

WITNESSES IN REBUTTAL.

are as responsible if they had composed and written it and put it in the press. The evidence you heard. The first witness was the complainant, C. McKiernan. His evidence was given in a straightforward manner, no doubt, and I must say he spoken very largely of his house. He keeps a bar or canteen, which is a lawful business, inasmuch as it is licensed, and he is as fully entitled to justice as any citizen. He is what is called a publican, or the keeper of a public house. The license is not only to denote revenue to the Government. The house licensee becomes a public house, to which everyone,

ON THE FAITH OF THAT LICENSE,

has a right to go. It is necessary for the interests of the community, and I have decidedly no objection to

the publication of a public notice that they shared their house with a prostitute. Therefore they would be safe in such a house. No therefore can be found with a paper if it state truth. If a newspaper states that a man had sex at home with his wife it would be a libel even if true. But with a public house it is different. If said weekly there are rows in a house, it is in the pub interest that they should be warned. Therefore, publication of true statements about a public house impossible to find anything that would be a libel. It be distressing to the feelings of the proprietor does not like to bear his place called a low room. Now what is the character of the house? It has doors by which a number of witnesses both for the prosecution and the defence that the house is the meeting place of all kinds—'Water rats,' 'Sunshine Gang,' 'Blacklegs,' and numbers of the 'Black Gang.'

THE SCUM OF ALL THE CITY

collects there, according to some of the evidence given by Mr. McKiernan. Mr. McKiernan tells us in the advertising sheet

Maclaren objected, and the objection by the Court.

published that no questions are asked. It is the sense that when the police want bad character go to that house to look for them and often find them. His hotel, he tells us, is equal to the best for his kind.

INVENTED SOME CORDIAL REMEDY
for any who may fall ill. He has also a room convenient to the bar, for those who are over the liquor they have drunk, where they may lie there recover, if not their money, at all events senses. You might find there in the daytime sixteen men lying drunk, whose only pillow of support was the legs of the table. At one o'clock at some of the witness' tables, you might see men, dressed with black eyes, and fighting about the door. Last witness but one told you that he was police the house and that about once a week there was a row. No doubt he tries to keep the peace as well he can. No doubt he must be sometimes

HAS TO BE GIVE BLOWN,

admitted by the prosecutor this trial advertisement, but the prosecutor app

The men go there because they can get food there cheaply as possible and liquor at a proportionate

In his advertisement the complainant gives a de-

any would consider it an abuse of

tion of his house, which is borne out by evidence which we may consider a pretty correct one.

to make use of a trial
as an advertisement, a rather better
than the first one. The document

ceives everyone who has the money to pay him.

was, perhaps, a mistake in using the

THE CITY SOLICITOR OF WINNIPEG has given his opinion on the question of the by-

HOW TO GROW TURNIPS.

The object of this article is not to discuss the wisdom of turnip-growing, in regard to which the writer has grave doubts, but to supply information to some correspondents of the WITNESS who have asked for directions as to the *modus operandi* of turnip culture. What is first and most required in order to raise a good crop of turnips is rich, mellow soil. They may be used to advantage in improving poor land, but in this case they are ploughed under or fed off by sheep, and not allowed to come to maturity. To obtain a good crop of ripened bulbs, choose the best bit of land available, and prepare it in such a manner as to make it very friable and rich. It is not necessary to use artificial or expensive manures. Plenty of good barn-yard dung is all that is necessary. By good barn-yard dung is meant, not that mixture of rotten straw and the droppings of animals fed on straw, which is too often dignified by farmers with the name of manure, but which is made from the litter of animals that have been well fed. It is, no doubt, better to apply the manure the previous fall, but this is seldom practicable. Most farmers have no stock of manure ahead, and must therefore use on the turnip ground the previous winter's make. The land, however, should be ploughed the previous fall. In the case of clay soil this may be said to be essential to the best results, for there is no pulverizer of stiff land to compare with Jack Frost. If the ground has been ploughed in the fall, it need not be meddled with until after the hurry of spring work is over. About the last of May it should be ploughed, harrowed and rolled, then left for a week or two in order to give time for the seeds of weeds to sprout. The land should then be thoroughly worked with the plough, harrow, cultivator and roller, until it is fine and loose, as a mellow seed bed is of the first importance. Most turnip-growers spread the manure as equally as possible all over the field, but some prefer to open out drills, spread the manure in the drills, then close them and sow upon the top. This plan is more trouble, but it brings the manure directly under the plants to be fed by it, and is thought by many to secure a larger crop. Care should be taken if the soil is of a nature likely to bake, that it be never worked when wet. To prepare for sowing, mark out the land in drills from twenty-six to thirty inches apart. The wider distance is to be preferred, and the best implement for drill-making is a double-mould-board plough. A roller should be passed over the drills lengthwise before sowing, to flatten the drills, make them more solid, and secure an even depth of sowing. Turnips may be grown on the level, and some think they are less liable to suffer from drought on this plan. But they are easier worked in raised drills, and the horse-hoe can be used sooner, without injury to the plants. It is very slow back-aching work to sow turnips by hand, therefore some kind of drill should be used. A one-horse drill, sowing two rows at once, is the most convenient. It is good policy to sow just after a shower, while the ground is yet damp. From the 15th to the 25th of June is the time to sow, but if there are unforeseen hindrances later will do. Good crops are often raised from seed not got in until early in July. Sometimes the fly destroys the first sowing. In this case, "try, try again" is the rule; in fact, sow till you get a "braid." Two pounds of seed to the acre are usually sown—far less would be sufficient if the greater proportion of the seed grew; but the extra cost of a little additional seed is not much. As soon as the young plants are large enough they must be thinned, and it is well not to leave this too long. Thinning is done with a hoe, from seven to nine inches wide, and it should be straight in the head, so that it can be both pushed and pulled in the process of thinning. A skilful turnip-hoe will strike the hoe across the drill, cutting out the width of the hoe and leaving only one plant in a place. In this way considerable ground can be got over in a day. Inexperienced turnip-growers are apt to leave the plants too thick. They should never be less than nine inches apart, and a foot is better. The wider the spaces, the bigger the bulbs will be, and the more easily is the crop harvested. In thinning the strongest plants should be selected, even if it leaves wider spaces to do this. It does no damage to have the soil well stirred, and there is no cause for alarm if the young plants fall over. They will stand some rough handling of this sort and soon recover. It is well to hand-hoe the crop twice. After that the horse-hoe should be kept busy. Once a week is not too often to use the horse-hoe until the plants grow too large to admit of its passage without injury. The best mode of harvesting turnips is to chop off the tops with a sharp hoe; then plough out the bulbs, taking the mould-board off the plough for this job. Storage is best done in a cellar. If there be one under a driving-house or barn, with trap-doors in the floor, it will be found very convenient; and a sort of grate or riddle may easily be contrived to run them in, so as to clear them of dirt on their way to the cellar. The less dirt there is clinging to them, the better they will keep. During mild weather, before the final setting in of winter, all the cellar windows should be kept open to prevent the turnips heating. If the cellar room is deficient they may be safely stored in pits. Dig a trench four feet wide and eight or ten inches deep. Fill in and shape up to a point, cover with six or eight inches of straw, and about the same thickness of earth. Leave the top open six inches wide, and cover with wide boards to shed the rain. Turnips should be taken out of the pits early in spring and put into the barn.

FARMERS' REVIEW.

HINTS FOR THE WORK OF THE MONTH.

The *American Agriculturist* for May says it is a very busy month, and there is so much work crowded into it that a farmer is in danger of being in a hurry. Every hour of work should be so planned that it will be most effectual, and this requires considerable thought in order to do the most urgent and important work first, and leave undone those things which may be done almost as well by and by. As we sow so we reap, and as this is the month of sowing, the way in which we work should determine what the harvest of the year shall be. Keep pushing on, but with a plan.

Labor.—It must be admitted by every one familiar with farm work, that the labor problem is a difficult one, and it may fairly, from its importance, claim the first consultation in deciding upon the plan of operations for the year. The largest possible crops may not return a profit, if the labor for their production has been well planned. One of the most important advantages obtained from a systematic rotation of crops, consists in the judicious distribution of labor throughout the year so that there may not be a surplus at one time, and a deficiency at another that will require the employing of extra hands at the highest wages.

Corn.—In the Northern and Western States, corn planting will be the leading occupation of the month, but this should not prevent a fair share of attention to other crops that will be needed as a reserve when pastures are getting short, as well as to furnish a variety of feed for winter's use. A sowing in high condition, and thoroughly prepared, will give the best promise of a good-paying crop of Indian Corn. The previous cropping of the soil will have an influence upon the crop, which is nearly as important as the immediate application of manures. A good clover sod, or grain, or a root crop, immediately after a fair crop of clover, may be followed by corn with a good prospect of success.

Ploughing.—The ploughing, and all subsequent preparations of the soil for the seed, should be done in the best possible manner. In turning a sod for corn, any breaks or "balks" in the work will prove an annoyance in after cultivation, and should be avoided.

Manures.—Corn, unlike the other cereals, will bear the direct application of manure in liberal quantities. For immediate results, well rotted manures are always best, but that taken unfermented from the barn-yard may be applied to corn. Long manure may be spread under while root manure may be spread upon the surface and worked into the soil by the harrow and cultivator.

The Time of Planting Corn will of course vary with the locality, but it will be better, as a rule, to secure a thorough preparation of the soil before putting in the seed, even if it somewhat delays the time of planting. Late planted corn, in a warm well pulverized soil will usually take the place of early corn, which has been struggling from an early start under unfavorable conditions.

Insects.—The Potato Beetle has become such an abundant and troublesome pest that it should be given no quarter—not even from the start. By combined effort in the early portion of the season, such as was done in the case of the Colorado beetle, the pest may be kept in check and thus do very little damage. Paris Green has been so long and successfully employed that it is scarcely necessary to explain its mode of application. Suffice it to say that the liquid method is the one now generally practiced, that is, mix the Paris Green with water and sprinkle in upon the vines. A coffee-pot may be converted into a sprayer by providing the spout with an extension and a rose at the end. The only source of danger is in the careless handling, and the poison should be kept and used with a full knowledge of its nature.

Hills or Drills.—On clean land drills may be made to best returns, but if weeds are plenty, hills will be better, as they allow of cultivation in two directions.

Seed about which there is any doubt, should be tested before planting to ascertain whether it will grow. Badly kept seed often causes disappointment from its failure to germinate.

Manure may be sown this month. Our practice has been to sow in drills thirty inches apart, using six pounds of seed per acre. A liberal supply of seed is required to secure an even stand, and the plants should be thinned by striking a broad hoe directly across the drills so that single plants will stand twelve to sixteen inches apart. Root crops are often a failure from defective thinning.

Clover.—An early sowing of clover to settle the roots that have been raised by frost will be especially appropriate after the open winter. It will be better, as they allow of cultivation in two directions.

Meadows.—Pick up any stones that may have been raised above the surface from the ploughing of the fall. The roller may be used to bring the surface into good shape for the mowing. Meadows are frequently injured by the tread of cattle before the ground is fairly settled. The grazing of meadows in spring is at the expense of the hay crop. It is better to keep cattle in the barn until the pastures are ready to furnish them a full ration.

Cow Peas, this great fodder crop of the Southern States, which in renovating land, and in the place of clover, is worthy of more attention than it has yet had from northern farmers. Though we can not plow under two crops the same season, we can easily get one, and a heavy one, whether for feeding or for turning under. Two bushels of seed to the acre, and plowed under with a shallow harrow, is the best quantity. A note of method practiced at the South is to put in the seed, the last hoeing of a field of corn, and as soon as the corn is off of the ground the pea crop is plowed under.

Jerusalem Artichokes are growing in favor; they are relished by nearly all domestic animals. They may be left in the ground all winter, and when dug in early spring are crisp and fresh and the most acceptable change in the feed. The roller may be used to bring the surface into good shape for the mowing. Meadows are frequently injured by the tread of cattle before the ground is fairly settled. The grazing of meadows in spring is at the expense of the hay crop. It is better to keep cattle in the barn until the pastures are ready to furnish them a full ration.

Sorghum.—The introduction of the early Amber Corn, has again turned the attention of farmers to raising the crop. It is sweet, and no doubt many will make a trial. It has never grown Sorghum, or even seen it growing. As the Amber is evidently vastly superior to the older varieties, to avoid disappointment, be sure to get seed of the true sort. Seedsmen of good reputation, and the makers of sugar machinery, can supply it.

The Seed, to make sure of its good quality should be tested, by sowing 20 or more seeds in a box of earth kept in a warm place, as the kitchen window, and noting the number that germinate.

Land for Sorghum should be such as would produce a good crop of corn, and prepared in a similar manner. The ground for early Amber is checked off 3 feet each way, taking care to check it regularly, so that the crop may be easily worked both ways; with these distances, about two pounds of seed to the acre will be required. By "hills," no elevation of the ground is meant, but the term is in common use for the spot, or place for the seed. For Sorghum the ground should be level. About 10 or 12 seeds are to be dropped in a place, and covered.

Early Cultivation is necessary. The time for planting is the same as for corn, or when the soil has become sufficiently warm to allow the seed to germinate at once. Observe that the plant, when it first appears, looks so much like grass, that a careless hand might take it for a weed, and pull it out. Success with the seedling depends upon giving the plants an advantage over the weeds at the start, and to do this, cultivation should begin as soon as the rows can be seen. Whatever implements are used for the corn crop, may be used to till the Sorghum, but hand-hoeing will be necessary at first. At the second working of the crop, thin out to 5, or at most 3 stalks in a hill. When the plants get to be 3 feet high, the crop is left to itself until it is time for cutting the canes.

Manure.—None of this valuable substance should go to waste. Any manure scattered over the yards should be raked into a heap and exposed to rain, or put on the field.

Sheep.—Sheep should be tagged before being put to grass. Dry ewes may be fattened, and marketed as soon as possible. Lambs that

are for early market, will need the best of care and extra feed. The best way to kill ticks is to dip the lambs shortly after the sheep are sheared in Tobacco Water to which Sulphur is added.

Washing Sheep.—A deduction of about 1/3 is made by the wool buyers for all unwashed fleeces, and this is right if the washing is properly done. Take it all in all it is best to wash the sheep, though there may be cases where it is not convenient, expedient, or even safe.

Live Stock.—Keep live stock of all kinds in a thriving condition. The change from hay to grass is critical, often resulting in loss of condition.

Crows.—These birds are in the main the farmer's friends; but at just this time when the corn is coming up it is hard to think of Crows as great lovers of young corn, but for most of the year they feed on insects that are injurious. Drive them off the corn field, but it is not wise to kill them.

Machinery.—See that all hay and harvesting machines and implements are in good condition for service, that they may be ready when wanted. If any part needs replacing, procure these well in advance of the time when they will be needed for use.

NOTES ON ORCHARD AND GARDEN WORK.

Planting should be as early as possible this month be finished; but trees that have been carefully heeled-in may be set safely for some time to come.

Grafting can be done now, but great care is necessary. As the bark peels easily at this season it should be cut through with a knife, and the saw made to follow the cut, otherwise the bark will be peeled and a bad wound made. It is not best to remove all the buds from the stock before the graft starts, as there will then be no inducement for the sap to flow upwards. After the union of the graft is made and the buds upon it have started, all those upon the stock below should be removed, in order that the graft may have the full supply of sap.

Lettuce.—An increase of insect life will come with the warmer growing weather. The eggs of the

Tom Caterpillar will hatch into the "worms" which will begin to ravage upon the foliage. Fortunately these destructive caterpillars put up "a sign," without which they might escape notice. They pitch their "tents" at once, and though these are at first small they may be readily seen in the early morning when the dew makes them conspicuous. Take the tent and the family is "at home" and crush it under foot. Various devices are suggested for this, but the hand, with or without a glove, is the best. For the higher limbs a pole with a swab attached may be used.

Curelets of the plum stings the fruit while it is quite small. The trees should be jarred early in the morning, beginning when they are just passing out of flower, and the sluggish beetles caught on a sheet opened beneath the tree for the purpose. Afterwards those caught on the sheet should be burned.

Borers.—Their presence is known by the sawdust they make. The only effectual method of reaching them is by probing with a wire; cutting the tree with a knife as close as may be found necessary.

Canker Worms.—Bands of stiff paper put around the trunks upon which is smeared a ring of tar or printer's ink, will keep the wingless females from ascending the trees. The bands will need new coats of tar or printer's ink now and then.

Plant Lice, which often crowd upon the growing tips of the branches of cherry and other fruit trees, are removed by syringing with tobacco water.

Thinning Fruit.—The sooner fruit is thinned after it has set, the better it is for the tree, as all growth of fruit costs effort for the tree to make and is therefore exhaustive. No one who desires the choicest fruit will fail to thin an overloaded tree.

Blight is a quick comer which gives no warning. The best that can be done is to cut away the portion "struck" by the blight. If the tree is badly affected it is best to remove it entirely.

Seed Beds of fruit and forest trees need close attention to keep the soil loose and the weeds from establishing themselves. The beds, especially of evergreens, will need shelter from the hot sun, which may be provided by a lattice work of laths, or brush may be used but less convenient in weeding.

Planting in Orchards.—There is a general reluctance to give up the soil of the orchard entirely to the trees. While the orchard is young it is best to cultivate it thoroughly, and grow crops like potatoes, roots, &c., can be grown as a present pay for the trouble, but as the trees get larger and shade the ground, nothing can be got from the soil except the orchard. It is a good practice to plant turnips in the orchard in clover sown for the purpose, as it is one of the best methods of enriching the soil and at the same time destroying insects.

Blackberries and Raspberries may be planted, but as they start early they should have been set out as soon as possible. Stakes or trellises should be provided to which the canes are to be secured. Novices fail to understand that it is the canes that grow this year that are to bear the fruit next season. All suckers are to be treated as weeds unless new plants are desired, when the best ones may be saved.

Currants and Gooseberries.—Cultivate the ground thoroughly and give a good mulch a little later in the season. Watch for the "worms" which come from eggs laid upon the under side of the lower leaves, and use White Hellebore, a tablespoonful of the powder to a pailful of water. It is best to add the Hellebore with a little hot water before adding it to the water in the pail or watering pot.

Strawberries.—Keep the soil free from weeds and mallow. So soon as the fruit is well set give the bed a mulch, which will keep the berries from the soil. Hand pull any large weeds that may appear. Set out new beds, if plants are to be had.

Grapes.—One healthy, vigorous cane upon a newly set vine is enough. Tie it up securely to a support. Vines are trained so variously that specific directions cannot be given. Whatever the method of training it should keep in view and provide for the crop of next year. Generally the fruit-bearing shoot of the present year should be stopped; that is, have their further growth in length prevented, by pinching off the end of the shoot at one, two or three leaves beyond the uppermost cluster of grapes. This should be done very early, as soon as the clusters of grapes are mistaken for young grapes and the young leaves can be distinctly seen.

KITCHEN AND MARKET GARDEN.

Work is apt to come with a rush; there are so many different things to attend to, that unless the work is properly planned, much time will be lost. It happens with many who make a change of residence, that they cannot begin gardening until the first of May. These have been obliged to delay the planting of these crops that should be in the ground long before this time. The soil will permit, and will be somewhat behindhand; but with extra effort, and that at once, they may be able to get abreast with the season with most of the vegetables of the garden.

Asparagus should be cut with a strong, round-pointed knife, and with care that the neighboring younger shoots of buds may not be injured. Cut the bed clean, leaving no small shoots to grow now.

Beans.—Plant the bush sorts in drills eight inches apart, as soon as there is no danger of frost. The Lima sort is not so in until the old rains are over and the ground well warmed. Set the poles four feet apart, and sow the seed in a row of five beans to each pole, thrusting the seed into the soil with the eye downward. See that the poles are firmly set.

Beta.—Thin the early sown sorts as soon as

large enough; the thinnings may be used for "greens." Sow every fortnight until July, and in drills fifteen inches apart. Put in Long Blood for winter use.

Cabbage.—The hoe and cultivator should keep all weeds from the early crop. Sow the seed in open ground for plants for the late crop.

Corn.—Sow the Early Horn for early use; for the winter supply wait until the ground is warm.

Corn.—Plant so soon as the frosts are past, and continue to do so at intervals of a week or ten days, to have a supply of this excellent vegetable throughout the season. "Triumph" is one of the best sorts.

Cucumbers.—Plants that have been started in frames should go out, but protect them if cold nights come. Seed for winter crop may be sown in the garden so soon as the ground is warm and dry.

Lettuce.—Cultivate the early plants; set out new plants from hot-bed for succession. Seed may soon be sown in the open ground for the late crop.

Onions.—Clean culture is necessary with this crop. The soil needs frequent stirring, and hand weeding will be required in the rows.

Peas.—Sow a succession for constant table use. The large sorts will need brush.

Peppers.—Set out plants when the weather has become settled. A few should be in every garden.

Potatoes.—Plant as soon as possible and keep clean of weeds by frequent hoeing and stirring the soil. Use Paris Green or London Purple for the "bugs" as soon as they appear.

Radishes.—Plant as soon as possible and keep clean of weeds by frequent hoeing and stirring the soil. Use Paris Green or London Purple for the "bugs" as soon as they appear.

Spinach.—Keep the first crop clear of weeds, and sow every week or ten days during the month.

Tomatoes.—Put in hills four feet each way so soon as all danger of frosts is past. Provide some support for the plants before they fall over. A little straw or brush to keep the fruit from the soil may be used if the plants are not supported.

Turnips.—The early sowings should be kept clear of weeds, and sprinkled with lime or plaster if the Black Fly appears. Sow seed for a late crop.

Tools of all sorts required in the garden should always be in good order and at hand; this is important, therefore have a place for every tool, and when not in use let it always be found there.

THAT GRAPE VINE.

Two years ago knowing that there must be few, if any, among our readers, who could not find a place for a grape vine, we insisted that one vine at least, should be planted, wherever there was a bit of soil, no matter how small, in the back of a village or city back-yard. In a series of articles headed, "One Grape Vine," we gave minute directions for its planting, and showed how it would grow through the summer, and what should be done with it. That these articles led to the planting of a great many vines, our correspondence shows, and even now we have letters, asking advice as to that "One Grape Vine." The greatest number of letters at the present season, are with regard to pruning and training, and they especially ask as to the treatment of old and neglected vines.

In the beginning of the disease remove the shoots, and rasp down the heels and edges around the buds, so that the bearing of the vine is weight comes entirely on the sole and foot; then place the foot in a tub of warm water, during half an hour, and repeat this three or four times daily during two days; thereafter apply hog's lard or some softening ointment to the feet daily. Leave the animal with out shoes in a roomy box-stall or comfortable shed with plenty of bedding. To keep such an animal tied up in a stall with its clinging or sloping floor is objectionable; he must have liberty to frequently change his position, which cannot be afforded in a single stall. As soon as the shoes have been removed, and the feet pared as directed, the horse should be given a laxative dose of medicine; for which purpose dissolve from one to one and a half pounds of Glauber's salts in a quart of hot water, adding to the solution an ounce of ground ginger, and give the whole in one dose; then give every hour, during six hours, ten to fifteen drops of tincture of aconite; after this, during the next three days, give, morning, noon and evening, each time, four ounces of solution of acetate of ammonia with an ounce of sweet spirit of nitre, in half a pint of cold water. If after three or four days, much pain and tenderness should yet remain, a fly-blister may be applied round the coronet, to the space of three fingers' width. The horse should be tied so as to prevent his interfering with the blister (by rubbing it with his mouth) during six hours after the application of the blister. From the beginning he should be kept quiet, in a comfortable, well-ventilated place, and be well blanketed, to excite perspiration; food, which should only be given in limited quantity, should be of a loosening nature, such as a mixture of steam-boiled oats, bran, and flaxseed-meal, together with only very little hay, which should not be timothy. When the urgent symptoms have

large or small. This branch grew last season, and is just as it was left when the leaves dropped last fall, and as it will be beforegrowth starts this spring. The vine is seen to be in sections or joints; there is a bud, a piece of vine longer or shorter, according to the variety, the luxuriance of growth, then another bud, with a piece of vine, and so on, for the whole length. Observe that no two successive buds are upon the same side of the vine; if bud No. 1 is on the right side, No. 2 will be at the left side; No. 3 right, and so on alternating for the whole length. Unless they have been removed, or accidentally broken off, there will be open each bud, a tendril, and a small remnant of a stem which bore a cluster the season before. These points where the buds are placed, are properly joints, but we commonly give that name to the portion of vine between two buds, and speak of a variety as "joint-jointed" or "long jointed." The botanical name for this point of the stem where the bud is placed, is *node*—a not difficult name, and one that has a definite application. Every branch of vine a year old, or cane, as it is called, has its *nodes*, with a bud and a tendril or remains of a cluster at each, and these nodes are separated by longer or shorter joints. When the vine starts in figure 1, the buds will burst open, and a small tendril shoot will begin to lengthen. Examine this young growth; when but a few inches long it will be seen to have nodes and internodes; and at each node a leaf, opposite which is a tendril or a cluster of minute buds, which look like and often take for young grapes.

If the cane (figure 1) is not young, but allowed to grow just as it is, it will soon appear as in figure 2. A shoot coming from each bud, the uppermost shoots, the tendency of the sap being toward these, will be the most vigorous and will grow away rapidly, robbing the lower buds of life. The lower shoots will be small, and weaker, and the buds at the lowest buds may not start at all. It will be seen that if a vine is left to itself year after year, the most vigorous shoots, those which bear the fruit, will be further and further away from the root, and the vine will become a tangled mass of weak stems. If instead of allowing the vine (figure 1) to have its own way, we cut it off where the cross line is placed, all the nutrient that would have gone to several shoots will go to the two that remain, and we shall have instead of a vine, like figure 2, one as in figure 3, where there is one strong shoot bearing the fruit, and a few down where they are within reach and being fed, both leaves and fruit, and the shoot itself will be altogether larger, and more vigorous and healthy. If instead of cutting off figure 1, as here described, we bend it down and fasten it in a horizontal position before growth begins, we shall change the direction of the shoots from a more equal distribution of food—or sap—will start more alike; the uppermost can not rob the others. In practice, in making an arm in this way, all the buds are not allowed to grow, as they would be too much crowded; but this diagram is merely to illustrate the principle. Let us now suppose that instead of cutting figure 1 back, as in figure 3, or bending it down as in figure 4, we want our vine higher—as soon as the buds have started and have grown an inch or two, we rub or break off all but the two or three topmost buds, as the case may be, and the vine from these may be carried out horizontally, as in figure 5, or continued in an upright direction as we may prefer. These illustrations are sufficient to show how easily a vine may be controlled and placed where we wish it. Observe that each shoot is a repetition of the original cane, and that each shoot, when ripe in the fall, will become a cane like figure 1. By fixing these points in the mind: that the growing vine is made up of a succession of joints, furnished at intervals with a leaf and opposite this a tendril or a cluster of grapes, and that these alternate, the matter becomes very simple. The management of the growing shoots must be left for another month.

DUCK RAISING IN FRANCE.

In the department of Lot, Ard, Aude, Ariège, Hérault, Gard, Lozère, Ardèche, and Haute Garonne, in the south of France, as well as in Normandy in the north, duck-keeping is carried on to an immense extent, and with very great profit. In Normandy we find three species, besides a plenty of ducks of the common sort; there is the white tufted duck, which is extremely valued for its fecundity, its precocity, and its size; the so-called Rouen duck or canard barboteur, and the splendid duck of Dindard, which makes its appearance in the Parisian markets. In the south a very fine duck is produced by crossing the Rouen with the Muscovy. These ducks are very large and handsome, and lay a great number of eggs, and it would be quite worth our while to introduce them into this country. It is a great mistake to suppose that water beyond what may suffice for drinking and an occasional bath is in any way necessary for ducks. On the contrary, in those parts of France we speak of, they are reared for the most part in yards where they have nothing more than a tub sunk in the ground, or even a earthen pan, to supply all their wants. The great point is to have the ducklings hatched early, ready for the Christmas market, and accordingly in the region where this industry specially prevails, the warmest corner of the cottage is dedicated to them, and they are tended almost as carefully as children, and for the few weeks of their existence—for to be really profitable they must be fattened quickly—are royally fed; and in this their owner finds his profit; and expects to receive ten or twelve francs for each of them at eight weeks old.

Vorard tells us that, having made experiments at Autouil as to the respective cost of raising ducks and chickens, he found that while it required two hundred and twenty francs to make each of the latter fit for table, the duck at two months old and equally fat had only cost fifty-five francs and both had been kept in the same yard—a fact which shows how much might be done if only the poultry were reared more intelligently studied, and if it were possible, to induce our rural population to devote themselves to this industry. *Jane Chesney, in Macmillan's Mag.*

SO-CALLED FOUNDER.

In the beginning of the disease remove the shoes, and rasp down the heels and edges around the buds, so that the bearing of the vine is weight comes entirely on the sole and foot; then place the foot in a tub of warm water, during half an hour, and repeat this three or four times daily during two days; thereafter apply hog's lard or some softening ointment to the feet daily. Leave the animal with out shoes in a roomy box-stall or comfortable shed with plenty of bedding. To keep such an animal tied up in a stall with its clinging or sloping floor is objectionable; he must have liberty to frequently change his position, which cannot be afforded in a single stall. As soon as the shoes have been removed, and the feet pared as directed, the horse should be given a laxative dose of medicine; for which purpose dissolve from one to one and a half pounds of Glauber's salts in a quart of hot water, adding to the solution an ounce of ground ginger, and give the whole in one dose; then give every hour, during six hours, ten to fifteen drops of tincture of aconite; after this, during the next three days, give, morning, noon and evening, each time, four ounces of solution of acetate of ammonia with an ounce of sweet spirit of nitre, in half a pint of cold water. If after three or four days, much pain and tenderness should yet remain, a fly-blister may be applied round the coronet, to the space of three fingers' width. The horse should be tied so as to prevent his interfering with the blister (by rubbing it with his mouth) during six hours after the application of the blister. From the beginning he should be kept quiet, in a comfortable, well-ventilated place, and be well blanketed, to excite perspiration; food, which should only be given in limited quantity, should be of a loosening nature, such as a mixture of steam-boiled oats, bran, and flaxseed-meal, together with only very little hay, which should not be timothy. When the urgent symptoms have

large or small. This branch grew last season, and is just as it was left when the leaves dropped last fall, and as it will be beforegrowth starts this spring. The vine is seen to be in sections or joints; there is a bud, a piece of vine longer or shorter, according to the variety, the luxuriance of growth, then another bud, with a piece of vine, and so on, for the whole length. Observe that no two successive buds are upon the same side of the vine; if bud No. 1 is on the right side, No. 2 will be at the left side; No. 3 right, and so on alternating for the whole length. Unless they have been removed, or accidentally broken off, there will be open each bud, a tendril, and a small remnant of a stem which bore a cluster the season before. These points where the buds are placed, are properly joints, but we commonly give that name to the portion of vine between two buds, and speak of a variety as "joint-jointed" or "long jointed." The botanical name for this point of the stem where the bud is placed, is *node*—a not difficult name, and one that has a definite application. Every branch of vine a year old, or cane, as it is called, has its *nodes*, with a bud and a tendril or remains of a cluster at each, and these nodes are separated by longer or shorter joints. When the vine starts in figure 1, the buds will burst open, and a small tendril shoot will begin to lengthen. Examine this young growth; when but a few inches long it will be seen to have nodes and internodes; and at each node a leaf, opposite which is a tendril or a cluster of minute buds, which look like and often take for young grapes.

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COMMERCIAL.

Montreal Witness Office, April 27.
—Greenbacks bought at 40 00 cts; sold at 40 00 cts.
Silver, 6 to 8.
P. D. BROWN & Co., Brokers.
124 J. A. Jones street St.

THE STATE OF TRADE.

The dull season which invariably precedes the opening of navigation has set in, as Sydney Smith said of summer, with evenness and severity. In every branch of the wholesale trade business is reported very dull since the beginning of this week. The small business which characterized the week before appears to end with that week, and the whole trade has been able to do but to prepare for the business which is expected to follow the opening of navigation. The Grand Trunk has made their first reduction of freight rates, which comes into operation to-day and consequently a large amount of heavy goods brought by Western merchants some time ago for future delivery will begin to move out, and will give our Iron and Hardware trade a busy appearance. In consequence of reduction of ship's expenses, it being now generally accepted that the Lake St. Peter debt will be assumed by the Government, and that the tonnage duty will be accordingly abolished, this port looks for an unprecedentedly large trade this year. It is hoped that we will be more successful in competing with United States routes for the produce carrying trade from the West. Unusual preparations are also being made for cattle shipping to Great Britain, and it is expected that this growing trade will show a large increase over last year. These preparations already give our ports a very lively appearance. On the Corn Exchange business is at a standstill. There is not the slightest enquiry either for spot or for future delivery of either flour or grain. The weakening of the English market consequent upon the good prospect of a grain crop next year in Great Britain and on the continent, has of course brought the Chicago market down from the altitude at which it continued up to a couple of weeks ago. That market having been almost sold out, but perhaps decidedly broken would be better, buyers here are not inclined to do anything at present. Cargoes on passage are unusually numerous, and a further fall is confidently looked for. At this market, therefore, buyers are offering their bids at 10 to 15 cents per barrel below last week's prices without, however, effecting business. Superiors are freely offered at \$8.90, and the last sale of choice Strong Bakers reported was made at \$8.55. Spring Extra sold at \$8.90. The receipts of flour by railway for the week ending 10th April, were 18,161 barrels. The total receipts from 1st January to 21st April were 32,078 barrels, against 174,484 barrels in the corresponding date in 1879, being a decrease of \$9,400 barrels. The local shipments from Portland and other channels for the week ending 21st April were 919 barrels. The total shipments from 1st January to 21st April, 1880, were 39,663 barrels, against 75,131 barrels at the corresponding date in 1879, being a decrease of 35,468 barrels.

For what the local enquiry for milling purposes has dropped off in consequence of the millers' general desire being fully supplied and the lowering tendency prevents any business of any but the most hand to mouth character. For May delivery, Canada Spring is held at 135 to 137 1/2. The receipts for the week ending 21st April, were 3,200 bushels. The total receipts from 1st January to 21st April were 49,325 bushels, against 742,065 bushels at the corresponding date in 1879, being a decrease of 272,680 bushels. The local shipments from Portland and other channels for the week ending 14th April were 711 bushels. The total shipments from 1st January to 21st April, 1880, were 354,094 bushels, against 740,059 bushels at the corresponding date in 1879, being a decrease of 385,965 bushels.

Poss are held here at \$14 to \$15 for arrival in May, and some sales of corn have made for May delivery at 45 to 47 1/2 in bond. Oats are again about 32c per 32 lb for spot, and 34c for May delivery. The Provision market has been active. As stocks increase with increased receipts the demand is not proportionately so large as early in the season, and the consequence has been as rapid and decided decline in prices. Good fresh butter brings now about 12c to 12 1/2, while a week ago 27c to 28c was paid. The receipts of butter for the week ending 21st April, were 423 packages, and shipments 10 packages. In a week or two extra butter will be coming forward. Cheese has advanced about four shillings per cwt. in England, but the market here is nominal. The receipts were 7 boxes, shipment 78 boxes.

DEET GOODS.—There is no life in this branch of the trade this week, in the general report. Up to the close of last week a small business was done, but this week only a very few small buyers have been in town, and there have been no orders for the week. Orders are better than usual for the reason that retailers are pretty well stocked up with cotton goods, so that their purchases in this line are small. The city trade is just beginning, and it is expected that it will show some improvement. Travelers will be out by the beginning of next month, and reports until then of country trade from this source will be limited. It is generally expected that the demand for the week will be a large one for farmers, this was to be looked for.

HIDES.—Green Butchers are selling at the same prices which ruled last week, namely No. 1, \$1.50; No. 2, \$2.00; and No. 3, \$2.50. Calves are sold at 14c per lb. Sheepskins sell at \$3.50 to \$2.50, while some dealers quote \$2.50 and \$3. Lambskins, 20c to 30c each.

WOOL.—The market has been very quiet but firm. Greasy Cape is quoted at 22c to 23c, and Canada pulled unwashed, at 25c to 27c.

PETROLEUM.—Business is dull in consequence of the bad roads, and so change is looked for now until for the opening of navigation. Prices are unchanged. Canada, 12 1/2c; part cwt, 14c to 14 1/2c; single barrel, 14 1/2c to 15c.

LEATHERS.—There is no change in prices since last week. A satisfactory business is being done at current rates which are very firm. There is no indication of any immediate advance in prices though the opinion seems general that the market will probably rise higher toward fall if not earlier.

ROOTS AND SHOES.—Shipments continue firm, and are mainly for closing up back orders. Few goods are now selling, and not much trade is expected until opening of navigation. Prices are firm, and without change.

DRUGS AND CHEMICALS.—The demand is limited mostly to filling country orders, which are coming in steadily; they are not heavy, however, and are confined to actual requirements. There is not much change to note in prices. Canada soda is a little easier, but the demand is light. In the finer drugs we have to note that opium remains firm at recent advance without any prospect of a decline. Opium is slightly easier, but the demand is light. The market for heavy chemicals shows a slightly drooping tendency, with full supplies.

ALCOHOL.—The market is very quiet, and prices are very firm. There is no indication of any immediate advance in prices though the opinion seems general that the market will probably rise higher toward fall if not earlier.

IRON AND HARDWARE.—The depression of the English market still continues in consequence of the sudden dropping of the American demand. The favorable crop prospects and the general improvement consequent upon the late temporary revival in many branches has prevented anything like a return to the former business condition. There is a general downward tendency in prices wherever they are discouraging and under business generally. Firm is offered for forward delivery at very decided reduction, while for spot, holders are comparatively firm. In manufactured iron some slight reductions in prices have been made. Sheet hardware is without change, and but few and small orders are received. A considerable amount of goods purchased for forward delivery some months ago will commence to-day as the lower freight rate of the Grand Trunk Railway are now in order.

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over sixty cents. With the market is somewhat easier for Japan, 27c to 28c for fair to ordinary, and 30c to 32c for fair to choice. In China Teas, Blacks and Greens, there is little business of moment to note.

SHOES.—Steady for Granulated at last week's prices. Yellow, for a few grades are a shade easier. Raw, however, notwithstanding the scarcity of choice, prices are fairly steady. The intelligence of a distressing drought in Jamaica is confirmed.

MASSACHUSETTS.—Barbadoes, 22c to 23c for Maracaibo; 18c to 20c for Jamaica. Rice dull, \$1.12 to \$1.45.

SPICES are without special quotable change for the week.

FRUIT.—Fruit firm for Valencia raisins, and supply light; \$2.40 to \$2.60; Layers, \$2.25 to \$2.40; Leone Muscat, \$2.40 to \$2.60. Currants, 6 to 8c.

OLIVE.—The report of the Seal fishery presents strong grounds for a successful visitation to the people along the coasts of Newfoundland, where almost all their doors large quantities of Seal have been taken, bringing relief to the distress, while the great traders with their expensive outfit have been largely unproductive. Steam Herring Seal Oil is in ordinary way 60c to 65c, and Oil, 40c to 45c.

MONTREAL STOCK MARKET.
—Published by Macdonald Bros., (Brokers).
Montreal, April 26.

Wholesale Prices.

The English headstuffs markets are quiet at present. The Chicago markets are also a tendency in sympathy. No. 2 Spring wheat closed easy on Saturday at \$1.13 for May delivery, and opened this morning at \$1.124. During the morning it advanced somewhat with slight fluctuations. Corn about steady. The local grain market is dull and quiet.

FLOUR.—Receipts, 440 bbls. The market is dull. There was a little more enquiry for Superior, but as the supply is small, it is not much affected. The price unchanged. Superior Extra, \$6.00 to \$6.05; Extra Superfine and Fancy, nominal; Spring Extra, \$5.75 to \$5.80; Spring Superfine, \$5.75 to \$5.80; Spring Bakers, \$6.50 to \$6.75; Fine, \$5 to \$5.10; Middling, \$4.25 to \$4.50; Poland, nominal; Ontario Bakers, \$4.50 to \$5.00. City Dregs, delivered, \$3.50 to \$3.20.