dadoes, rabbets, joints for boxes. drawers, etc.

These cutter heads, while fitted to the machine, are extra, but the cost is so small that anyone using the machine will not be long in getting a few knives. Four piece sections may be made with one of these cutter heads, and good work may be turned out with them. In short for general use, no more profitable investment can be made than this combined machine, with its different combinations and attachments.

Emery wheels, in size up to one inch face, by six inches in diameter, can be used to good advantage on these machines.

Read at the Nebraska Convention.

The Relation of the Honey-Bee to Horticulture.

VERY close connection exists between the two subjects, and the relation, one to the other, should be considered in all its bearings. It is evident that flowers are useful to insects, but the question arises, are the insects of any use to the flowers?

First, it is to be seen what benefit the insect is to horticulture, and then what harm, if any, the insects cause to flowers.

An ordinary flower will be taken for an example. Inside the corrolla is a set of organs called stamens. and on top of them is an organ called anther, containing a powder known as pollen, which carries the male element of the flower, or the sperm cell. In the center of the flower is another organ, or organs, called a pistil, composed of three parts, the stigma, style and ovary. The ovary is a hollow case or pod, which contains rudimentary seeds, and in which is found at the proper time the embryo sac that contains the germ-cell. To produce fruitage the sperm-cell must be brought into immediate contact with the germ-cell. The question is, how are these two elements to be brought together?

When all of the organs are found in one flower, or in the case of the one described, the process is very simple. A gentle movement of the wind after the anther has ripened will shower the potent grains of pollen down upon the receptive stigma. Soon there is found what is known 8. the pollen-tube, which, growing downward through the style, and guided by some mysterious yes unerring power, makes its way to the embryo sac. Movethus is formed the fruit and seed, in which lies beautifully folded the embryo plantlet of the future tree, bush, vine, or whatever it may be.

In some flowers the process of pollenation is more complicated. They are so constructed that the pollen cannot reach the stigma, although in the same flower. In some instances the pollen dust is so constituted as to be of no use to the pistil of the same flower, and in many flowers the stamens and pistils are not fully developed at the same time. In these and in other cases some outward agency must be looked to, to bring the two elements together. This brings up another important part of the subject. Not only pollenation is desired, but pollenation in such a way as to secure crossfertilization, preventing what is known among stockmen as "in-breeding." Here comes in the work of the bees. In visiting the flowers they carry pollen from flower to flower, and thus do for the plant what it cannot do for itself.

It has been shown by experiments that selffertilized plants, that is, fertilized by their own pollen, are generally much inferior in vigor and strength to those that are cross-fertilized. In many gardens and green-houses bees are kept for this very purpose.

In this connection, lest some one may ask why this mixing up of pollen of various plants will not create great confusion by the production of hybrids, etc., it may be stated that Aristotle observed, over 2,000 years ago, that bees visit the flowers of the 88.me species as long as they can, and this has been confirmed by later observation. The wind and other insects than bees are valuable in accomplishing cross-fertilization, but many trees and plants have to depend upon the bee.

The question now comes up, do bees ever injure fruit ? The prevailing testimony seems to be that, as a general thing, bees do not perforate flowers. The main ground of complaint has been that the bees injure the fruit itself, especially the grape. Prof. McLain, who is employed by the Government to make experiments in apiculture, has devoted considerable time to this subject. He confined a number of colonies of bees in a house, and endeavored by heat, etc., to bring about drouth, and they were brought to the stages of hunger, thirst and starvation, the test lasting forty days. Thirteen varieties of grapes were placed before them, and every opportunity afforded the bees to appease their hunger, but in no case were the bees able to pierce the skin of a sound grape, or otherwise harm it. When the skins had been cracked or ment, growth and all formation commences, and | bursted, the bees lapped and sucked the juice