

Allen Hayes' Beekeeping Gadgets
from the Susquehanna Beekeepers Association Meeting Sept 9, 2015
(and other notes from his very entertaining talk)

1. Scale Hive. A wooden platform, in two pieces, with a top and bottom designed to accommodate an analog bathroom scale turned upside down on the bottom platform. The hive is on top of the upper platform. Using Allen's scale system you Record the weight of your hive every evening at dusk. A mirror periscope system fits in a tray underneath the upside down scale. You pull out the tray like a drawer and then use a flashlight to light up the periscope drawer adjusting the tray mirrors until you can read the scale numbers. A complete description and detailed plans for Allen's hive scale system are located at:

<http://www.carrollcountybeekeepers.org/using-a-bathroom-scale-to-weigh-honey-bee-colonies.pdf> From the Carroll County Beekeepers on-line files from 2009 here are pictures of the completed system:



The plans for building another perhaps simpler system designed by Bob Kloss is located at:

http://nwba.njbeekeepers.org/pages/features/2012-1216_hive_scale.html

2. A metal branding device with deep letters. (Homemade branding iron.) Each letter has to be fabricated in reverse and then welded to a base. The base then has a handle attached to it and you can heat the letters using propane torches. Many similar projects for making your own branding irons are on YouTube and Instructables online. One is located at: <https://www.youtube.com/watch?v=qDga-b0WL8c>

3. A hive top feeder built out of an already assembled shallow or medium box. Create a Miller style feeder with internal parts that include a removable screen. If you remove the screen you can feed honey-filled comb in it in case you run across that from a place like a cut out from a house or other burr comb that you acquire that is filled with honey. Here is what a Miller style hive top feeder should look like:



Many similar plans are available from Michigan Beekeepers and their video series called "In the Beekeepers Workshop" are excellent. Check them out at: <https://www.youtube.com/user/beekeepersworkshop/videos>

4. Preform some half inch wire mesh to make a mouse guard and continued it around the sides of the hive. Then you can tie a string or cord to both sides and place it on the hive securing the cord at the back of the hive by tying the two ends together without having to do any nailing or screwing. It would look like this but extend around the sides and have the cords attached.



5. A feeder conversion board. It's just a sheet of plywood cut to the dimensions of a box (painted or preserved with linseed oil) with four evenly spaced holes, one in each quadrant and each hole has a screen over (or is it under?) it. The holes are the right size for a 1 gallon jar lid to fit down in it. Then with a full size box above, (one can put on as much as 4 gallons of feed.) Allen feeds syrup through eight 1/16-inch holes in each lid. He uses a 1/16-inch drill bit for the holes. Allen uses regular Mason jar lids but turns the intersection upside down.

6. Various shapes, sizes and colors of metal plates are used to help bees identify their home. You can move the hive to another location but keep the metal plate or sign at the original location. Field bees orient on the spot, and allows cross leveling of strength between hives.

Allen attaches a piece of bright colored vinyl taped to his smoker cork for easy retrieval and finding it when it drops in the grass or on the ground.

7. Allen uses a large flea market metal ammunition box (army surplus) as a holder for his hot smoker. A spacer is in the bottom of the ammo box. He uses sand or rocks to keep the smoker off the bottom.

8. Allen keeps colored thumbtacks on the back of his bellows of the smoker so they're available anytime he needs to color code something such as a frame or a hive box.

9. Allen welds an upright rod onto the spacer at the bottom of the smoker. This not only helps you to get the three-legged stool in and out of the smoker but he also keeps the spacer upright not letting it over turn.

10. A travel frame box --- a special box with handles and a hinged top. Use for passing around a frame of drone comb with something of interest on it without having to touch the propolis with your fingers. Used as a frame carrying travel box.

11. Note: Food grade buckets usually have a triangle "five" code on the bottom.

12. For dripping out honey from uncappings, you can use a pair of buckets such as 2 Dunkin' Donuts frosting buckets. Make several holes in the bottom of the first bucket. Place the uncapping's in a clean mesh paint bag and place this in the bucket with holes. Place this bucket inside the second bucket with the spacer in the bottom to hold the upper bucket off the bottom. Keep warm if possible. In a day or two all the honey from the uncappings will drip into the bottom bucket.

13. Allen uses a Rheostat temperature controller to adjust the heat on his uncapping knife. Materials needed include a 20 amp wall dimmer switch with on-off push button, a double receptacle electric box (square), and a 2 outlet electric receptacle. Plug a small night light or something similar into the upper receptacle outlet so you know when it is on. The hot knife plugs into the lower outlet. The dimmer switch adjusts power to the receptacle. When the uncapping knife is too hot you can turn it down or turn it off. Another alternative could be the Harbor Freight \$19.95 "router controller" to be used as a hot knife variable temperature controller: <http://www.harborfreight.com/router-speed-control-43060.html>

14. Instead of having multiple spigots, valves and separate buckets for bottling multiple honeys you can attach a spigot to the lid of a bucket and then just transfer the lid from bucket to bucket as needed.

Allen designed a plywood plate for the top and bottom on the bucket with three adjusting chains between the two to hold them together and put pressure on both the top and the bottom of the bucket. This is to make sure that the lid does not come off unexpectedly!

15. Allen created a custom made wooden case to hold his honeycomb display case. It is padded and cushioned. The end of the case includes a little compartment with a door on it that allows you a place to store some glass cleaner and clean cloth also a spacer device that can hold a frame a different size frame (shallow) up at the proper height.

16. Allen builds crystal examination light boxes for examining bottles of honey – The box contains two polarized filters and a strong light source with a dimmer on it. Note: A source for polarizing plastic material reportedly is Edmund Scientific.

17. Setting hives on concrete chimney blocks - About 16 x 20" is just the right size to hold a full-size beehive. Allen sets large eye hooks to opposite sides of the blocks for ratchet straps during extreme wind/weather. This provides a quick method of tying down the hive in the winter or in bad weather without having to put a strap under the block. A picture of a sample chimney block is on the next page. These are available at manufacturers such as Aberdeen Concrete Block Products, 910 Old Philadelphia Rd, Aberdeen, MD 21001, phone 410-272-1515.



Concrete chimney block for hive base:

18. A frame holder which is actually a custom frame hinged in the bottom middle and with wires on either side so that a piece of the brood comb from a cut out can be placed in the center and then the frame folded back together and latched so that it holds the comb in position. This takes the place of trying to fit a piece of comb into a normal frame and then wrapping string or rubber bands around it.

19. A wooden tray or holder to use slide in a line of labels. It holds the labels in position and allows you to use a rubber stamp to stamp the label accurately in alignment. The part that holds the stamp is adjustable so that you can move it left or right.

20. A swarm bait hive made out of a papier-mâché or similar material. The bait hive is modified by adding a wooden board to it. Another board has matching attaching points on its side. This one is attached to a tree at the correct location. Then the two boards are mated with the bait hive attached. The board on the tree and the board on the bait hive is the top part have matching parts. The bottom part for attaching the 2 parts includes a Tee nut bolt and insert from the hardware store.

Note: For catching swarms, Allen cuts a square from the cardboard lid of a copy paper box. He fashions a (bent) screen cone for bees to enter but not leave, attaches this inward to a screen that is mounted over the cutout. This then makes for a very light and portable box with a removable lid to hold swarms. Bees not initially caught can enter the cone to be with the hive but will have difficulty in exiting. Attach a screen cone about 5 inches in length to a screened portion of the box lid with the cone pointing inside the box.

21. Allen sands the edges and corners of his boxes to round them off before painting. He believes that most paint begins its peeling at the corners. Rounding the corners before painting helps stop this peeling.

22. A rotating box holder that holds an assembled super or hive body from the inside and allows you to rotate it on its axis so that you can work on it, sand or paint it, then turn it without touching the outside. The device has an expandable clamping mechanism which has a handle that allows you to expand the inner frame against the inside walls of the box to hold it securely.

23. Allen creates a tall special bee bucket with a pocket for storage of tools. The 6 ½ gallon plastic bucket has a false bottom in the bucket with a door in the side which allows you to keep things like smoker fuel in the lower compartment. The lower compartment can be created by putting a shorter 5 gallon bucket inside the larger one.

24. In his Bee bucket Allen keeps a small wooden or plastic box which protects a box of matches from damage and moisture. Allen uses alcohol with wintergreen to clean his hands.

25. A transport box with dividers in it for transporting glass jars of honey 12 at a time, for one pounders two pounders and five pounders.

26. Allen has fashioned a multipurpose mobile extraction cart that holds his extractor, has wheels, but can be securely mounted to a solid interior wall of his garage. It can be rolled outside for cleaning and washing.