

Bee Keeping Equipments

Sem -3 SEC-A Apiculture

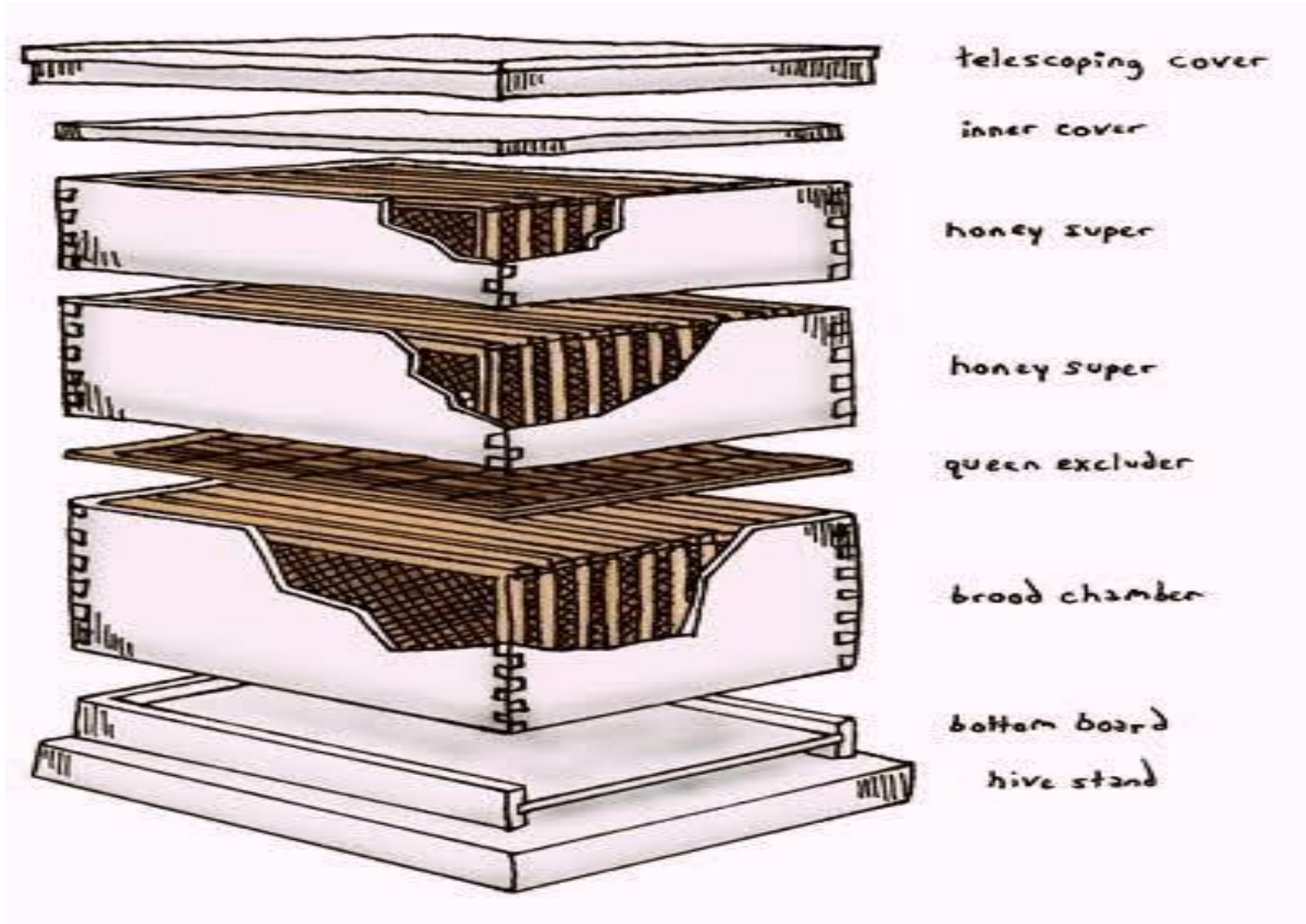


Bee Hives

- ▶ In modern apiculture several types of hives are used. The Hive is a wooden structure, consisting of several parts.
- ▶ The hive developed on the principle of bee space by L.Langstroth revolutionized the whole concept of bee keeping from 1851 onwards.
- ▶ Types of bee hives:
 - ▶ i)Langstroth Hive
 - ▶ li)Newtons Hive



Langstroth frame showing different parts



Bee Veil

- ▶ Worn over face for protection against bee sting
- ▶ Made of mosquito nylon netting
- ▶ Black in color
- ▶ Bottom cloth must have a rim with an elastic to stick to the neck.



Gloves

- ▶ Made of heavy canvas
- ▶ Used by beginners to develop confidence
- ▶ Protects the hand from bee stings



Overall

- ▶ Protective garment
- ▶ Worn over clothes
- ▶ Prevention of bee stings
- ▶ Made of white cloth
- ▶ Blue or Black color must be avoided.



Hive Tool

- ▶ Piece of flattened iron spatula
- ▶ Used for inserting between hive boxes to separate them
- ▶ Also used to scrape off bee glue.



Smoker

- ▶ A bellows type smoker is used to drive the bees out of brood box after lifting top cover for easy handling.
- ▶ Consisting of a tin can provided with a a spout for directing the smoke from the smouldering material
- ▶ Smoke should be without heat
- ▶ Bees should be smoked gently



Bee Brush

- ▶ Used to brush off the bees from a honey comb before it is taken out for extraction.
- ▶ Also used for bringing together the scattered bees at the time of hiving a swarm



The Uncapping Knife

- ▶ Flat sharp long edged knife
- ▶ Used for cutting the wax capping of sealed honey cells at the time of extraction
- ▶ The knife is heated by steam and used for the above stated purpose.




Honey Extractor

- ▶ It is a hand or motor attached centrifugally moving and revolving chamber into which the frames fit with which the honey is extracted in its purest form
- ▶ As the handle is worked, honey flows out of the frame by centrifugal force without breaking the comb.



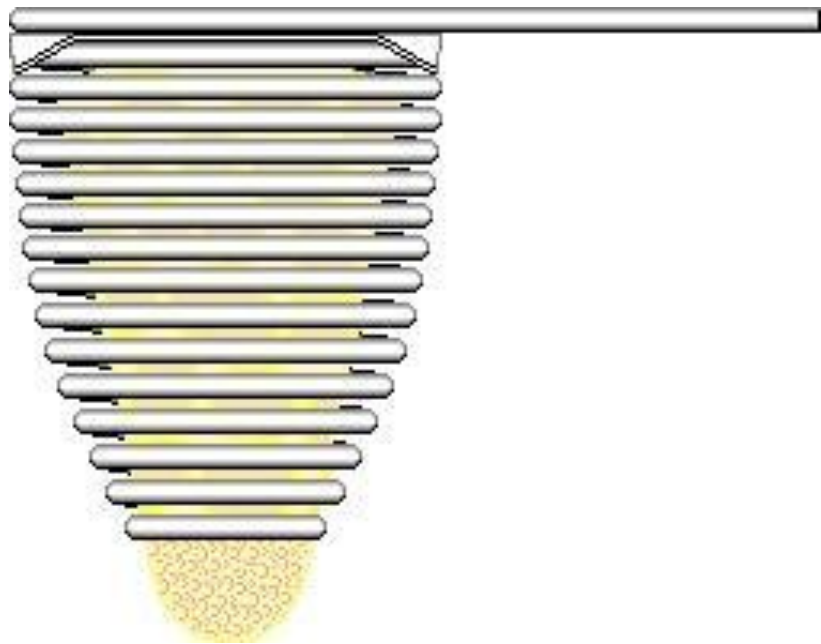
The Queen's Cage

- ▶ Rectangular Cage-made of wire gauze closed at one end and open at the other.
- ▶ Used when a new queen is introduced into a queen less colony.
- ▶ The wire gauze apperture mustnt be big enough to allow exit of worker bees
- ▶ A laying queen with 5-6 workers is confined to this cage along with a little candy(dry sugar) and the opening end is closed with a piece of wood.
- ▶ The cage is then suspended alongside a frame in the colony. Within 24-48 hours when the queen has acquired the odor of the colony, she is then accepted by the workers as the Queen .



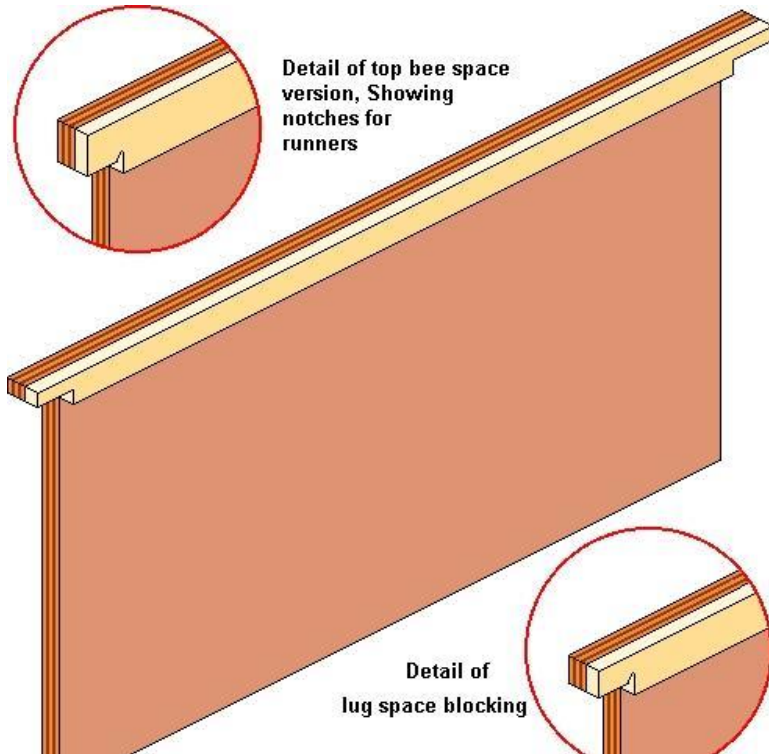
Queen Cell Protector

- ▶ Cone shaped structure made up of a piece of wire wound spirally.
- ▶ It fits around a queen cell giving protection to the developing queen inside.



Dummy or Division Board

- ▶ It is a wooden partition
- ▶ Serves as a moveable wall helping to reduce the brood chamber
- ▶ Just like an ordinary frame, so that bees can have their hive air conditioned and well protected from bee enemies.



Comb Foundation Sheet

- ▶ It is a sheet of beeswax on both sides of which are depressions or marks of the exact shape and pattern of workers brood cell
- ▶ As bees build cells of various sizes in comb in different parts of the country, the use of several types of comb Foundation is used



Division Board Feeder

- ▶ It is a wooden trough of regular frame dimensions with its shoulders so that it may hang in the hive, with a wooden strip to serve as a float.
- ▶ Sugar syrup or other liquid food is poured into it for the bees to feed on at the time of food scarcity.



Queen Gate

- ▶ This wire gate is placed in front to the hive entrance so as to confine the queen inside
- ▶ Prevention of swarming.



Drone Trap

- ▶ Rectangular box with two compartments and on the partitions in between, two wire gauge funnels are fixed with their narrow ends directed upwards
- ▶ When the open end of the trap is placed against the hive entrance during evening hours, the bees pass through the box and out of the distal wall of iron bars, results in the escape of the workers while the Queen or the drones cant escape through the wire screen and thus, all are trapped.



Queen Excluder

- ▶ It is a perforated zinc sheet placed on the top of frames, separating the brood chamber from the super.
- ▶ The workers can pass through these spaces, whereas the queen and the drones can't.
- ▶ The queen will be obligated to stay within the brood box and spare the supers of the eggs and brood.



Nucleus Hive

- ▶ Used at the time of colony division or capture of a swarm colony
- ▶ It consists of four to five frames depending upon the species of honey bee.



Pollen Trap

- ▶ Pollens can be collected from the bees using pollen trap fixed in front of the hive entrance when available in abundance.
- ▶ The bees while passing through the grid, loses the pollens she carries, the pollen pellets drop into the grid and down into pollen trap
- ▶ It consists of a plastic strip of 1.5 mm thickness which serves as vertical pollen trapping screen in which a circular hole 4.5mm diameter made
- ▶ The pollen balls get detached when such bees pass through the holes.



▶ *THANK YOU*  