

"It has often been said that no animal uses any tool; but the chimpanzee in a state of nature cracks a native fruit, somewhat like a walnut, with a stone.... Another monkey was taught to open the lid of a large box with a stick, and afterwards it used the stick as a lever to move heavy bodies; and I have myself seen a young orang [sic] put a stick into a crevice, slip his hand to the other end, and use it in the proper manner as a lever."

— Charles Darwin, *The Descent of Man*

Last month I described a clever device that was invented by a clever beekeeper (see "[Slatted Racks](#)"). I think that all beekeepers must have at least some degree of cleverness – how else can we pour a bunch of creepy crawlies into a box, then come back later and gather bucketfuls of delicious honey? But for me, most of my cleverness is revealed through hindsight, as when somebody brings a new gizmo on the market and I shout, "I almost thought of that!"

Darwin pointed out that even chimpanzees can make tools using just sticks. Not to be outdone by our evolutionary cousins, I have decided to share a clever use of sticks that has served me very well at harvest time.

I must confess that I did not originate the fundamental concept of my Frame Popper. There is an extremely expensive device, part of any commercial beekeepers' standard stainless-steel assembly line, that does the same function, namely, to push all of the frames from a honey super, all at once, so they can then be easily handled for the next extracting step (uncapping). Frames that are propolized within a super are difficult and time-consuming to remove, one by one, with a hive tool. Breaking the propolis bond and freeing the frames from the tight confines of the box, even just a little bit, makes a tremendous difference in the effort that is required to remove the frames.

That's where the Frame Popper comes in. It is a very simple device that isn't much more than two rails sitting on a couple of crossties. The rails are a little shorter than the inside



A honey super with "popped" frames. All of the frames have been forced up $\frac{3}{4}$ inch, breaking the propolis seal and allowing them to be easily pulled free.

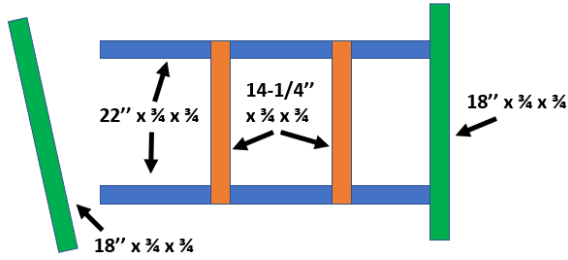


A frame popper. The two central rails fit within the inside dimensions of the box so they pop frames from the super when the super is pressed down. After extracting, the super can be positioned so that it rests on the longer rail on the far right and the free-standing stick on the left; this supports the entire box in an "unpopped" state and makes refilling it with empty frames easier.

width of my 10-frame supers. They are placed an arbitrary distance apart on the crossties, close enough together to be well within the length of the super.

A super is placed on top of the rails. By pushing firmly down on the sides of the box, the frames are forced upward and are freed from the propolis seal. Because our standard Hoffman Self-Spacing Frames have angled ears at the top, raising them up a bit creates plenty of wiggle room to easily push frames apart by hand.

The dimensions of a Frame Popper aren't important, except that the length of the two rails that do the popping must be a little narrower than the inside width of your supers.



Schematic diagram showing the general dimensions and simple design of the Frame Popper. This one is for 10-frame supers. For 8-frame, the 14-1/4 inch rails should be shortened to 11-3/4 inches.

My rails are 3/4 inch thick, but you'll get more "pop" if they are thicker (taller). It's all up to you. If you keep the objective in mind – to free the frames from the super – anything that accomplishes that goal is a winner.

If you are thinking, "So what?", I assume you've never struggled freeing honey frames from a super, one at a time, on Extracting Day. But if you have, give this gimmick a try. It may not be life-changing but it is a nice little helper. Plus, it is dirt cheap: it can be made with discarded scraps of wood. Most importantly, it will show those darn chimpanzees that they aren't the only clever creatures around!

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Inside view of a super in the "popped" position. The rails are inside the walls of the box.



Inside view of a super in the "unpopped" position. The two sticks on the ends hold up the box so that the bottom is flat with respect to the frames; the frames hang freely in their normal position. This saves space in the work area since the frames can be returned to the same space from which they were removed.