corn planted exclusively for fodder, our experience has led us to adopt the following rules: 1st. To sow so thickly that cattle will eat the fine stalks. 2nd. To sow in drills, so that horse culture may be freely given. 3rd. To cut at the right time, as already designated. 4th and last, but not least, to cure as perfectly as possible, inasmuch as sweet green fodder is better than black, water-soaked, half fermented or mouldy fodder.

We need no more experiments to determine the right degree of thickness for sowing the seed, so as to get the greatest amount of valuable food from an acre, and the difference in nutriment afforded at all different periods of the inflorescence.—*Country Gentleman.*

FATTENING HOGS.

Stock should not only be regularly fed, but should also eat regularly. Fattening hogs, especially very large ones, will frequently lie until nine or ten o'clock in the forenoon before getting up to eat their breakfast. Such porkers should be awakened early and made to get up and they will take their feed and continue to thrive as long as they can get up at all; where as if left to themselves they will barely maintain their condition of flesh after becoming so lazy. The moral is, stir up the lazy hogs so they'll eat their breakfast.

Hogs that have run in the woods all summer as thousands do in the west, or those that have been pastured, will often be very restless on being penned for fattening. I have known one such to keep a pen full of hogs in perfect turmoil. After it had attained good condition it was so uneasy as to prevent the others from thriving to the fullest extent, and did not gain flesh itself although it ate heartily. Such hogs should be penned alone, and if they persist in being so restless as to prevent their gaining flesh, should of course be marketed at once if profit is the object of feeding. Of course the pen for such hogs should not be too small.

Preparations of feed is a very important item, and we have those who advocate grinding, steaming &c. Corn of course is the main article of food for hogs, and I am satisfied it can be more easily and completely prepared for feeding than most folks presume. I have shelled and boiled corn with the best results. Put in plenty of water with the corn, build a good fire

under the kettle, and by the time it has burned out your corn will be sufficiently tender to be easily mashed between your thumb and finger. Where fuel is cheap I prefer this method to grinding, as the corn is easily handled and gives quite as good results in feeding as meal will, whether the meal is cooked or not. Then you save one-eight toll that must be given for grinding, besides the trouble saved of going to the mill. This saving will, ordinarily, more than compensate for the cost of cooking.—*Germantown Telegraph; h.*

TIME TO FEED HOGS.

In regard to the number of times per day hogs should be fed, when put up for fattening, my experience in this matter is this: When hogs are as old as they should be, after putting them into the pen and feeding them somewhat plentifully for six or eight days, they will then bear full feeding. And I care not whether it is given in one feed or five. But about one day in each week I like to feed a little sparingly, so as to let them get a little hungry.

Turning hogs into corn-field I consider a wasteful way of feeding. Still, I think I have never seen hogs fatten faster than when they were feeding themselves in this manner. I do not think it best to give full feed to hogs at as early an age as some do. Putting them to pasture and giving them some grain to keep them thrifty, I regard as the best plan until they are twelve to sixteen months old. By this time they have ago and constitution to bear being put up and full fed. In this way they will take on flesh and fat very fast. When hogs are penned up to be fattened, they frequently fail I think to get water enough. It is according to my experience that we have to salt and water our stock fat, as well as to feed them fat.—*Cor. Cincinnati Gazette.*

RAISING TURKEYS.

About two years, in the fall, a Toronto sportsman was shooting in the county of Kent, and met with excellent sport. Amongst other birds, he shot at, and broke the wing of, a remarkably fine gobbler turkey. He and his friends managed with considerable difficulty to secure it, amputated the broken wing and brought it home. A farmer in the county of York obtained the bird, and caged it in a rail pen during the winter; it was very wild and knocked

itself about a good deal, so they disturbed it as little as possible, but continued to feed it well. As the spring opened, the bird seemed attracted by the hen turkeys of the farm, and they were introduced to their wild relative. They agreed well, and finally the wild turkey was turned loose on the farm with his domestic mates. The result was that every egg laid by the turkey hens proved fertile, and the farmer raised over one hundred young turkeys. The young were not tender, as the domesticated birds are, but stood all the changes of the weather well. The progeny were very fine, but it has yet to be seen whether these properties are transmitted to the second generation. The farmer in question, however, considers the introduction of wild blood into his flock a great improvement.

It is a fact well known to experienced poultry breeders that if a new gobbler is introduced to the flock of turkeys each year, particularly if he is brought from a great distance, far more fertility is shown than if the old breed is continued. This may have been the cause of the success which attended the introduction of the wild gobbler, and not the wild blood only.

It is still a moot point with many of the best informed people whether the wild turkey can be thoroughly domesticated, or whether the tame turkey ever becomes wild. There are so many tame turkeys so nearly like wild ones that they can hardly be distinguished; the most striking differences is the brassy or metallic sheen on the feathers, which is greater on the wild turkey than on the tame ones. Many breeds of the domesticated turkey have the same red legs that the wild turkey has. The brassy sheen on the feathers of the latter scarcely shows on the birds of the first season.

EXPERIMENTS IN FEEDING SWINE.

Accurate reports of well-conducted agricultural experiments are certainly among the most valuable contributions which can be made to the press. The following from an Iowa farmer, would have been more interesting if he had given us the number of hogs, and more valuable had he given, instead of his own estimate, the precise cost (each separately) of shelling, grinding and cooking the grain:

"They were fed 28 days on dry shelled corn, and consumed 83 bushels; made a net

gain of 837 pounds, which is equivalent to 10 pounds per bushel, which sold my corn thus fed at 50 cents and 4 mills per bushel.

They were fed 14 days on meal, ground fine and fed dry, and consumed 47 bushels; made a net gain of 553 pounds, which is equivalent to 11.76 pounds to one bushel of corn, which brought my corn to 58 cents and 8 mills per bushel.

They were fed 14 days on meal mixed up with cold water, and consumed 55½ bushels; made a net gain of 731 pounds, which is equivalent to 13.17 pounds per bushel. In this trial I realized for my corn 65 cents and 8 mills per bushel.

They were fed 14 days upon cooked meal, and consumed 46½ bushels; and their net gain was 696 pounds, which is equivalent to 14.96 pounds per bushel. This sold my corn for 74 cents and 8 mills per bushel.

Taking the two extremes, I find I got 24 cents and 4 mills more per bushel for my corn by grinding and cooking than when whole and raw. After deducting one-seventh for grinding, leaves 21 cents per bushel.

Had I ground and cooked the feed for my 20 hogs I find I would have made 663 pounds more pork than I did, which would have given me \$33 more.

I find it will require 345.51 bushels of raw corn to make 3,480 pounds of pork, and only 232 bushels when cooked—a difference of 112.6 bushels in favor of the cooked feed."

A HINT FOR THE VICTIMS OF BAD BUTTER.

—Mrs. Beecher says this great evil will never be remedied while those who board, either regularly or only for a few weeks in the summer, continue to "put up" with this discomfort as one of the ills of life which must be borne. Let it be once fully understood that all boarders—all who frequent fashionable resorts—are fixed in their determination to endure this cruel imposition no longer; and that as soon as they find poor butter is a part of the regular diet, and good butter only an occasional luxury, they will at once leave; and we think the hotels and boarding-houses will soon find means to procure a good article. Let this class of purchasers alone refuse to buy any but the best, and the large number of poor butter-makers will soon be taught the necessity of greater carefulness in their dairies.

AMOUNT OF PORK FROM A BUSHEL OF CORN.—Mr. Milton Briggs, of Kellogg, Iowa says in the *Homestead*, that various experiments have proved the fact that corn fed to hogs has produced from two to twenty pounds gain, a bushel, according to the different modes of preparing feed, and the age, breed and condition of the hogs fed. He is satisfied that over one-half all the hogs fed in Iowa, do not produce over five pounds gross weight for each bushel of corn fed, which, counting hogs at \$3 per hundred pounds, gives fifteen cents per bushel for corn.

CHAFF IN AN ANIMAL'S EYE.—Professor Law gives this method of removing chaff from the eye of an animal: "The best way is to pick it off with a pair of fine pincers, the head being held steadily by an assistant having hold of the nose, and the eyelids held open by the opposite hand. In the absence of pincers and forceps, cover a pin with a single layer of a soft handkerchief, and scrape off the chaff with the head of a pin so protected. The eye will suffer much more from the continued presence of the chaff than from pretty active scraping. Keep a wet rag in cold water over the eye for a day or two after removal; then touch it daily with a feather dipped in a solution of lunar caustic, five grains to the ounce of distilled water."

HIPPOPHAGY was introduced into France by M. De Croix, the veterinary surgeon-in-chief of the Guard of Paris. The first shop for the sale of horse meat in Paris was opened July 9th, 1866: It proved a success and others quickly followed. M. De Croix estimates that 902 horses were eaten in 1866, 2,152 in 1867, 2,421 in 1868, and 2,768 in 1869. In the first nine months of 1870 3,791 horses were devoured. Then came the siege of Paris, and it is computed that the total number of horses eaten during the siege was 70,000. Misfortune made hippophagy a great success in France. It was gradually growing before the war, but during the war it made bold strides, since it was horse meat or starvation to the poor Parisians.

In one county in California there is an apiary of two thousand bee-hives. The Californians have been very successful in importing Italian bees, which have thus far proved to be the best honey-makers.

The Garden.

FLOWERS IN THE WINDOW.

With the return of winter will come the desire to have a few flowers in the window, something bright and beautiful to look at, when all without looks cold, and bleak, and dreary. To be p our readers in the pleasant task of caring for the plants in the window, and to guide them in the selection of those that are of easy culture and likely to afford them the most pleasure, we now present a few suggestions.

Select, if possible, an east or south window. Our days are short, plants need light, and as we can give them at best only a few hours of light, it is important that there should be as much of brightness and warmth in it as we can furnish. If an east or south window cannot be had, then a west window is better than a north.

The room should be one where the night temperature does not fall below 40, and, if possible, is not maintained much above 70 by day; also, it should be one not usually occupied by the family in the evening, for at night we draw the curtains, stir up the fire, light the lamps or gas, and increase the temperature several degrees above the average temperature of the day. But plants require that when the daylight fades the temperature should decline. Night is their time for rest, but they cannot rest if the temperature be as high or higher than it was during the day. The effect is similar to that produced upon a human being by depriving him of his wonted sleep.

The room should not be one that is heated by a furnace; the air from it is apt to be too dry and too hot. If it must be heated by a furnace, set a pail of water in the register, and at night shut off the heat so that the temperature may fall gradually to about 45° before morning. Again, gas-lighted rooms are bad for plants. Enough gas escapes in the evening, uncousumed, though the flames seem never so perfect to kill delicate plants, and to injure materially the most robust. If they can not be kept out of such an atmosphere, by closing a glazed door or sash so as to shut them out from the air of the room, then better not try to keep plants in the window at all.

Arrangements should be made for giving the fresh air whenever practicable. The most convenient way is to have the upper sash movable, and let it down at the top, taking care that the plants do not stand in a draught of cold air, and admitting it in quantity, proportioned to the weather outside; when it is very cold and frosty, very little or none at all, and more when the weather is moderate.

The leaves of plants need washing in order to remove the dust that gathers on them and fills up the pores. Geraniums, and like hairy and soft leaved plants, are best washed by taking them to the sink, and syringing them thoroughly through a fine rose. Glossy leaved plants, such as Camellias, require to have the leaves sponged off one by one. In all cases soft and tepid water should be used. This washing should be done often, say once a week.

In watering, use tepid water, and learn the requirements of the plants, so as to adapt the amount

to their need. An Ethiopian Lily will rejoice in watering that would kill a Coctus.

The drainage of the pots should be perfect, so that surface water can escape through the hole in the bottom of the pot. If the pots stand in saucers, pour off the water that runs into them, and not let it be soaked up into the pot again. Yet this rule, though of very general application, need not be observed in the case of aquatic plants.

A very common error in window gardening is that of attempting too much. Too many plants are crowded into the little space at command, so that it is impossible to give each the air and light it should have. Again, plants of too diverse character are brought together. It is no uncommon thing to see tropical plants that require stove heat, and plants from the temperate zone, if not even Alpine plants, all crowded into the same window, and subjected to the same temperature and treatment. Better far to have one healthy, well grown plant, that will yield its flowers in perfection, than dozen sickly feeble, wretched plants, that have no beauty either of leaf or blossom.

We subjoin the names of a few flowering shrubs and plants that are suitable for window culture, with a few hints on the treatment peculiar to each.

THE DAPHNE makes a charming window plant, and if any will thrive in a west window, this will. It is an evergreen shrub, producing bunches of sweetly fragrant white or pinkish flowers on the ends of the branches. The pot in which it is grown should be filled one-third full of broken crocks, so as to secure perfect drainage. The leaves should be kept perfectly clean. While the plant is growing it should be freely watered, and the temperature maintained at about 70 by day to about 45° at night.

THE HEMITROPIS is a very great favourite, on account of the profusion of bloom and the delicious fragrance of its flowers. It should be encouraged to grow large by giving it plenty of pot room and plenty of window room. It may be pruned and trained into any desired form.

MANY ROSES, especially the tea-scented, are beautiful window plants. They need rich soil, thorough drainage, frequent washing of the foliage with a fine rosed syring, as even a temperature as possible, carefully guarding from draughts of cold air, and smoking with tobacco if the green fly makes its appearance. They should have the morning sun, but be shaded from the afternoon sun when it has become powerful.

HYACINTHS make beautiful window plants grown either in pots filled with soil, or in moss, or in water. They should be kept in a dark cellar, free from frost, until well rooted, and then placed in the window to bloom. As soon as the flowers begin to expand, the plants will require abundant watering. If kept in a low temperature, say 65°, the flowers will last much longer.

THE CYCLAMEN is especially suited for window culture. The bulbs should be planted in pots in November, in a rich loam, intermingled with a little pulverized charcoal, with the crown of the bulb just peeping through the surface of the soil. They should be kept in a cool atmosphere and close to the glass, until the leaves are well grown and the flower buds begin to appear; then they should be removed to a somewhat warmer atmosphere and a sunny window. The variety known as *C. Persicum*

ha; white flowers tipped with rosy purple, and will bloom from January to March. When the bloom is over, water should be gradually withheld, and when the foliage dies off they may be stored away in the cellar in some place where the mice will not get them, until next November.

THE IVY may be grown in an part of the room. The pots may be placed on the floor and the plants so trained as to festoon a window arch a door-way, or to wreath a picture frame or mirror. They require to be watered often, yet the water must not be allowed to stand about the roots. There are varieties with golden and silver variegated leaves; others with lobed, or palmate, or heart-shaped leaves. All are pretty, grow rapidly, and endure the heat of our sitting-rooms, with their dust and extremes of temperature, and want of light, in a most astonishing manner.

VERBENAS.—By striking your plants in the last days of July, and potting them first into thumbs, and then into larger as soon as the roots have reached the sides, and keeping them in vigorous growth, pinching back the leading shoots, and nipping off every flower head, the Verbenas may be made to bloom beautifully in the window all winter. There is danger from over watering and the aphid or green fly; against these be on your guard.

SCARLET AND SCENTED-LEAVED GERANIUMS are easily grown in the window. They want plenty of light, plenty of air, a moderate temperature, and to be frequently turned so as to expose all the leaves to the light. They do not bear crowding, nor excess of water.

From these each one may make selections of such as each prefers. Do not undertake to grow them all. More pleasure will be derived from one well grown plant than from any number that are overcrowded, drawn up and sickly.

THE PHLOX AND ITS CULTURE.

This is certainly the most beautiful of hardy autumn flowers; it is easily cultivated, and a succession of flowers can be obtained from it in the latter part of summer and throughout the autumn. It is extremely valuable for planting in mixed borders, and for the flower garden; also for growing in pots for the decoration of the greenhouse and conservatory. Although the Phlox is worthy of cultivation in any garden, it is just the flower for the cottage or the owner of a small garden, as it yields its flowers in rich and luxuriant profusion without the aid of glass houses, frames, or coddling of any sort.

There are two sections of the Phlox, divided into early and late-flowering. The early-flowering section (*Suffruticosa*) contains some very beautiful varieties, but they are wanting in the rich orange-red, crimson, and purple shades of the late varieties. It seems that they require a cool and moist atmosphere. In warm localities it is best to grow the *Decussata*, or late-flowering section, although it is as well to have a few of the others in order to prolong the season of flowering. They require the same treatment and both sections will well repay the amount of care required to keep them in good order. The culture is very simple, but their wants must be attended to at the proper time, otherwise success will not be attained.

I shall begin with established plants, such as may be obtained from the nurseries. A plant

which has been struck in the spring, and sent out in the autumn, will throw up from the base of the stem a number of shoots. When these have grown three or four inches in length, all except three should be taken off to make cuttings. Some light sandy mould should be prepared, and one cutting inserted in the centre of a three inch pot; they strike root freely, especially if the pots can be plunged in a gentle bottom heat in a dung frame. When the cuttings are rooted, the plants should be removed to a cold frame, and gradually inured to the cold; for although the plant is quite hardy it dislikes sudden changes of temperature. Some of the plants should be reserved for pot-culture, and others for planting-out.

The plants intended for pot-culture should, as soon as the pots are well filled with roots, be repotted in six-inch pots, in which they should be allowed to flower. This size I find to be the best for flowering strong, early, spring-struck cuttings, and noble spikes of flowers are obtained in this way, when the plants receive careful attention. If the plants intended to be grown and flowered in pots are from cuttings struck in the previous season, three shoots may be allowed from each plant, and they should be flowered in ten-inch pots. The best compost to use is three parts sandy loam, one part leaf mould, and one part rotted manure. During the growing period the pots should be plunged and be abundantly supplied with water both at the roots and overhead. Occasional waterings with weak manure water will be beneficial. At an early stage of their growth sticks should be put in; these should stand two-feet out of the ground and be rather stout, as a well-grown spike offers considerable resistance to the wind.

For culture in the open ground, the Phlox should be planted in beds if the finest possible spikes be desired. A few plants in a mixed border are a pleasing feature, and contrast well with Delphiniums and other herbeaceous plants, but it is not easy to pay proper attention to them in such a position. Four rows should be planted in each bed, with an alley between wide enough to allow a man to pass along with a watering-pot without damaging the spikes. If one spike only is allowed to each plant, sixteen-inches apart in the beds will be sufficient; if three spikes, twenty-four-inches should be allowed. Early in March is the best time to plant them, and the ground should be deeply trenched and highly manured. The plants will also require copious supplies of water during the growing season, and the beds should be also mulched with short manure to prevent evaporation.

The Phlox is not so well adapted for exhibition as the Hollyhock and Gladiolus, as the flowers are apt to fade before night, although when due precautions are taken I have seen them stand pretty well. The best way to stage the cut spikes for exhibition is to fill a small pot with sand, in the centre insert a small tube full of water, in this tube place the cut end of the spike, and surface over neatly with green moss. A pot is required for each spike.

Grown and flowered in pots, Phloxes are a grand feature at the autumn exhibitions. A serious drawback to exhibiting them in this way is the expense attendant on moving them to long distances, so that to give all a chance it would be as well to show them in both ways. I will add a list of the best varieties in each section.

Early-flower ing.—Duchess of Sutherland, Elvina, James Mitchell, James Neilson, John Watson, Miss Ainslie, Miss Murray, Mrs. Thorn, Mrs. Austin, Mrs. Hunter, P adda, Robert Haunay, The Queen, William Linton, Waverley, William Blair, The Deacon, and W. W Platt.

La e-flower ing.—A. F. Barron, Amabilis, Aurantiacina superba, Aurore Borcale, Comtesse de Chambord, Liervallii, Madame Barillet, Madame Guilloteaux, Madame La Comtesse de Fernandona, Madame Billy, Madme Domage, Mdlle Mermine de Turenne, Mdle Marguerite de Turenne, Mis-Macrae, Mons Joseph Heim, Mdle Muret de Bort, Mons W. Bull, Mons. Malet, Mons. Veitch, Madame Delanere, Mons. Marin Saison, Mons. Guilloteaux, Mrs. Laing, Princess Louise, Queen Victoria, Souvener des Fernes, Triomphe du Parc de Neuilly and venus.—*Cultage Gardener.*

HOW ANY ONE CAN GROW GRAPES UNDER GLASS WITH LITTLE TROUBLE OR EXPENSE.

PAPER READ BEFORE THE FRUIT GROWER'S ASSOCIATION OF ONTARIO.

Many persons would be induced to erect a smallinery for the culture of the finer varieties of foreign grapes, were it not for the great trouble attending their culture under glass in the ordinary manner, in watering, syringing, ventilating &c., requiring the services of a professional gardener, or occupying more time and attention than the generality of persons can spare.

By adopting the following plan in erecting theinery they will be relieved of the greater part of this trouble, and have a fine supply of delicious grapes, with no more trouble or attention than is required to grow the natural vine out of doors.

The sashes are made stationary, but so that they can be uncrewed and taken off for repairs at any time. They extend from the front wall to within a foot or ten inches of the back wall at the top, leaving an opening of ten inches wide along the top to be closed by sheet-iron ventilators in winter or when requisite, but which is kept constantly open from the time the vines are uncovered in the spring till they are laid down and covered in the fall.

The principal peculiarity is in the glazing. The glass is laid end to end without lapping or putty, and merely kept in its place by small pieces of tin, and a space of half an inch is left open between every third or fourth pane, so that all the rain that falls on the house is distributed pretty equally over the entire house, very little running off the roof except in very heavy thunder storms. There is no ventilation whatever below as a draught I have found injurious to the vines. Any air that comes in is by these openings in the glazing, and the heated air finds vent at the top.

Last year was a very dry one, as well as this, we having no rain here for months; but the vines never suffered from the draught, though they were never watered or syringed from the time they were uncovered in spring, when it was done copiously, till again uncovered this spring. Nor were they the least affected either last year or this with mildew or red spider; though previous to adopting this plan I was annually troubled with both, in spite of syringing copiously morning and evening.

My presentinery was not erected for that purpose,

but for a small conservatory, and the floor was sunk about 2½ or 3 feet, with a brick wall all round. About 12 years ago I filled it up level with good compost, and planted the vines all inside, there being no opening for their roots to extend to the border outside. It was intended principally for proving seedling vines of the foreign varieties and the newer varieties, then out, with a few of the best old varieties, and in a space of 24 by 14 feet contained for several years 36 vines, which were thinned out as they were proven worthless, till it not contains 24; this is still too many, about 16 being all that could be properly grown in that space. Last year it got a liberal supply of liquid manure in spring; this year it got nothing but clear water at first and rain as it falls, and is doing as well as last year, and vigorous enough for a house containing so many vines.

The end of my presentinery are not glazed, having on y a small window and door on each end. Were I to erect a new one I would have the ends glazed to within three feet of the ground, and would have openings in the front wall to allow the roots of the front row of vines to extend into a prepared border outside.

For those who may wish to try this plan, I would recommend the following varieties as being the most successful with me, and of the finest quality;

1. Black Hamburg.
2. Muscat Hamburg.
3. Champion Hamburg.
4. Lady Downes.
5. Golden Hamburg.
6. Bowood Muscat.
7. Buckland Sweet Water.
8. General della Marmora.

The first four are black or purple grapes, and the last four white grapes.

No. 1 is by far the most profitable and best of the blacks, and Nos. 6 and 7 of the whites. Nos. 4 and 6 are the better of artificial impregnation, as they do not set the fruit very well.

The principal trouble in following this plan, more than is required in out-door culture of the native, is the necessity of thinning the grapes on the bunches to about one-half when about one-quarter grown, to give room to the rest of the berries to swell.

JAMES DOUGALL.

Windsor, 3rd July, 1871.

OILED PAPER SASHES.

Make as many frames as you require to cover your beds, of strips inch and a quarter pine; have the strips inch and three quarters wide, and if you are not carpenter enough to put them together with mortice and tenon at the corners, halve them together, using wrought nails which will go through and just clench. The frames should be six feet long and three wide, with a piece of the same as the outside put across the middle of the frame. This, if not morticed and tenoned together, had better be merely fitted in between the sides, and nailed with long cut nails; its use is more to keep the frames apart than anything else. Now get good stout twine; put in tacks all round the frame, six inches apart; wind the twine round the tacks from side to side, until the frame is full that way; then go from tack to tack, from end to end, but as

you pass the ball of twine down across the first twines, take a turn each time round the crossstrings you will thus have a netting of six inches square over the whole. This will be quite strong enough, but you may put the strings closer if you don't think it sufficient. When you have finished, make fast the twine and drive in all the tacks level with the surface of the frame. Get some strong white paper; old newspaper will do if the paper is thick; damp them a little (only just damp); paste them together, and stick them over the frame, well pasting the wood frames first with well boiled thick flour paste; be sure the paste is thick and well boiled. Let the paper come all round the edges of the frames; then put them by to dry. When dry, if the work has been well done, the paper will be smooth and as tight as a drum-head. Don't damp the paper too much, in the first place, or it will crack and break in the drying. Now, get some well boiled linseed oil, get some dryers put into it, and dissolved in it; then with a paint brush go over the whole frames, wood, paper, string and all; give them a good coat on both sides, and put the frames by to dry; they will be dry in a day or two, and will be as serviceable as the best glass while they last, which with care will be from two to three years, and they can be fresh covered or patched at any time. Of course dogs and poultry must be kept off them, and they must be carefully used, but for service they are really better than glass, as the plants grown under them never scald with the sun. If thought better, the strings may be put on both sides of the paper, but is scarcely necessary.

With these frames, on beds prepared as before mentioned, everything from a turnip plan to a melon can be raised in perfection; and after the beds are done with for turnips, melons and cucumbers can be raised in any quantity, with the advantage that as the cold weather comes on in the fall, if the melons are not fully ripe, they may be covered, and thus the very latest be brought to full perfection. These sashes answer as well for hot-beds as for the cold frames. As they are very light, they must be properly weighted in windy weather or exposed situations.—*Cor. Globe.*

IMPORTANCE OF AN INTEREST IN GARDENING AND NATURAL HISTORY TO THE YOUNG.

The study of the simple, the natural, the pure, and the beautiful by the young, will be one of the best antidotes against the indulgence in gross and debasing pleasures. Many a lad and many a man seek pleasurable excitement in channels that will ultimately be ruinous, who might never have cared for such indulgences, if other sources of excitement of a more mellowing character had been presented to his notice, such as a book to read, a garden to clean, a plant to attend, a bird to feed, a beautiful insect in all its wonderful transformations to study. And, call it contractedness or selfishness if you will, still it is no less a law of our humanity, especially strongly manifested in the young—the law manifested in the fact that to insure anything like enjoy-

ment, we must have something to care for, something to pet, something to love something that, in a proprietary sense, that must be inherently and peculiarly our own. And thus, on the same principle, if the object petted be a living thing, capable of responding in some measure to our cares for it, the more attractive it will be. I can recall to my recollection many instances in which the sportive kitten, the cosy tame rabbit, the faithful affectionate puppy, the kiss-and-kiss-me dove and pigeon, the favourite strutting cock of the yard, or the still more aristocratic bantam (but whose love to his owner was even greater than his assumed dignity), the high warbled cheering note of linnet and canary when a certain knock was heard at the door, and more especially when a certain head and shoulders showed within it; the appearance of the window plant after its roots were watered and its leaves were washed, cleaned and sponged, and when every bit of flower and foliage seemed to look you in the face and say Oh, how I thank you for your care!—I can recall to memory instances such as these which have exerted a more mellowing, kindness-securing, and kindness-diffusing power, than could be realised by looking on the finest painting or sculpture, or beholding the most magnificent scenery the world can afford; and chiefly because these living things could make a return for the care bestowed, and because, also, the possessor could look each or either as his or her very own.

Damp not but encourage all such tastes for pets, be it bird or plant, even in very young people. A place could be set aside for the young folks, and a particular place or position awarded to each, that each might do the best, and carry out a particular hobby without interfering with the peculiar leanings of his neighbour; and all this, it is wise in every way to encourage.

I have often found mothers, and fathers too, so objecting to their young folks having any pets of their own, that to carry out the natural craving, it had to be indulged in, in a concealed sort of a way—a very bad thing, for in every matter it is well that the most perfect confidence should exist between child and parent. "I might as well have a perfect Babel as these screeching and howling sounds. A menagerie, with its filth and odours, could be no worse than my boys pester me with their brasts and birds in every corner they can get hold of," said a mother not long ago. Ah! but mother, if you arrest the gratification of such tastes, you might have tastes formed for other things, that will give such pulls at your very heart strings, that in comparison with the screeching you complain of, would be the sweetest music. Direct all such tastes aright, and you may wield a mighty power on your loved young ones for fostering habits of order, of attention, of thoughtfulness, of cleanliness, and kindness.

When plants are grown for their own sake and the pleasure they confer, they will ever exert a power in arresting the indulgence in the low and degrading; and the culture of them, therefore, should be encouraged in every possible way.—*Cottage Gardener.*

Editorial.

NORTH-AMERICAN BEE-KEEPERS' SOCIETY.

As chronicled in our January and February issues of the current year, the two apian organizations, formed respectively at Indianapolis and Cincinnati, in December and February last, adjourned to meet simultaneously at Cleveland, the first Wednesday of December, 1871, for the purpose of consolidating themselves into one association, and deliberating on the topics and interests connected with apiculture. Pursuant to adjournment, a joint meeting was held in Cleveland, on Wednesday, Dec. 6, at 10 a. m., some two-hundred persons being present. In the absence of the Rev. L. L. Langstroth, President of both Associations, the meeting was called to order by Rev. W. F. Clarke, First Vice-President. The proposed union of organizations was quickly effected, Mr. M. Quimby of St. Johnsville, New York, being elected temporary President, and Rev. H. A. King, editor of the *Bee Keeper's Journal*, New York, temporary Secretary. A committee on constitution and permanent organization was appointed, consisting of all the officers of both the former associations who were present.

While the committee was out, Mr. E. Rood spoke on "Foul Broods." His remarks were in the highest degree interesting; and he exhibited a knowledge of the important subject which can only be secured by years of thorough investigation and experience. The views which he advanced provoked considerable discussion, as he frequently called for questions from those present, and many were found whose views failed to correspond with his own. He took the position that the disease is contagious, no one knowing whence it comes or what is the cure. He spoke of various opinions to the contrary which had been advanced, but considered them unsupported by the proper evidence.

He did not consider the disease the product of any particular locality, or external influences of soil or shrubbery, as evergreens, as had been asserted by some, as he had known of its existence under a variety of conditions, and in localities different in all these respects. He mentioned several courses of treatment which we will not specify.

Several members asserted that they had never been troubled with the disease, and that it was entirely unknown in their neighborhood; and a vote taken upon the question resulted in an almost equal division, nearly one-half having failed to experience any damage from it. Mr. J. W. Hicks, of Indiana, purchased several hives of bees some time since, and after a few weeks discovered the existence of "Foul Brood." He applied a remedy, consisting of laudanum and salt, dissolved and mixed with syrup of good coffee sugar.

The inside of the hive was saturated with this solution, which proved efficacious, and he had never known it to fail, although put to the test upon several occasions since that time.

Mr. L. Gifford, of Trumbull county, Ohio, had experienced trouble from this disease among some of his bees. A few hives had suffered, until nearly the entire number had perished, but had recovered and increased to full-sized swarms. He had not heard of any other cases in his neighborhood. At this point in the proceedings, the committee reported a constitution providing for a consolidation of the two associations, under one name, which document was under discussion at the time of adjournment.

AFTERNOON SESSION.

The Association met at 1.30 p. m., and immediately proceeded to the adoption of the following Constitution:

ARTICLE 1. This organization shall be known as the "North American Bee Keepers' Society," and shall meet annually.

ART. 2. Its object shall be to promote the interests of Bee culture.

ART. 3. The officers of this Society shall be a President, one Vice-President from each state, district, territory or province represented; a Secretary, a Recording Secretary, a Corresponding Secretary and a Treasurer, whose duties shall be those usually performed by such officers, who shall be elected by ballot, and hold their offices for one year, or until their successors shall be elected.

ART. 4. The President, Secretaries and Treasurer shall constitute an Executive Committee.

ART. 5. Any person may become a member by giving his or her name to the secretary, and paying one dollar; excepting ladies, who shall be admitted free of charge.

ART. 6. This society may, from time to time, elect suitable persons as honorary members. This constitution may be amended at any annual meeting, by a two-thirds vote of all the members in attendance.

ART. 7. No member shall be entitled to the floor more than five minutes, in the discussion of any motion, resolution or petition, without consent of the society.

ART. 8. All committees shall be elected by ballot, by a plurality vote, except by special resolution.

ART. 9. Each annual meeting of this society shall be held at such time and place as shall be designated by a majority vote, or the preceding regular annual meeting.

ART. 10. A special meeting may be called by the

Executive Committee at any time on requisition of five of the Vice-Presidents.

Wm. F. CLARKE, Chairman.
G. BOHRER,
A. F. MOON,
T. B. HAMPTON,
N. MITCHELL,
S. HOAGLAND,
L. C. WAITE, } Committee.

ELECTION OF OFFICERS.

Under the above constitution, the following officers were elected by an unanimous vote:

President—M. Quimby, St. Johnsville, New York.

VICE-PRESIDENTS.

Rev. W. F. Clarke, Guelph, Canada.
J. E. Hetherington Cherry Valley, New York.
E. J. Peck, Linden, New Jersey.
Seth Hoagland, Mercer, Pennsylvania.
A. Benedict, Bennington, Ohio.
D. L. Adair, Hawesville, Kentucky.
Dr. T. B. Hamlin, Edgefield Junction, Tennessee.
Dr. Bohrer, Anderson, Indiana.
E. Rood, Wayne, Michigan.
M. M. Baldrige St. Charles, Illinois.
R. C. Otis, Kenosha, Wisconsin.
J. W. Hosmer, Janesville, Minnesota.
Mrs. E. S. Tupper, Brighton, Iowa.
A. S. Stillman, Louisiana, Missouri.
Dr. E. J. Dallas, Topeka, Kansas.
W. D. Roberts, Provo City, Utah.

Secretary—Rev. H. A. King, 14 Murray street, New York.

Recording Secretary—Prof. A. J. Cook, Lansing, Michigan.

Treasurer—N. C. Mitchell, Indianapolis, Indiana.

A Business Committee was appointed, and after the transaction of a small amount of miscellaneous business, the Society adjourned until evening.

EVENING SESSION.

In the evening the members again assembled at the hall, and at seven o'clock the meeting was called to order. The business matters before the association having been disposed of during the forenoon and afternoon sessions, the evening was spent in general remarks from different ones, upon various questions, upon the subject of keeping bees, which had been presented by the Business Committee. The first one was "Why do bees swarm," which elicited remarks from Messrs. R. C. Otis, G. Bohrer, H. A. King, A. F. Moore, S. W. Cole, A. J. Root, E. Rood, and R. Wilkin. A short paper was also read upon the same subject by Mr. D. L. Adair. The question was under consideration for an hour, and the sum of the theories and opinions of the several members differed somewhat as to the real reason of the swarming of the bees. It was generally conceded that it is the natural instinct for the bees to swarm; but as to the times of their doing it, some thought it to be when the hive had become full by propegation of the species, and the abundance of honey; others that the matter was entirely governed by the age or inclination of the queen. All the speakers gave their various experiences and experiments in the matter, and made the subject one of much interest. At the close of an hour it was thought that sufficient time had been given to it, and the subject was laid on the table for future consideration.

The next question was, "What is the best method

of swarming bees artificially?" upon which Messrs. Root, Bohrer, Moon and Adair, and Mrs. Tupper spoke. Mr. Moon's and Mrs. Tupper's manner of accomplishing 'his, seemed to meet with the most general approval of the meeting. The former said that he took one card from the centre of each of his full hives, and placed these in an empty hive, putting in their places in the old one a new card. In the new hive there would be in a few days a regular swarm, with a good queen of its own. Mrs. Tupper's plan was to take from each full hive two cards, and replacing these in the old hive with fresh ones, to put the newly formed hive in the place of the old, and carry the old hive to another place. A certain portion of these bees will then return to the old place and new hive, and there form a new swarm, while the old swarm will still flourish in the old hive.

This question occupied half an hour, when it was laid upon the table, and the question "Can swarming be prevented, if the multiplication of colonies is not desired?" brought up. Dr. Bohrer spoke upon this question; when Mrs. Tupper asked, that, because of the absence of Mr. Quimby, who had expressed a desire to speak upon the subject, and whose opinions would be valuable, the subject might be left open until he should be present. The subject was accordingly laid upon the table. "What is the best method of handling bees without angering them?" was then proposed for remarks, which were made by Messrs. Moon, McKay, Bohrer and Mrs. Tupper. The former said he never used tobacco smoke for subduing his bees; but set fire to some cotton rags, and after blowing several whiffs of this smoke into the hive, he could do anything he wished with the bees, without the slightest danger of being stung by them. Mr. McKay said he never used any smoke at all; but that he always approached the hive quietly; and by careful handling of the bees, had never had any trouble with them. None of the speakers were in favor of the use of tobacco smoke to subdue the bees with.

The next topic was, "What is the best method of preparing honey in the comb for the market?" but the consideration of the subject was postponed until a later period in the session.

The last subject was, "What are the best honey producing plants?" Upon this many members spoke. White clover, alsike clover, bass wood, locust, buckwheat, melilot, golden-rod aster, blackberry, raspberry, were severally recommended as furnishing store for the honey gatherers.

SECOND DAY.

The "Society" met for its second day's session at an early hour; the members evidently finding more of interest in the discussion of the theories and rules of bee culture—which has long since become a science—than in looking at the "sights of the city" which are new, at least to many of them.

The business committee, consisting of Rev. W. F. Clarke, S. C. Waite, D. L. Adair, Seth Hoagland, J. W. Hosmer, A. F. Moon and Mrs. E. S. Tupper, among other things, on Wednesday reported the following topics for discussion during the session; several of which were taken up yesterday, and others at this forenoon's session:

1. Why do bees swarm?
2. The best method of swarming bees artificially.
3. Can swarming be prevented if the multiplication of colonies is not desired?

4. The best method of handling bees to avoid exciting their anger.

5. The best method of procuring honey in the comb for market.

6. What are the best honey plants?

7. Do bees gather honey from honey dew?

8. Will it pay to use the extractor?

9. Can artificial comb be made?

10. Is there a preventive to foul broods?

11. Is the Italian bee superior to the native or black; and are Hybrids better than the native?

12. Are forced queens inferior to those raised from the egg?

13. Can the fertilization of the drone be controlled?

14. Will the drone progeny of a pure Italian queen, fertilized by a black drone, produce pure Italian drones?

15. The best method of wintering bees.

16. Why do young fertile bees cease laying?

On question 6, it was testified by several bee-keepers, that bees did obtain honey from what is known as "honey dew."

Question 8 was unanimously decided in the affirmative; and a number of reports were given of large results obtained by the use of the extractor.

Question 9 excited much interest. Messrs Quimby and Adair narrated some experiments made by them, which seemed to promise ultimate success in the way of making artificial comb. Mr. Adair had found that bees would build cells on wire cloth, lightly coated with wax; but it was a singular fact that the queen would neither lay eggs on such cells, nor pass the cards of comb with wire foundations; hence they answered as partitions, dividing the stowing from the breeding departments.

Question 10 was considered to have been sufficiently discussed in the preliminary meeting.

Question 11 was affirmatively decided, with scarce ly a dissentient.

Question 12 was generally negatived, experienced queen breeders having detected no difference in queens raised from eggs, or from newly-hatched larvae,

Question 13 led to an animated debate; some denying that the thing could be done, and others affirming that they had successfully experimented on it in their apiaries. Messrs. Quimby, Root, Mitchell, Moon, Waite, Rev. W. F. Clarke, and Mrs. Tupper, all testified to the fact, that they had controlled queen fertilization, mostly by some modification of the Kohler process.

Question 14 was the "vexed question" of the meeting. It was mooted at this morning session; laid on the table, and taken up several times before final adjournment; and in the end, proved that among bee-keepers, as among lawyers, "much may be said on both sides."

AFTERNOON SESSION.

In the afternoon the time was taken up with reports of committees, the consideration of more topics, and the transaction of miscellaneous business. The subjects taken up were, "What is the best method of procuring honey in the comb for the market," and "Will it pay to use the extractor," which were talked upon at length; the latter receiving a general affirmative support. In accordance with a generally expressed desire, Mrs. Tupper gave an explanation in detail of Farnham's attachment to the hive, to prevent the swarming of bees. As several different kinds of hives had been brought

to the convention, by members, it was decided to give each five minutes for exhibition by the owner. All in turn were brought in and were duly inspected by the other members; their peculiar merits discussed, and judgment passed on their respective advantages. By vote it was decided that the honorary members of the two societies, which had been dissolved to form the present one, should still continue as members of the union society. The only other business of importance was the deciding upon the time and place of holding the next meeting; which was finally appointed to be held at Indianapolis, Indiana, on the first Wednesday in December of next year.

In the evening an interesting meeting was held, the exercises of which were of a popular rather than a scientific character. It had been appointed for seven o'clock, but all were so busily occupied in various ways, that it was not called to order until half-past seven. A beautiful pyramid of honey, in fine white cases, and surmounted with a white vase filled with flowers, was placed upon the President's desk, and attracted much attention. It was the design and work of Mr. A. F. Moon, of the *National Bee Journal*, who had made it to adorn his editorial sanctum. After the meeting was called to order, the list of members was read by the Secretary, to be sure that all were right before being published in pamphlet form.

A few general remarks on the subject of bee culture were made at the opening by President Quimby

Rev. H. A. King delivered an interesting popular address on the subject of bee culture and its practical results. He alluded to many of the improvements that had been made in this branch of business during the past few years. One of the most notable of these, was the manner of handling the touchy little insects. The old "brimstone process" has been entirely ignored; and now, by merely blowing a little harmless smoke into the hive, the bees are handled as easily and safely as though they were flies. In hives there had also been a marked improvement. The "box hive" had gone out of date entirely, the movable comb hives having been found incomparably superior. Artificial swarming had also been found a great convenience to bee keepers. The introduction of the Italian bee had marked a new era in bee culture, this species having been found far superior to the old black bee. He said there were few branches of business so profitable as bee keeping. The stocks would easily double each year, thus increasing in a few years to an almost incredible extent. One prominent grower, starting the past season with but seventy-five stocks, had gathered over nine tons of honey. The subject of bee culture was yearly absorbing more of public attention, and the business was rapidly on the increase.

Rev. W. F. Clarke, editor of the *ONTARIO FARMER*, read, by request, the poem written by himself, in competition for a prize of \$40, offered by the proprietors of the *Bee-Keepers' Journal* N. Y. and which gained the award over some forty rival competitors. It is entitled "The Bee," and minutely describes the characteristics and habits of the busy little insects and expatiates on the improvements, pleasures and advantages of modern bee keeping. In reference to a couplet in the poem,

"A more untiring and adventurous rover,
And able to suck honey from red clover,"

concerning which, the author expressed himself somewhat dubiously, it was testified by several—Mrs. Tupper among the rest—that the Italian bee really does “suck honey from red clover.”

Mrs. Savery, of Iowa, well known as a leading advocate of Female Suffrage and Woman's Rights, next addressed the meeting on the importance of opening fields of remunerative industry to women; and narrated in a happy manner, her “experience” in bee-keeping. Her attention was first called to the subject, last winter; and she at once regarded it favorably, as opening up a new source of profitable employment for women. She began the season with twenty-three weak “stands.” At the close of the season she had 37 prosperous “colonies,” and had sold over twelve hundred pounds of honey. She believed the business one peculiarly adapted to the tastes and capabilities of women; and more profitable and pleasant than anything else they could do. Her remarks were highly interesting, and were received with enthusiastic applause.

Mrs. Savery is a very pleasing and forcible speaker, having a most musical voice, agreeable style, and natural action. We confess to a considerable disarmament of prejudice against “lady lecturers,” after having heard this distinguished representative of the class.

An essay on the subject of “Bee-keeping for Ministers” was then read by Rev. W. F. Clarke; who set forth the extremely low salaries of ministers, and their consequent need of some income outside of the church. He said that gardening had been resorted to, and was good both for recreation and to provide in a substantial way, for the support of the family; but that the keeping of bees had been found to be both easier, and far more profitable. He gave instances where ministers had thus employed their spare hours during week days, with very gratifying pecuniary results.

Mrs. E. S. Tupper answered, by request, a number of questions propounded by various persons. Being asked in regard to the merits of the Italian bee, she said she had become fully convinced of its superiority, beyond all question, in the production of honey. She thought indoor wintering, in a cellar, the most economical and advantageous. They should be kept in a cellar perfectly dark, with the temperature as cold as possible without freezing. Various other questions were asked on different points, all of which Mrs. Tupper answered in the clearest manner. No person in the entire convention shows a more perfect understanding of the science of bee culture, or can tell it better, than Mrs. Tupper.

THIRD DAY.

The society met at the usual hour; the discussion of the topics proposed being in order, and also the reading of papers prepared by various members, on important subjects. The first was an able essay upon the subject of “artificial or reconstructed comb,” by Mr. D. L. Adair, of Hawesville, Kentucky. The document was highly interesting and instructive to all interested in the successful management of bees; and will form a valuable acquisition to the written records of the society.

The question of controlling the fertilizing of the queens, was discussed; opinions being various and about equally divided upon the two sides; one gentleman, Mr. Furman, offering \$500 to any one who would fertilize, “in confinement,” fifty queens in

his atripary. The sixteenth topic, “Why do young fertile queens cease laying?” was considered. The opinion generally prevailed that the cause was owing to obstructions, which could be, and had been, removed by artificial means. “The disease and mortality of bees generally” was fully discussed, various reasons being advanced, which were the results of experience and experiment on the part of the members; each of whom had given the subject considerable thought. Mr. Hosmer, of Janesville, Minnesota, who has had wonderful success in rendering bees productive, by his style of management stated the results of his experience, and the extensive yields of honey which his bees secured for him, making the following challenge, which produced no little sensation:

CHALLENGE.

Mr. Hosmer has 118 stocks of bees, and offers to sell 108 at \$15 per stock, on this condition: That if he does not succeed in obtaining 10,000 pounds of honey during the season of 1872, from the ten stocks retained by him, he will forfeit the price of the 108 stocks he proposes to sell.

Mr. Hosmer stated among other extraordinary instances of diligence on the part of his productive servants, that one colony of bees, made from the Linden, or bass wood tree, fifty-three pounds of honey in a single day. He made the Linden tree the most important consideration in the rapid accumulation of honey; which idea gave rise to the following happy *impromptu* poem

ON LINDEN.

A PARODY.

[Respectfully dedicated to J. W. Hosmer, of Minnesota,]

On Linden when the sun was low,
(All ready were the combs of snow),
The bees began, a tent to show,
Of honey gathering rapidly.

'Twas noon,—and yet the July sun
Was half *b*e-clouded by the run,
That streamed to show what can be done
From Mr. Hosmer's apiary.

With tiny trumpets fast arrayed,
Each laggard sheathed his battle blade,
Nor laggard natives long delayed,
But joined the merry revely.

Then shook old heads with wonder riven,
As past the bees their teams were driven,
For swiftly through the light of heaven,
Fair flashed the bright Ligurians.

And wider yet their fame shall grow,
On Linden's sweets, in combs of snow;
And greater yet shall be show
Of honey gathering rapidly.

Well, Hosmer saw a splendid sight,
As forth he went to weigh that night,
Commanding John, his man, to light
The darkness of his apiary.

The gain that day per single hive,
Was two pounds less than fifty-five;
No wonder, then, bee-keepers thrive,
Who understand their *bees*-iness:

The interest deepens. On, ye brave,
Whose work and glory 'tis to save
Our friends, the bees, from cruel grave
Beneath a sulphurous canopy.

Ah! few shall fail, and many meet
Success like this authentic feat,
When every flower beneath our feet
Shall feed some dainty epicure.

LE ROY WHITFORD.

Harmony, Chatauqua county, N. Y.

The society then proceeded to the discussion of the question, "Can drones from virgin queens, fertilize queens?" A general opinion prevailed in the affirmative. Mr. L. C. Waite of St. Louis, described a very simple, but efficient and desirable method of feeding meal in the absence of (pollen) in early spring. It consisted of a frame, upon which was stretched a piece of mosquito bar or similar fabric, upon which the meal being allowed to fall, the bees rapidly consumed it, without inconvenience or waste.

The statements and challenge of Mr. J. W. Hosmer had made him the lion of the day, and every bee keeper desired to learn as much as possible from him. He was little blessed with the set phrase of speech; but good naturedly consented to reduce a portion of his theory to writing, for their benefit. He has learned the secret of conciseness; and his manner of managing bees will be found of value to every one interested in their preservation during the idle months.

WINTERING BEES.

To prepare for wintering, take your strong swarms as soon as the great honey harvest is over, and divide them into as many swarms as possible, and have each contain one quart of worker bees. Give each hive a queen, and then let them stand till the cold weather comes. Then examine, and see that each swarm has at least ten pounds of honey; and if there is more than a quart of bees, take out the frames and gently shake off the bees, leaving only one quart in the hive, of the youngest. Then set them into a cellar where it is perfectly dark, and so warm that it will not freeze. Close all the under ventilation; and if the American frames are used, leave all the mortises through the top open; at all events, give them full vent at the top of the hive. Now you have "put them to bed" for the long night of winter; do not disturb them from peaceful slumbers, by going into their bedroom with a light. If you have not a collar, prepare them as described, with bottom closed and top open, and set them in a dry place, close together. Lay sticks or boards upon the hives, slanting towards the ground, then cover them with dry straw, one foot deep when pressed down. Upon this covering, place dirt to the thickness of six inches, and smooth it down, letting it freeze. Lastly, cover it with litter to keep the frost in, and the work is done.

RESOLUTIONS.

As it was necessary for many of the members to depart for their homes before the afternoon meeting, the following resolutions were passed:

That the thanks of this Society be tendered the Railroad Companies and Hotel-keepers who have accorded privileges to attendants at this meeting.

That the thanks of this Society be tendered to

the papers of this city, for their reports and notices of our proceedings.

That the thanks of this meeting be given Mr. A. F. Moon, for the exhibition of his beautiful honey pyramid.

That this meeting regrets the inability of Rev. L. L. Langstroth to be present, owing to ill-health, and that as a mark of its appreciation of his great services to apiculture, his name be put first on the list of honorary members of the society.

Moved by W. F. Clarke, and seconded by A. F. Root—

That the Executive Committee be empowered and required to make all the arrangements necessary for the next annual meeting, including reduction of fare on railroads, and board at hotels; also, the preparation of papers, by competent persons, to be read at the meeting; a list of questions for discussion and a programme of business, so far as practicable.

That the thanks of the Society be tendered to Mrs. Annie Savery, for her valuable and interesting address on the experience of a beginner in beekeeping. That we especially commend and endorse her views on the importance of opening up spheres of remunerative labor for women, and the peculiar suitability of bee culture as an employment for women; and that we respectfully request her to reduce the substance of her remarks to writing, that they may be put in print, as a part of the proceedings of this meeting.

In the afternoon a goodly number assembled for the final session. Dr. Bohrer, a very successful bee culturist, gave an interesting narration of his "experience," after which Professor J. P. Kirtland was called upon. He made a few remarks expressing the pleasure he had experienced in being present, and observing the wonderful improvements that had been made in bee culture. Although he had devoted much thought and study to this subject, yet he found that he was still far behind—that the younger men had entirely out-stripped him.

Hugh Cameron, of the district of Columbia, offered the following preamble and resolutions, which were adopted:

Whereas, millions of wealth have been annually lost to the people through ignorance of bee culture, and

Whereas, It is the desire and object of this Convention, to enhance improvement and prosperity in this regard, therefore

Resolved, That we earnestly recommend the appointment of an apiarian professor, in each of the agricultural colleges on the continent, and that we respectfully call the attention of the State and other executives to this matter.

Resolved, That the Secretary be instructed to forward copies of these resolutions to the Governors of all the States, Territories and Provinces in North America.

Mrs. Savery was requested to deliver a farewell address. She did so; speaking especially in behalf of the ladies in attendance. Rev. W. F. Clarke was called on to respond in behalf of the gentlemen.

After singing the doxology, and prayer by Rev. W. F. Clarke, the Society adjourned to meet in Indianapolis, on the first Wednesday in December, 1872.

AGRICULTURAL SOCIETIES.

The following from the *Globe* is timely and useful:—

The time fixed by statute for the annual meetings of the Agricultural Societies is now close at hand, and the important duties which the period once more brings on should be well considered. The date for holding the meetings of Township Societies is the second week in January—that is to say, on some day between the seventh and fourteenth of the month; and that for the County Societies during the third week, or between the fourteenth and twenty-first of the month. At these meetings, the report of each society for the past year, including especially its financial condition, is to be presented, and officers are to be elected for the ensuing year. On the last point no one, it should be remembered, is allowed to vote who has not paid his subscription before the opening of the poll, the time for which is specified to be not earlier than 12 o'clock at noon, nor later than 4 o'clock in the afternoon, of the day of meeting. Much of the efficiency and prosperity of a society depends on the directors, and especially on the Secretary, and it is therefore highly important that a wise choice be made in this matter of the election of officers.

It is the duty of the Secretary of the Township Societies to forward a copy of their report to the County Society before the date of its (the County Society's) annual meeting, and on this account the time fixed for the meeting of the Township Society is one week earlier than that of the County Society. The Secretary of the latter is required to furnish a complete report of all the Commissioners of Agriculture and to enable him to do this it is very necessary that the respective secretaries who report to him should do so promptly and clearly, at the same time fully and briefly. It is astounding how much this simple matter, notwithstanding explicit directions published by the Bureau of Agriculture for guidance, is either neglected or bungled. The annual report of the Commissioner would be greatly enhanced in value if each one would attend faithfully to this part of his duty.

By the last amendment in the Agricultural Bill, the elected members of the Council of the Agricultural and Arts Association hold their office only for one year, and it devolves on the County

Societies, at their annual meetings, to elect a representative for their district to serve in the Council; and through them the management of the affairs of the Provincial Association is very much under the control of the County Societies. They have therefore, great responsibility thrown upon them, and instead of finding fault with the management of the Association, as it is the fashion with some to do, they see to it that the right men are put at the head of its affairs; and if reforms are needed, should be firm and explicit in urging those reforms through their representatives in the Council.

For the information of those who may not have a list to refer to, we give the names of the members of the present Council, and the district they represent, numbered according to the Act:—

No. 1. Stormont, Dundas, Glengary, Prescott and Cornwall—Geo. McDonell, Cornwall

No. 2. Lenark, Renfrew, City of Ottawa, Carleton and Russell—Hon. Jas. Skead, Ottawa.

No. 3. Frontenac, City of Kingston, Leeds, Grenville and Brockville—Andrew Wilson, Maitland.

No. 4. Hastings, Prince Edward, Lennox and Addington—Jas. J. Farley, Canif-ton.

No. 5. Durham, Northumberland, Peterborough and Victoria—Nathan Choate, Port Hope.

No. 6. York, Ontario, Peel, Cardwell and City of Toronto—Geo. Graham, Brampton.

No. 7. Wellington, Waterloo, Wentworth, Halton and City of Hamilton—Geo. Murton, Guelph.

No. 8. Lincoln, Welland, Haldimand, Monck and Niagara—J. C. Rykerk, M. P. P. St. Catharines.

No. 9. Elgin, Brant, Oxford and Norfolk, Hon. David Christie, Paris.

No. 10. Huron, Bruce, Grey, Algoma and Simcoe—Robt. Gibson, Goderich.

No. 11. Perth, Middlesex, City of London—Lionel E. Shipley, Falkirk.

No. 12. Essex, Kent, Bothwell, and Lambton—Stephen White, Charing Cross.

The retiring members are in all cases eligible for re-election.

The Provincial Association, in spite of all errors in the past, has been of great service to the country, and those who have our agricultural prosperity at heart will rather strive to strengthen its influence and

efficiency by putting its affairs into good hands, than indulge in idle complaining, or expend their hostile activity in fostering dissatisfaction, or aiming to establish any other rival institution.

THE AMERICAN DAIRYMEN'S ASSOCIATION.

The seventh annual convention of the American Dairymen's Association will be held in the city of Utica, N. Y., on Tuesday, Wednesday and Thursday, January, 9th, 10th and 11th, 1872. Arrangements for this meeting are not yet fully completed; but the officers of the society take pleasure in announcing the following programme as essentially that which will be carried out at this convention:

Professor George C. Caldwell, of Cornell University, Ithaca, N. Y., will deliver an address on "The practical value of chemical analyses of the dairyman's raw material and of the products of his manufacture." This lecture will be illustrated by many large diagrams prepared expressly for this occasion.

Professor X. A. Willard, of Little Falls, N. Y., will deliver an address on "The Manufacture of Condensed Milk." This lecture will likewise be illustrated by extensive diagrams to show the principles involved in the manufacture of condensed milk, the apparatus and machinery used, &c. Mr. Willard will enter into the details of the subject, showing the cost of manufacturing this article, the market, &c.

A communication is promised from the pen of John M. Webb, Esq., now in Europe, of a similar nature to the papers heretofore read by Mr. Webb, with so much satisfaction and profit to the association.

A paper is likewise expected from L. B. Arnold, Esq., of Ithaca N. Y., in which the subject of "Poisonous Cheese" will be touched upon.

Addresses will also be made by the following gentlemen on the subject specified:

Hon. Harris Lewis, of Frankfort, N. Y., on "The Winter Food of Dairy Stock,"—also a renewal of the discussion respecting the value of Sowed Corn as a forage crop.

T. D. Curtis, Esq., of the Utica Herald, on "The Standard of excellence in cheese-making."

Dr. L. L. Wight, of Whitesboro, N. Y., on "The lesson of my experience in cheese-making in 1871."

S. A. Farrington, Esq., of Rock Stream, N. Y., on "Dairy farming and grain raising in connection."

O. S. Bliss, Esq., Secretary of the Vermont Dairymen's Association, on "Recent improvements in Butter-making."

H. Cooloy, Greene, Esq., of Woodcockboro, Pa., on "The manufacture of Butter in Creameries." Mr. Greene will also exhibit and explain to the convention a plan for a model creamery, drawn on a large scale.

Wm. Blanding, Esq., of North Fenton, Broome Co., N. Y., on the question, "Is it policy to take any cream from the milk before making it into cheese—and if so, how much?"

Mr. Folsom, Esq., of New York, as well known cheese dealer, has consented to prepare a paper to read at this convention, but his subject cannot yet be announced.

Other gentlemen have been invited to address the meeting, among them Mr. C. Schormerhorn, of Oneida Co., who has been making factory cheese in England for the past two seasons.

Reports are expected from the committees appointed at the last annual meeting on the subject of Sunday cheese making, a juster appointment of milk delivered at cheese and butter factories, and on the establishment, by the state, of an experimental dairy farm. It is the intention of the officers of the association to allow ample time for the full discussion of each subject, and in these discussions all members are urged to participate. Besides the topic, above alluded to, members may bring before the convention such other pertinent subjects as they may desire to present for consideration. Factory reports of operations and results for the season of 1871, should be handed to the secretary at the convention, or sent to him by mail very soon after. They are much needed, as they constitute a valuable portion of our annual reports.

It is designed to set apart one evening for a social meeting in the Hall where the convention assemblies.

Tickets of admission to all the sessions of this convention, \$1 each. Ladies free. Fifty cents additional constitutes the person a member of the association until January, 1873; entitles him to the next annual report, and to such other documents and

circulars as may be sent out by the officers of the society during the year.

HORATIO SEYMOUR, Pres.

GARDNER B. WEEKS, Sec'y.

SYRACUSE N. Y., Dec, 5, 1871.

REPORT OF THE U. S. COMMISSIONER OF AGRICULTURE.

Close upon the end of 1871 we have received a copy of the Report of the U. S. Commissioner of Agriculture for 1870. Though some of the contents are of permanent value, much of the interest of other parts is considerably abated by the lapse of time, and the information has already been anticipated by other published accounts. Of this class are the statistics of the crops and the weather, which are useful now chiefly as standards of comparison.

Notwithstanding this drawback, the voluminous report, extending over nearly 800 pages, is very acceptable, and contains much valuable matter. A glance at the crop returns should be especially reassuring to the Canadian farmer who is disposed to be dissatisfied with things at home. The average yield of almost every crop that we profess to raise at all in Canada is below our own, either in comparing the same years or estimating the general average. The highest returns come from California, Oregon, Nevada, and the Territories; the lowest from the Southern States—notably, South Carolina, Georgia, Florida, Alabama, and Mississippi. The average yield of wheat is given at 8 bushels to the acre in Georgia, and 19 in California. In the Eastern States it averaged from 12 to 16.

An improvement is noted in the condition and care of stock, and the starvation and neglect to which so many animals have been wont to be exposed during the winter is becoming less prevalent, as wiser and more human views are extending among the people.

The volume contains a very interesting entomological report of the insects, injurious and beneficial, that have specially come under notice during the year. The chemical report is also of great value. Considerable prominence is given, in a very elaborate paper by Andre Poey, to the subject of agricultural meteorology. The President of the American Pomological Society, Marshall P. Wilder, contributes a brief account of the history and progress of that valuable institution. Some space

is devoted to a popular description of the minor vegetable products and their sources, such as the oils, the gums, spices, beverge plants, &c. The dairy, and its increasingly important interests, receive due attention. The subject of agricultural education, of irrigation, modes and results of underdraining, and a variety of other topics, are brought under consideration; and the compilation is altogether more than commonly rich in carefully collected information, which will be found valuable to the agriculturist of Canada as well as of the States. The work is to be procured, we believe, by application to the U. S. Department of Agriculture, which has always shown itself very liberal in disseminating its publications, and we cordially tender our thanks to the Honorable Commissioner for the valuable and interesting report, which according to former custom has been courteously sent to us.

TREE LAW OF NEW YORK.—"The Tree Law" of New York State, as recently amended, and now on the Statute Book, seems to us an eminently good one, and much needed at this time. It is as follows: "Any inhabitant liable to highway tax who shall transplant by the side of the public highway any forest shade trees or fruit trees, of suitable size, shall be allowed by the overseers of highway, in abatement of his highway tax, one dollar for every four trees set out; but no row of elms shall be placed nearer than seventy feet; no row of maples or other forest trees nearer than fifty feet, except locust, which may be set thirty feet apart; fruit trees must also be set at least fifty feet apart; and no allowance as before mentioned, shall be made unless such trees shall have been set out the year previous to the demand for said abatement of tax, and are living and well protected from animals at the time of such demand." The cities need just such a law. The large towns need it. The country needs it. All need it, and if all heed it, in its true spirit and interests, New York will be a very different State in 1900 from what it would if none regard its suggestions. Many advantages will result, as effect follows cause, from a faithful, earnest carrying out of this law. Some of these are so obvious that men who have studied the influence of forestry and tree planting on human welfare at all, will cry out with us for more trees, and will wish, as we do,

that more of our unsightly and fruitless hill-tops and slopes were robed in forests, both to hide their nakedness, and to modify our climate in a way to favor the great interest of agriculture. The influence of this law, if suitably regarded, is certain to be beneficent.

EDITORS' BOOK TABLE.

ANNALS OF BEE CULTURE FOR 1870. By D. L. Adair, Hawesville Kentucky. A very valuable publication for all who keep bees, whether on a limited or extensive scale.

ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS FOR 1872. Price 30c. T. J. Day, Guelph. We have so often and fully described this Annual that it is quite enough to say it is equal to its predecessors, which is high enough praise. Every farmer should have it.

BRITISH WORKMAN FOR 1871. 50c. T. J. Day, Guelph.

BAND OF HOPE REVIEW FOR 1871. 35c. J. T. Day, Guelph.

The two publications last mentioned, are too well known to need commendation.

We regret to learn that among the disastrous losses occasioned by the Chicago fire, the very valuable entomological collection of the late Dr. Walsh was totally destroyed. It will be remembered that after the death of the eminent entomologist, the collection became by purchase the property of the State. It was not only very extensive, but the specimens were arranged and labelled with great care and accuracy; and it will be many years before another can be collected to replace it.

SMOKE STACKS OF RAILROAD ENGINES.—A farmer writes to the *Detroit Press* his belief, from actual observation, what one of the chief causes of the recent destroying fires in the woods and the prairies, it is to be found in our railways, and pertinently inquires "why are not some measures taken by railroad companies in order to prevent spread of sparks and cinders, causing so much damage to farmers as well as to themselves? Our steam threshers work with safety among barns and stacks, their smoke stacks being fully secured against out-passing sparks, and why cannot a like safeguard be applied on railroad smoke-stacks.

Agricultural Intelligence.

HAMILTON FARMERS' CLUB.

WINTER CARE OF STOCK.

At a meeting of the Township of Hamilton Farmers' Club, held at Coldsprings, on Wednesday, the 29th of November—Peter Sidney Esq., in the chair.

Mr. John Pratt, who had been appointed at the last meeting to introduce the subject for discussion, said that, in speaking of the care and management of farm stock during winter, he would begin with the most important of our farm stock—the horse.

The horse should be kept in a stable of moderate temperature, light, and well ventilated. He should have sufficient supply of hay and oats, with a few turnips or carrots be fed regularly, and be supplied with plenty of water, he should be well littered, kept clean, and sufficiently exercised when not working; if he is working constantly, he should have full supply of the above feed. Young colts, before they are taken from the mare, should be fed a little to accustom them to eat, the feed to be a small quantity of boiled barley or oats; this feed to be continued after they were weaned, with hay when they are put in the house.

Cattle should be tied up in the stables as soon as the after-grass fails in the fall. Care should be taken not to leave them out too late in the season, as they lose flesh fast in cold, wet, stormy weather. They should have a liberal supply of clover hay or clear oat straw, and turnips or mangolds; they should be allowed to run out through the day when the weather is fine, with free access to water at all times when out. Calves need not be tied up, but may be put in a house where they can eat out of a rack or manger.

Sheep should be kept in a dry, airy house, and fed with clover hay and turnips; they should have a yard to run in at leisure, and not more than twenty should be kept in a flock together.

Pigs should be shut up in a dry, warm place, well littered, and have plenty of eat.

Mr. F. Atchison said he hardly knew what to say about feeding stock. He almost let his stock come as nature sent them. He agreed generally with Mr. Pratt, about feeding horses. He would give them plenty of hay and oats, with a feed of boiled barley once or twice a week. Several things had to be considered in feeding; economy had to be studied; hay, at eighteen dollars a ton, was expensive feed; so were turnips; would rather let them live at the straw stack; would prefer good dry open sheds for his cattle, rather than tying them up; though they stand cold better coming out of a good open shed than coming out of a warm stable. Calves he would tie up all night, and let them run out in the yard all day, and throw them the refuse of the horse stable to work among. Sheep he would keep in an open shed, and pen together; approved of giving them pea straw all winter; thought they did as well on pea-straw (not over well thrashed) as on hay; when the lambs were about coming, the ewes ought to have some gruel and some turnips, so as to feed the lambs well and give a good growth of wool. One thing he thought Mr. Pratt had overlooked that was salting stock in winter; did not believe that stock ought to have much salt during the winter; as at

that season they were apt to take more than was good for them if they had their chance.

Mr. Pratt explained that his cattle did not seem to care for salt in winter. He always salted his hay well, and perhaps they got as much that way as they needed.

Of pigs, Mr. Aitchison thought he would keep few or none; with pork at four dollars a hundred, they were not worth keeping; were troublesome stock any way; had to keep his shut up all the time; thought we killed our pigs too young; would make better meat if they were older; never thought he could make pigs too fat.

Dr. Tisdale thought that any animal used for food ought to be kept in as natural and healthy a state as possible. Pigs ought not to be kept and fed as they usually are, shut up in a dirty pen, and made as fat as possible; they ought to be fed with corn, kept clean, and allowed room for exercise. Most of our bilious troubles, so common in the country, were caused by using too much fat pork; if fed as he had said, or on grass, pork was as wholesome as any other meat if not too fat. No animal, when over fat, was wholesome meat. He spoke of pork chiefly as a summer diet. In Russia, in winter, to keep up the calorific, they actually took oil.

Mr. Sidney said that he considered fat a heat-producing article; thought that fat meat kept up heat; thought that Mr. Aitchison's was mistaken economy in feeding stock; thought there was no way of keeping stock cheaper and better than in building good houses for all of them as soon as we could; when tied up, the small or weak cattle got whatever you liked to give them, and could eat it in peace without being driven about by the larger beasts; thought there was no danger in giving cattle all the salt they liked during winter, if given regularly, or laid in troughs, in some place where they could get at it whenever they liked; thought that salting our straw stacks would probably be as well as giving them the salt; thought they ought to have it at least once a week, thought salt gave cattle an appetite.

AGRICULTURAL AND ARTS ASSOCIATION.

A meeting of the Council of the above Association was held on Wednesday, the 6th inst., in the Agricultural Hall. There was a full attendance, the Hon. Mr. Skead occupying the chair.

The minutes of the last meeting were read and confirmed.

THE PROVINCIAL EXHIBITION AT LONDON.

The long-contested account of expenses for entertaining the visitors from the Maritime Provinces to an exhibition held in London in 1869, was at last ordered to be paid, the amount being about \$300.

THE LATE EXHIBITION AT KINGSTON.

The Secretary read his report as provided by the statute of the affairs of the late exhibition at Kingston, giving a detailed statement of the number of entries in the various classes and the financial result of the meeting. The report which was addressed to the Hon. J. Carling, was very long, and occupied some time reading.

COMMUNICATIONS.

The Secretary announced the receipt of a cata-

logue of the first Annual Exhibition at the Provincial Agricultural Association, held in the town of Winnipeg, on the 4th, 5th, and 6th October last. The prize list was a long one, in the premiums comparatively large. A letter from Mr. G. B. Spencer, of the Customs Department at Winnipeg, accompanying the catalogue, was read. Mr. Spencer, in one part of his communication, said, "I regret that the Fenian Raid which took place on the same week of our first Exhibition, prevented not only exhibitors but spectators being present. We, however, continued it, and kept open one day, which will have a most beneficial effect on the exhibition to be held next Autumn. You can readily imagine the serious effect, injurious to our cause, when I tell you that on Wednesday, Thursday, and Friday, the days set apart for our Exhibition, no less than one thousand men enrolled themselves to serve in defence of our country during those three days. The excitement was intense, and, moreover, the extensive prairie fires, raging before and about that time, also prevented many exhibiting. We, however, anticipate a most favorable result next autumn."

Several other communications upon minor matters were read, and action taken upon them. The affairs they referred to were of no public interest.

THE HERD BOOK.

Mr. Young said that several enquiries had been put to him as to when the Herd Book would be ready for publication.

The Secretary said that the book was ready for the press at any minute, and only awaited the sanction of the committee, which had not yet met to consider the subject.

The Hon. David Christie suggested that animals of four crosses should be recognized as eligible to be entered in the Herd Book; that was done in England, and he did not think it well to adopt a higher standard here.

After some further conversation, it was agreed that the matter should be referred to the Committee for them to report on in the morning.

The Board met again on Thursday morning, at half-past nine o'clock.

A number of accounts were passed.

The chairman of the committee to whom was referred the question of the standard of eligibility for entry in the Canadian Herd Book, and the prefixing of stars in pedigrees which are not regular, reported that the committee recommended that the standard recognized in England, viz., the possession of at least four well established crosses by thorough-bred bulls—be the standard for admission to the Canadian Herd Book. The committee could not recommend the admission of stars, in cases of defective pedigrees referred to in the second volume of the Canadian Herd Book.

explained that a star attached to the name of a sire signified that his pedigree was not well established.

The report was adopted. No other business of importance was transacted.

A PHENOMENON.

The Ashy Blister Beetle, *Lytta cinerea* Fab. (*Macrobasis Fabricii* LeConte) was very destructive to the potato vines in several parts of the Province of Quebec during last July. In some

places it was exceedingly abundant, and attacked the Windsor bean as well as the potato. Five years ago it was also very common. Its appearance this year gave occasion to an article in one of the French newspapers published in Three Rivers, which is such a wonderful production that it is well worthy of being placed on record. Entomologists will have a smile at it, and think that a little better acquaintance with insect life would do our farmers and journalist no harm. The following is a free translation of the article:—

“A NEW PLAGUE.

“We are threatened, it would seem, by a new plague. A citizen, a good observer, reports to us that he noticed the following phenomenon in a fine field of potatoes on his ground in this town. He tells that he found on his potatoes a large quantity of blue beasts winged, and the colour of blue stone, which rapidly devoured all the leaves of the plants, leaving only the bare stems. He gathered more than a quart of these insects. After some time, the insect undergoes a change. It dries in the sun, an opening appears, beside the shoulders, near the neck, and a very active fly emerges, at first of a blue colour, which alights on the cabbages, and doubtless continues its ravages there. As it grows older, this fly becomes grass-coloured, probably on account of feeding on the cabbage leaves. This subject is a most important one, and merits the close attention of our agriculturists.”

What can the “active fly” be, which makes its appearance in such an extraordinary manner, issuing (as the Abbe Provancher expresses it), like Minerva from the brain of Jupiter? This mystery will probably remain forever unsolved. The only solution that can be offered is, that as the “good observer” has mixed things so promiscuously, he may have mistaken the larva *Pieris rapae* for a fly, and fathered (or mothered) it on the unfortunate Blistering Beetle, which has enough to do in attending to the potatoes, without providing for cabbage also.

This beetle seems to be the most injurious of the insects infesting the potato crop in Lower Canada, and its attacks cease about the beginning of August when the insect is supposed to enter the earth to deposit its eggs. Cutworms, however, did some harm last spring by nipping off the young shoots; and a larva (perhaps of the same family), destroyed the seed in some places, by eating it in the ground, as I was informed by a farmer in the vicinity of Quebec.—G. J. BOWLES, Quebec, in *The Canadian Entomologist*.

VALUABLE SHEEP KILLED BY DOGS.

A paragraph in the *Press and Messenger*, of Knoxville, Tenn., informs us that the noted South Down ram *Peebles*, and six others of the same flock, belonging to Messrs. Hough and Church and David Lee, of that city, were recently killed by dogs.

We never see a notice of such an occurrence without a feeling of the utmost contempt for the little mole-eyed, jack-leg lawyers who infest our legislative halls, and have neither sense enough to comprehend the necessity for, nor manliness to advocate, the enactment of laws intended to discourage dog-raising, and encourage sheep-raising in at least the Southern and Western States. Regularly in this State, at almost every session of the General

Assembly, for many years, some rural, unprofessional member has introduced a bill for an act of the kind referred to, and just as regularly his efforts to have it passed have been defeated by the active opposition of some fellow whose brain would hardly bear comparison with that of an average ram, together with the culpable indifference of other better-endowed members. The seven victims of that midnight raid at Nashville were beyond all question of more money value, present and prospective, to the State of Tennessee, than all the dogs in that commonwealth. Similar outrages are occurring at short intervals all over the country.—Hundreds of thousands of dollars' worth of property are destroyed annually, and one of the most important branches of live-stock husbandry rendered hazardous or impossible for want of such legislation as nine-tenths of the people in every civilized community would not only acquiesce in, but heartily endorse, if once in operation.

In addition to the liability of the owner of a dog for liberal damages on account of depredations committed, declare every such animal when off his owner's premises and unaccompanied by him, an outlaw, to be killed by any person who does the world the small service of destroying him, and the flockmaster will find his remedy in due time. We long for the time when hunting for “suck-egg hounds” and worthless curs shall be the favorite, law-protected sport with farmers' sons and school-boys out for a holiday.—*National Live Stock Journal*.

ELECTRICITY ON THE FARM.—The *American Artisan* in noticing some curious patents that have been taken out in Great Britain, says: “One Henry Pinkus, who seems to have been a highly original genius in his way, got a patent in 1840 for operating agricultural implements by electricity! His plan was to place a battery in some central position, in a “deep well or tank,” so as to be out of the way. From thence pipes containing insulated wires are laid all over the plantation, having at various convenient places “vertical branches,” terminating in suitable boxes. To put the implements into action, a “rotary electro-magnetic locomotive” is to be used with a drum, carrying and winding up the battery wires.

INTRODUCTION OF HORSES.—*Hearth and Home* is the authority for the following: Historical records show that up to 1632 there were no horses in New England, and their introduction into New Netherlands, now New York, occurred during the administration of Gov. Von Twiller, in 1633-38. Trumbull's History of Connecticut mentions the horses accompanying emigrants from Massachusetts to that state, Oct. 15th, 1636. The first horse seen in Canada was brought to that country from France, in a ship which arrived at Tadoussac, June 20th, 1647. It is estimated that there are now in this country eight million of horses, valued at between two and three thousand millions of dollars, a sum ample to pay the national debt.

HOPS IN CALIFORNIA.—The *Pacific Rural Press* says. But little attention has ever been paid by our citizens to the raising of hops, yet it is a crop that is quite remunerative. Mr. Clock, of St. Helena, has for several years been cultivating a few acres of hops. He was somewhat unfortunate at first, but his crop this year is unusually large, and will bountifully pay him for all his losses and dis-

appointments. His hops this season are of a superior quality, and will command the highest market price. Soon after gathering his crop, he sold a portion of it at 50 cents per pound. He expects to get 75 cents for the residue. He deserves eminent success on account of the diligence with which he has labored to develop this additional resource of our country.

CHEAP STUMP MACHINE.—A writer says that he has made and used a stump machine, constructed as follows: Take three pieces of common joists, put them together in form like the common harrow, letting the tapering or forward ends lap by each other some six inches, making a place for the chain to rest on. Cut off the roots at any distance you please from the stump; place the machine one side of the stump, tapering end up; hitch the chain on the opposite side, and pass it over the machine; then hitch a good yoke of oxen thereto, and you will see the stump rise. He has cleared about three acres in this way.

MAPLE SUGAR.—The Vermont *Farmer* says C. J. Cheney, of Lunenburg, last Spring, made 1,268 pounds of sugar from 212 trees. In another orchard he had trees enough to make up 700 in number, from which he made in all 2975 pounds of sugar. One of his neighbors, Calvin Smith, did nearly as well, making 640 pounds from 130 trees. Statements like these ought to convince farmers everywhere of the advantage of a sugar orchard. It is not only a source of pleasure, but a mine of wealth. Sugar is a heavy bill in every family, but if one has the trees on the farm, the very best article can be made at a time when little else can be done.

Arts and Manufact res.

OUR RECEIPTS FOR CURING MEET.

To one gallon of water—Take $1\frac{1}{2}$ lbs. of salt; $\frac{1}{2}$ lb. of sugar; $\frac{1}{2}$ oz. saltpetre; $\frac{1}{2}$ oz. of potash.

In this ratio the pickle can be increased to any quantity desired. Let these be boiled together until all the dirt from the sugar rises to the top and is skimmed off. Then throw it into a tub to cool, and when cold, pour it over your beef or pork, to remain the usual time, say four or five weeks. The meat must be well covered with pickle, and should not be put down for at least two days after killing, during which time it should be slightly sprinkled with powdered saltpetre, which removes all the surface blood, &c., leaving the meat fresh and clean. Some omit boiling the pickle, and find it to answer well, though the operation of boiling purifies the pickle by throwing off the dirt always to be found in salt and sugar. If this receipt is properly tried, it will never be abandoned. There is none that surpass it, if so good.—*German town Telegraph.*

WATERPROOF BOOT SOLES.

If hot tar is applied to boot soles, it will make them waterproof. Let it be as hot as leather will bear without injury, applied with a swab and drying in the fire. The operation may be repeated two or three times during the winter if necessary. It makes the surface of the leather quite hard, so that it wears longer as well as keeps the water out. It is a good plan to provide boots for winter in summer, and prepare the soles by tarring, as they will then become, before they are wanted to wear, almost as firm as horn, and wear twice as long as those unprepared.

Ten years ago I met with a direction similar to the above, and with some hesitation I concluded to have it tried on the soles of a pair of field boots. By a piece of supererogance, a pair of thin soled morocco boots was tarred with the others, the soles being saturated and the seaming too, all round, including the lower rim of the morocco all round the soles. As these boots are doing service yet, and have been much used every summer during the ten years, I mention the fact because it furnishes what I then wished for, namely, a proof that the tar would not burn or otherwise hurt the leather. The soles remain like horn, and even the thin upper, apparently cracked in all directions from the first, has never torn but a little on one boot at the bend on the outer side of the foot. It has been oiled about once each summer, but the soles received only the one thorough tarring.

But soles will take the tar best after having the grain worn off slightly. It soon dries in if exposed to the sun, and the odour even of gas tar is quickly overcome by the all-conquering effects of dry earth. A short walk over a fallow field will remove it completely, and make it entirely unnecessary to imitate the eastern custom of taking off the boots at the house entrance, unless there be some other reason for it than fresh tarred soles.—*Cor. Country Gentleman.*

NON-SMOKING CHIMNEYS.—To build a chimney so that it will not smoke, the chief point is to make the throat not less than four inches broad and twelve long; then the chimney should be abruptly enlarged to double the size, and so continue for one foot or more; then it may be gradually tapered off as desired. But the inside of

the chimney, throughout its whole length to the top, should be plastered very smooth with good mortar, which will harden with age. The area of a chimney should be at least half a square foot, and no flue less than sixty square inches. The best shape for a chimney is circular or many sides, as giving less friction (brick is the best material, as it is a non-conductor), and the higher above the roof the better.—*Scientific American*.

WHETSTONES.—When first putting a new whetstone into use, try water upon it, and if this keeps the surface from being glazed or burnished, oil will not be needed. Some stones work better with water than oil. A dry stone is very apt to give a wire-edge. It has been said that a little carbolic acid added to water will increase the friction on either a whetstone or a grindstone.—*Ohio Farmer*.

Our Country.

THE INTERCOLONIAL RAILWAY.

The *Montreal Gazette* of Tuesday contains a long and interesting description of the condition of the Intercolonial Railway. The space at our disposal will not permit us to even summarize the reports from the separate sections of the work; but the general results attained and the prospects of the undertaking will be gathered from the following extracts:

The general results, then, of the careful examination which has been made, and which we have thus in detail laid before the public, shows that the Intercolonial Railway will be ready for traffic from Riviere du Loup to Metis, a distance of about ninety miles, and from Painsee Junction to Truro, a distance of about 117 miles, before the close of the season next year. This will make a total length completed of the Intercolonial Railway of 207 miles. A considerable portion of the track will be laid on other parts of the line during the next year and early in the season of 1873. The portion between Monoton and the Miramichi River, as well as that between Bathurst and the Metapedia, will be then completed and ready for operation, and there does not seem to be any reason to doubt that by the end of 1873 the entire line will be completed and ready for operation from one end to the other. The iron bridges have all been ordered, and with

the exception of the long spans for the Restigouche and Miramichi bridges will be on the ground during the next season, during which time the great bulk of them will be put in place. A large proportion of the rails required will also be on the ground during next season, and very considerable quantity laid in the track. The whole of the rails will be delivered by the spring of 1873, and in fact the whole of the material required to be procured from abroad will be upon the spot in ample time to carry out the results which have been here stated.

There is now rather more than half of the amount of the whole of the contracts executed and paid for, and at the rate at which work was executed last year, at least four-fifths of the entire work will be completed by the end of 1872. The work then remaining to be done will be concentrated in a few places, and will permit of the concentrating upon those spots, all the labor which will, by that time, be set free from the portions of the work which are now rapidly approaching completion. The whole of the work will thus be completed next year from Riviere du Loup to the Metis River—all the work in Nova Scotia,—nearly the whole between Monoton and the Miramichi River—and also between the Miramichi River and the Metapedia.

The points that will be last completed will be too heavy bridges across the Miramichi River, and the very extensive contract let to W. E. Macdonald & Co., eastward of the Metis River.

The necessary quality of engines and cars required for the ballasting and track-laying of the different sections of the line are now being supplied, and there will be a full sufficiency of these as rapidly as they will be needed.

The total outlay which has been made upon the line up to the end of the present year, will probably somewhat exceed \$7,000,000. With the amount of work which will be done next year, and the payment for the iron bridge work, rails, and rolling stock, it is probable that the outlay during the year 1872 will be from \$5,000,000 to \$6,000,000, making the total expenditure to the end of 1872 about \$13,000,000.

The whole of the works that have been so far executed are of the best possible description, and there is no masonry on the continent which can exceed, in quality, that on the Intercolonial Railway.

By the mode which has been adopted in letting the contracts by public tender, and awarding the contracts to responsible persons who tendered at the lowest prices, the work has been constructed on exceedingly cheap terms, and the contractors have been enabled to carry on their works at the low prices at which they took them, mainly from the course which has been pursued of employing the labor which the locality was able itself to afford, and by not attempting to force the construction too rapidly, so as to necessitate a large importation of foreign labor, and a consequent great increase in the price of wages.

The bridge works and rails have been contracted for upon exceedingly favorable terms, and so long has been the rise in the price of both iron and steel, since the contracts were made, that if those contracts had to be made again, they could not be entered into except at a large addition to the prices which are now to be paid.

There is no doubt that whatever that whilst the whole work is being executed in the most thorough and substantial manner, and the materials upon it will be of the very best and most permanent character, the cost of the work will be exceedingly moderate, and be much less per mile than has been the case in similar works of equal magnitude upon this continent up to the present time.

AGRICULTURE IN MANITOBA.

A blue-book, the first of its kind in Manitoba—has been published, containing a large amount of useful information to any one desirous of obtaining some reliable accounts of the new province. It is in reality (says the Canadian correspondent of the Scotsman) the substance of answers to questions addressed by a Committee of the Legislature there, to persons supposed from their position to be able to furnish, valuable information on the points in question. We are told the advance of agriculture has been satisfactory, and as a stock-raising country the province is held in high esteem. Horses left at liberty thrive well without any care, roaming through the woods or swamps all winter. Horned cattle and sheep must be housed and fed during five or six months, according as the winter proves short or long. Oxen are now selling there at from \$80 to \$100 a yoke, and cows at \$50 each. The breed is the original

stock imported by Lord Selkirk. The Indian pony, whose progenitors were brought to the continent by the Spaniards, has become acclimated, but is greatly degenerated, though hardy and useful. With respect to the manufacture of butter and cheese in the province, we are informed that butter is made by all, but cheese by but a few Scotch settlers only.

Hearth and Home.

WOMEN AND WINE.

Woman has never been associated with wine without disgrace and disaster. The toast and the bacchanal that, with musical alliteration, couple these two words, spring from the hot lips of sensuality, and are burdened with shame. A man who can sing of wine and women in the same breath, is one whose presence is disgrace, and whose touch is pollution. A man who can forget mother and sister, or wife and daughter, and wantonly engage in a revel in which the name of woman is invoked to heighten the pleasures of the intoxicating cup, is, beyond controversy, and without mitigation, a beast. "Dost thou think, because thou art virtuous, there shall be no more cakes and ale?" Ay, cakes and ale, if you will, but let it be cakes and ale. Let not the name by which we call the pure and precious ones at home be brought to illuminate a degrading feast.

One of the worst foes that women has ever had to encounter, wine stands at the head. The appetite for strong drink in man has spoiled the lives of more women—ruined more hopes for them, scattered more fortunes for them, brought to them more shame, sorrow, and hardship—than any other evil that lives. The country numbers tens of thousands—nay, hundreds of thousands—of women who are widows to-day, and sit in hopeless weeds, because their husbands have been slain by strong drink. There are hundreds of thousands of homes, scattered all over the land, in which women live lives of torture, going through all the changes of suffering that lie between the extremes of fear and despair, because those whom they love, love wine better than they do the women they have sworn to love. There are women by thousands who dread to hear at the door the step that once thrilled them with pleasure, because that step has learned to reel

under the influence of the seductive poison. There are women groaning with pain, while we are writing these words, from bruises and brutalities inflicted by husbands made mad by drink. There can be no exaggeration in any statement made in regard to this matter, because no human imagination can create anything worse than truth. No pen is capable of portraying the truth. The sorrows and the horrors of a wife with a drunken husband, or a mother with a drunken son, are as near the realization as can be reached in this world, at least. The shame, the indignation, the sense of disgrace for herself and her children, the poverty—and not unfrequently, the beggary—the fear and the fact of violence, the lingering, life-long struggle and despair of countless women with drunken husbands, are enough to make all women curse wine, and engage unitedly to oppose it everywhere as the worst enemy of their sex.

And now what shall we see on the New Year's Day, 1872? Women all over the city of New York—women here and there all over the country, where like social customs prevail—setting out upon their tables the well-filled decanters, which, before night shall close down, will be emptied into the brain of young men and old men, who will go reeling to darker orgies, or to homes that will feel ashamed of them. Woman's lips will give the invitation, woman's hand will fill and present the glass, woman's careless voice will laugh at the effects of the mischievous draught upon their friends, and, having done all this, woman will retire to balmy rest, previously having reckoned the number of those to whom she has, during the day presented a dangerous temptation, and rejoiced over it in the degree of its magnitude.

O woman! woman! Is it not about time that this thing were stopped? Have you a husband, a brother, a son? Are they stronger than their neighbors, who have, one after another, dropped into the graves of drunkards? Look around you, and see the desolation that drink has wrought among your acquaintances, and then decide whether you have a right to place the temptation in any man's way, or do ought to make a social custom respectable which leads hundreds of thousands of men into bondage and death.

Women, there are some things which you can do, and this is one; you can make drinking unpopular and disgraceful among

the young. You can utterly discountenance all drinking in your own house, and you can hold in suspicion every young man who touches the cup. You know that no young man who drinks can safely be trusted with the happiness of any woman, and that he is as unfit as a man can be for woman's society. Have this understood: that every young man who drinks is socially proscribed. Bring up your children to regard drinking as not only dangerous, but disgraceful. Place temptation in no man's way. If men will make beasts of themselves, let them do it in other society than yours.—*Dr. Holland, in Scribner's Monthly.*

A PLEA FOR THE BUMBLE BEES.

The *Turf, Field, and Farm* puts in the following:—

Boys think it glorious fun to fight bumble bees, but they should not be encouraged in the warfare. Bumble bees, like all the hymenoptera, play an important part in the great field of nature. The vein-winged insects which fly from flower to flower, do not injure or destroy the flowers, but make them productive by distributing the pollen. They also rid us of innumerable noxious caterpillars and other insects, which they convert into wholesome food for their offspring.

The ordinary honey bee performs its work well in the fertilization of white clover, but its proboscis is not long enough to enable it to reach the nectaries of red clover; for the fertilization of the red clover we must rely to a great extent upon the bumble bee.

Darwin has called attention to the intimate connection between the number of cats in a given district and the yield of red clover seed. The mice destroy bumble bees, and the cats destroy the mice; therefore, the more cats, the more bumble bees, and the more bumble bees, the greater is the red clover yield. In order to make red clover grow more abundant in New Zealand than it does, some enterprising gentlemen are talking of importing colonies of bumble bees from England. Our young friends will thus see how earnestly the bumble bee is desired in countries where he works not. Then should we not protect what we have, and which performs such important services in our fragrant meadows? We think so, even if it does interfere with the wild pleasures of careless boyhood.

GIRLS, DON'T TALK SLANG.

Girls, don't talk slang. If it is necessary that any one in the family should do that let it be your brother, though I would advise him not to adopt "pigeon English" when there is an elegant, systematized language that he can just as well use. But don't *you* do it. You can have no idea how it sounds to ears unused or averse to it to hear a young lady, when she is asked if she will go with you to some place, answer, "Not much!" or, if requested to do something which she does not wish, to hear her say, "Can't see it."

Not long ago I heard a young miss who is educated and accomplished, in speaking of a young man, say that she intended to "go for him!" and when her sister asked her assistance at some work, she answered, "Not for Joe!"

Now, young ladies of unexceptionable character and really good education fall into this habit, thinking it shows smartness to answer back in slang phrases, and they soon slip flippantly from their tongues with a saucy pertness that is neither ladylike nor becoming. "I bet" or "you bet" is well enough among men who are trading horses or land; but the contrast is startling, and positively shocking, to hear those words issue from the lips of a young lady. They seem at once to surround her with the rougher associations of men's daily life, and bring her down from the pedestal of purity, whereon she is placed, to their own coarse level.

LONGEVITY OF FARMERS.—In a late address before the Farmers' Club, of Princeton, Mass., Dr. Nathan Allen said that according to the registration report of deaths in Massachusetts, published now for about thirty years, and preserved with more accuracy and completeness than anywhere else in the country, the greatest longevity is found to obtain in agricultural life. In the ten different occupations as given in these reports, the cultivators of the earth stand as a class at the head, reaching, on an average, the age of nearly sixty-five years, while that of the next class, merchants, is only about 49 years; that of mechanics of all kinds, about 48 years, and that of shoemakers about 44 years. Thus there is an advantage of about 15 years on the side of farmers as compared with merchants and they reach an average age but little

short of the three score years and ten allotted by the Psalmist for human life.

BUTTERFLY PICTURES!—In the woods, near Stamford Bridge, *Arge Galathea* formerly abounded, but it has not been seen for some years; indeed, some of our most conspicuous butterflies (notably *Io*, *Paphia Rhamni* and *Galathea*), have lately become rare, or disappeared from the neighborhood of York, Leeds and Sheffield, and this not from any "improvement" of the land, or, so far as appears, any alteration of the former conditions of their existence, but simply from their merciless pursuit and wholesale slaughter by the makers of butterfly pictures. The numbers thus annually destroyed are almost incredible. I have known 250 peacocks used in the construction of an elephant, and upwards of 500 *Vanessa Urticæ* in the figure of a crocodile three feet long! *Galathea* was an especial favorite with the tribe; a portrait of Lord Brougham in butterflies, the checked trousers depicted by *Galathea's* wings, is considered a very clever work of art!—E. BIRCHALL, in *Newman's Entomologist*.

Potery.

THE QUILL.

BY THE EDITOR.

Before all pens of steel or gold,
Give me a grey goose quill;
Ready to move, easy to hold,
And pliant to your will.

'Tis a nimble, light, and airy thing,
Plucked from a downy pinion;
And suited well afar to wing,
Truth, fact, and sage opinion.

Over the page it swiftly goes,
From side to side in a trice;
Fleet as a sleigh o'er beaten snows,
Or a skater on the ice.

It never runs against a snag,
Like pens of nettle made;
And throws them all, what'er their brag,
Completely in the shade.

Give pens of steel to business clerks,
And secretaries trim;
Who write abjuring twists and quirks,
In letters stiff and grim.

82/100 Give pens of gold to love-lorn swains,
And sentimental misses;
Dapperly things to note their pains,
And register their blisses.

But give to me, howe'er uncouth,
A good old-fashioned quill;
My trusty friend in early youth,
And loved companion still.