

## TORONTO HORTICULTURAL SOCIETY.

The Second Exhibition of the Toronto Horticultural Society came off, agreeably to a former announcement of ours, on the 17th ultimo, at the grounds of the Government House. It was by far the most creditable performance of the kind that has ever taken place in Canada; and we are informed, has given general satisfaction to all who favoured the Society with their presence. Indeed, the great display of fruits, flowers, and vegetables that were exhibited both by professional gardeners and amateurs has been the principal topic of conversation for several days subsequent to the Exhibition. If any one performance gives evidence of a highly-cultivated taste, it is that of the inhabitants of our towns and cities engaged in a praiseworthy emulation of each other in the production of the choicest ornamental and useful fruits of the season. This can best be accomplished through the agency of organized Societies, and magazines devoted partly or exclusively to the science and practice of Gardening.

The citizens of Toronto are under high obligation to the President and founder of this creditable Institution, W. B. Jarvis, Esq., who has so indefatigably devoted his time, talents, and influence in its behalf. As the Institution is established upon a sound basis, and the gardeners, without an exception, exhibit a lively interest in its success, the citizens would show evidence of their good sense if they would come forward and sustain it with their purse and influence.

We are requested to state, that, if the funds will admit of the arrangement, there will be an autumnal Exhibition, about the middle of next September. This, however, will depend altogether upon the citizens themselves. We hope an effort will be made to raise the necessary funds for the intended September Exhibition.

## THRASHING MACINES.

Those of our readers who are desirous of procuring a stationary two-horse power thrashing machine would do well to consult the machine makers of this District, who has built a machine constructed after an American pattern, and which is very justly admired by all the best farmers in the Home District. A large portion of our farmers have one attached to each of their barns, the cost being only about eighteen pounds for the

entire machine. They require but a trifling amount of skill or expense to be kept in good repair, and they will properly thrash from one hundred to one hundred and fifty bushels of good wheat in a day, of ten hours, by proper attendance. They are manufactured by Mr. Absalom Baker, in the village of New Market; Mr. Josiah Jones, in the immediate neighbourhood of the village; Mr. Edward Caldwell, Whitby, and by numerous other machine makers in various parts of the District. They have been in use in the District for about nine years, and the demand has gradually increased, so that it may now be safely said that there are some hundreds of them in use.

(Continued from the July Number.)

## AN EASY METHOD OF MANAGING BEES, IN THE MOST PROFITABLE MANNER TO THEIR OWNER.

General Observations.

The reader might have expected many things demonstrated in this work, which are omitted by design.

The structure of the worker is too well understood by every owner of bees to need a particular description. So also of the drone; and the Queen has already been sufficiently described to enable any one to select her out from among her subjects. If any further description is desired, the observer can easily satisfy himself by the use of a microscope. Every swarm of bees is composed of three classes or sorts, to wit: one Queen or female, drones or males, and a vast number of workers. The Queen is the only female in the hive, and lays all the eggs from which all the young bees are raised to replenish their colony. She possesses no authority over them, other than that of influence, which is derived from the fact that she is the mother of all the bees, and they, being endowed with instinctive knowledge of the fact that they are wholly dependent on her to propagate their species, treat her with the greatest kindness, tenderness and reverence, and manifest at all times the most sincere attachment to her by feeding and guarding her from all danger.

The government of a hive is nearer republican than any other, because it is administered in exact accordance with their nature. It is their peculiar natural instinct, which prompts them in all their actions. The Queen has no more to do with the government of the hive than the other bees, unless influence may be called government. It is found by experiment that bees will go to work, and continue their labors with perfect regularity, with a dead Queen, as long as she is confined in the hive in such a manner that the bees will keep her in motion; but as she is the only female in the hive, no eggs will be laid, no brood comb made, and no young bees raised; notwithstanding there is a plenty of drones, as there are no grubs (larvæ) in the hive to consume the pollen, the combs will be unusually loaded with bread; and the bees will finally perish by the depredations of the moths, or want of animal heat in the winter, which is generated in the hive by a populous community only. If any one is disposed to doubt on this subject, let the experiment be tried with skill, and I will be answerable for the result, to wit: Take the Queen from a first swarm (second swarms frequently have more than one Queen,) kill her, and by means of a fine wire, or strong string, suspend her in the hive; now let in the swarms; confine the bees in the hive until they have found their sovereign, and clustered about her, then give the bees liberty

to work. If the experiment ends here, entire loss will be the final result. Bees have so many admirers, they will soon dwindle away in numbers, and perish in consequence of losing so many of their companions, which are caught by the birds, and are lost by other casualties, unless they have the means of propagating their species. But there is a remedy by which the bees may be supplied with a Queen, which is more simple, though more difficult than the ordinary method. I take brood combs containing eggs and larvæ of workers only, from any hive that contains them; place the same in a drawer in its natural position; now insert this drawer into the chamber of the hive, so that the bees can have access to them and they will have a Queen in a few days. If she finds empty cells in the hive, during the breeding season, she will deposit eggs there, because it is her nature to do so; and the nature of the workers prompts them to take care and nurse all the young larvæ, labor and collect food for their sustenance, guard and protect their habitations, and do and perform all things in due obedience, not to the commands of the Queen, but to their own peculiar instinct.

The drone is probably the male bee, notwithstanding the sexual union was never witnessed by any man; yet so many experiments have been tried, and observations made, that but little doubt can be entertained of its truth. That the sexual intercourse takes place high in the air, is highly probable from the fact that I have seen an attempt at copulation by the drone with the Queen on their return from an excursion in the air, before she could enter the hive, and other insects of the fly tribe do copulate in the air, when on the wing, as I have repeatedly seen. That the drone is the male bee, is probable from the fact that the drones are not all killed at once, but at least one in each hive is permitted to live several months after the general massacre.

I examined four swarms, whose colonies were strong and numerous, three months after the general massacre of the drones, and in three hives I found one drone each; the other was probably overlooked, as the bees were thrown into the fire as fast as they were examined. But there are many mysterious things concerning them, and much might be written to little purpose; and as it is designed to go no further in illustrations than is necessary to aid the apian in good management, many little speculations have been entirely omitted in the work, and the reader is referred to the writings of Thatcher, Bonner, and Huber, who are the most voluminous and extensive writers on bees within my knowledge.

The importance of taking the Queens from all small, and late swarms, and returning them to the original stock, cannot be too much insisted upon. It constitutes a very important feature in my system of managing bees. Even first swarms that are late, had better be compelled to remain in the parent hive. The propriety of a hive of bees depends in a great degree upon their number being kept full. They are their own best defenders. Their number not only protects them from the depredations of the moth and the robberies of other swarms stronger than the animal heat which is generated in the hive by a populous community protects the combs from mould, and the bees from freezing in the coldest weather. But the apian derives another advantage by keeping his hives full of bees; he secures a larger quantity of honey from a full swarm, than from many small ones. The time for making much honey does not usually last more than 20 or 30 days in Vermont, and the greatest proportion of honey that is deposited in the hive for winter use is collected in fifteen or twenty days. This renders it very important that the attention of the old stock should not be called off from gathering honey at this time, to guard their hive from the attacks of moths to which it is left exposed, by the desertion of that part of their body which has accompanied the Queen to constitute a new swarm. Hives that are well stored with bees in the spring, swarm much earlier than feeble ones, and are able to use the best of the season to great advantage.

In speaking of the advantages of a large colony, I would not be understood to approve of the plan of those persons who so far depart from the economy of nature as to raise bees in a chamber