

WHY?

- **Smoke masks bee pheromones.**

Honeybees rely heavily on pheromones to communicate throughout the hive. When bees think their hive is under attack, they release an alarm pheromone to alert other bees which agitates the entire hive. Smoke masks these pheromones and confuses the bees. This allows the beekeeper to work in the hive and keeps the bees calm.

WHY?

“...other species and races of honey bees readily abscond when faced with excessive smoke. But this would be difficult for European honey bees during the warm part of the year, since the queen is too engorged with eggs to fly. It appears to me that smoke elicits this relic absconding behavior in EHBs nevertheless.

In such absconding behavior, older bees abandon defensive duties, and house bees immediately gorge on honey (breaking open capped honey if necessary, which is why you want to avoid smoking when pulling comb honey).

Smoke also acts as a repellent, resulting in any defensive bees turning around and no longer responding to the movement of the intruder.

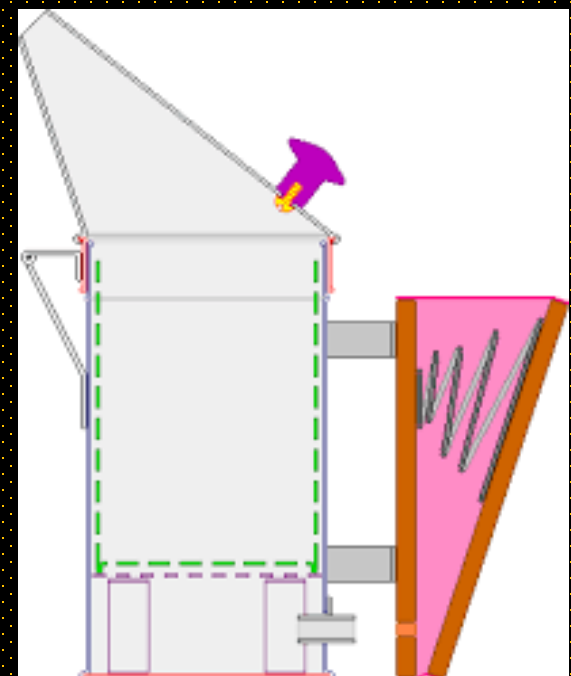
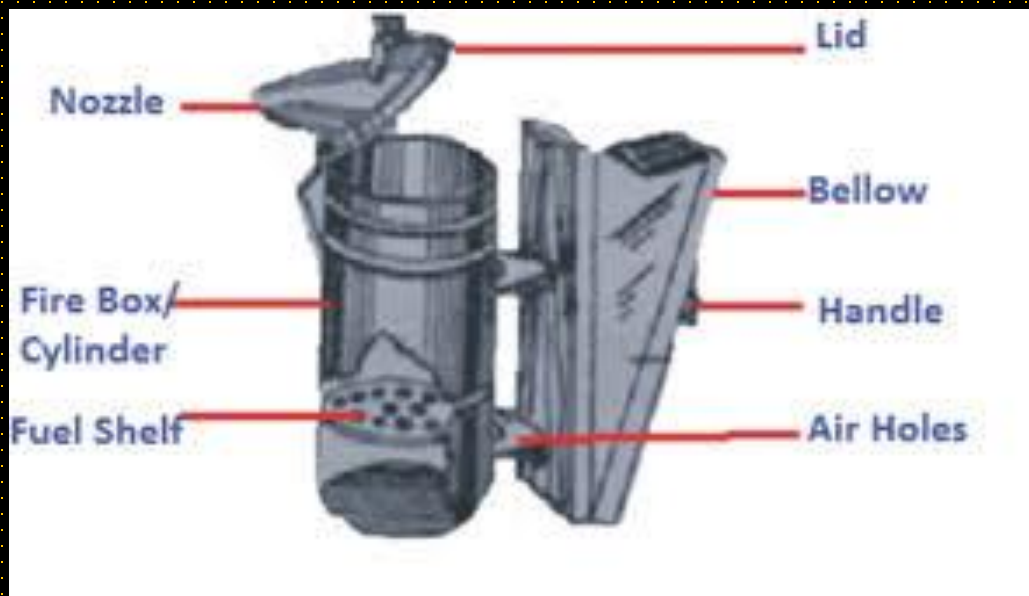
Smoke also "overloads" the odor sensory cells on the antennae, making older workers less responsive to alarm pheromone.

The combination of the above appear to me to be why smoke, gently and minimally applied, is so effective for avoiding the initiation of defensive behavior.”

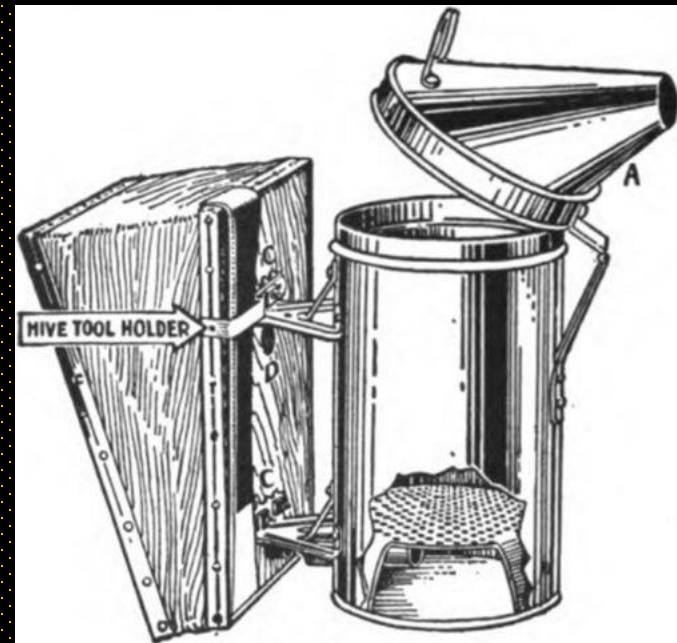
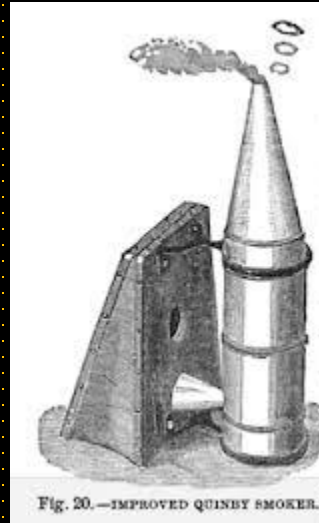
-Randy Oliver, ScientificBeekeeping.com

WHAT?

The smoker is a simple device for burning fuel in an environment that is starved of oxygen, until the bellows provide a mild blast of air.



WHAT?



HOW?

The best fuels burn slowly and give off instant smoke without continually puffing the bellows.

Some fuels are listed below. Some are what can be referred to as "primary" that are good for starting the smoker, and "secondary" that can be used once the smoker is well lit, and have more "body" that will stay smoldering a lot longer.

- **Untreated burlap**
- **Corrugated cardboard**
- **Wood pellets**
- **Wood shavings**
- **Pine needles**
- **Cattails**
- **Compressed cotton/denim**
- **Grapevine cuttings**
- **Staghorn sumac heads**
- **Pine cones**



HOW?

<http://youtu.be/4TRug0ysanc>; Dadant

<https://www.youtube.com/watch?v=Qh0QcYfKz-Q&list=PLhZGrHCEzrs3W28FXQEA3J9630inaup9y&index=21> ; 2:23

<https://www.youtube.com/watch?v=u3MjiaCqqU8&index=49&list=PLhZGrHCEzrs3W28FXQEA3J9630inaup9y>; 3:52

<http://nybeewellness.org/diagnostics/hive-inspection-protocol/>; 6:59

Once your smoker is going good, step up to the side of the hive and direct a few puffs of smoke into the entrance. Wait a minute or two, and then crack open the lid and puff in some smoke.

Let the lid down, wait a little longer, and then remove the lid, puffing smoke over the top of the hive as you expose it.

As you work the hive, you'll periodically add more smoke.

With experience, you'll come to know when it's time to give the bees more smoke by their behavior. When they start to act more agitated and animated, it's time for more smoke.

Quite often you'll see rows of bees 'eyeballing' you from in between the frames when their patience is running thin.

Safety & Maintenance

Fire hazard: beware of clothing , gloves, veil

Only you can prevent forest fires- use caution during drought, around flammable areas

Watch where you set a hot smoker, it takes a while to cool

Be sure the embers are extinguished,
place in metal box, cork it



<http://www.extension.org/pages/25566/smoker-maintenance#.VN5wjC6iFqt>

Clean with hive tool or screwdriver
Check the grate & air tube



<http://www.dave-cushman.net/>

<http://nybeewellness.org/>

http://www.extension.org/bee_health

<http://scientificbeekeeping.com/>

<http://www.rochesterbeekeepers.com/>

