

ops into drones, and the other that under ordinary treatment, produces worker bees, or undeveloped females. The latter kind of eggs, under different treatment and care, produces perfect females or queens. The queen is the principal bee of the colony, on whose well-being the prosperity of the colony depends. There is a physical resemblance between the queen and the worker-bee, which indicates that they are both of the same sex, and were produced from similar eggs, but the more perfect development of the queen is shown by a stronger frame of body. The queen is also distinguished by a larger thorax, of a rather brownish color, and a stronger and longer abdomen, which is hardly half covered by the wings at the time when she is most actively engaged in depositing eggs. Queens are reared in special cells, called queen cells, or as some writers name them, royal cells. The workers build the foundation of a queen cell as a rule at the edge of a comb, and somewhat in the shape of a small peanut, slanting downwards—into which an egg is deposited either by the queen or sometimes, as it is thought by some, carried by the worker bees from other cells, and deposited in the queen cells.

If we were to examine a colony of bees we should find the bees engaged in different occupations on the combs, some fresh from the fields discharging their loads of pollen and honey, others engaged in feeding the young. Others would be capping over cells or building new comb. If we watch a bee just from the fields, we shall probably see her remove the pollen from her legs, and place it in one of the smaller sized cells which usually serve for this purpose; then putting her head into the cell she presses the pollen down firmly. She will next proceed to another cell, and discharge into it from her honey stomach the nectar she has collected—or rather what will now be honey—the nectar which was gathered from the flowers,

having been converted into honey by a secretion derived from the salivary glands of the bee. Now let us watch the queen, and then carefully follow the various stages through which a bee passes from the egg state to the mature insect. We shall probably see the queen moving slowly over the combs surrounded by a number of workers, which are constantly touching her and offering her food. She stops at an empty cell, examines it by putting her head inside, then, hanging on to the edges of the comb, inserts her abdomen, and deposits at the base of the cell, to which it is attached by a glutinous secretion a little white oblong egg. It will be noticed that the egg stand in a position parallel with the sides of the cell, and in this position it remains the first day. On the second day it inclines at an angle of about 45 degrees, whilst on the third it assumes a horizontal position, resting perfectly flat on the base of the cell. It requires about 15 days from the time the egg is laid until it produces a perfectly developed queen—21 days for the worker bees and 24 days for drones.

INDEXED

### INTENTS FOR THE FARMER.

#### Wax Rendering and the Prevention of Swarming.

N. E. France.

Bright yellow beeswax is worth saving, yet it is so easily lost in rendering old combs. I find but few beekeepers equipped with material in shape to save but a small per cent. of the wax in rendering.

First of all, but one method will save all the wax, that is to have all the wax when melted in some kind of receptacle with hot water so the wax as it gets free from the "Slumgum" will rise to the surface and can be taken off into another dish with hot water below it, to allow the sediment to settle to bottom of the dish.

Where but few bees are kept, and they on the farm, I often find all material on the farm necessary to make a good wax

press. Take a large inside a cross-slatted that will go down to kettle. Another slat larger for top one, sugar sack, and some sure weight with stone long lever with short lever over the upper pails of old combs in with soft water to co the comb is all melting to surface place o with lever apply pressure from old cells of comb long handled dipper sk pouring same into dec half full of boiling soft through cloth, the wax be ready for the high do not like iron as we or wooden dishes to co

The "Slumgum" presses, is not heated germs of disease, and if diseased combs have wax machine.

Caution.—Do not over boiling will spoil the also endanger boiling where the wax will burn some cold water be thrown into the h boil over. Longer melt in dish with boiling water better. Rub lightly on the inside of dish in—it will keep wax dish. Wooden dishes soaked before putting them to cool. Bright the best dishes to cool

There are many bee cities, and find it no reason why bees o not be more profitable for bees to bother.

colonies of bees are the orchard, the better fruits of every kind, b