PVC FRUIT PICKER

by **Thinkenstein** on July 14, 2009

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intro: PVC FRUIT PICKER

This fruit picker was designed for oranges, but it works for other fruit also. The body of the picker holds several oranges before needing to be emptied. That speeds up the picking process when there are lots of fruit.

The main feature of interest is the "J" shaped channel at the end of the pipe. One makes a spear-like thrust with the picker to get the fruit inside the pipe. The stem of the fruit follows through the "J" channel. A twist and pull of the picker put the stem at the end of the "J" slot, where a sharp razor blade cuts it. The fruit falls into the head of the picker.

Alternative ways of mounting the pole will be described.

step 1: CLOSING THE BOTTOM

PVC is a thermoplastic. It softens with heat and rigidifies again when it cools. This property makes it a useful material for inventions.

Cut the section of pipe you plan to use. In this step, you need to cut "fingers" in the bottom end of the pipe and then fold them over to close the bottom. The pipe, in the finished project, will hold several fruit, but only if the bottom of the pipe is not open.

Cut the pipe as shown, heat it over a gas stove, and press the end against the floor until it cools. All the fingers are bent at the same time, and create a flat bottom.

step 2: CUT THE "J" CHANNEL

Remember that you will be exerting some force when you pull at the fruit. If the blade is dull, you will be exerting more force. If the blade is missing you can still use the picker to break the stem of the fruit. You don't want to break the picker, so leave as much plastic around the blade as you can, for strength.

To cut the "J" channel, I used a pencil to lay out the design and a saber saw to do the cutting. Files and scrapers are useful for cleaning up the edges.

step 3: CUT THE BLADE MOUNTING SLITS

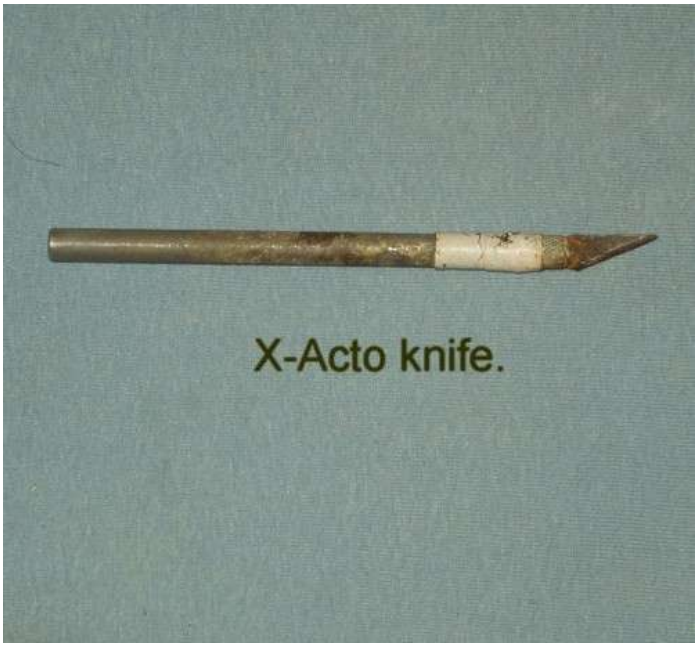
Two slits at the sides of the "J" channel hold the razor blade in position. Razor blade replacements slide in from the side and are held by the two slits.

Drill four small holes at the ends of the slits.

Heat the local area to soften it.

Insert the tip of the X-Acto knife into one of the holes and cut across to the other end of the slit. Repeat the procedure for the remaining slit.

Practice first on a piece of scrap material, to get the feel of cutting with the knife. It feels like cutting leather.



step 4: MOUNT THE RAZOR BLADE

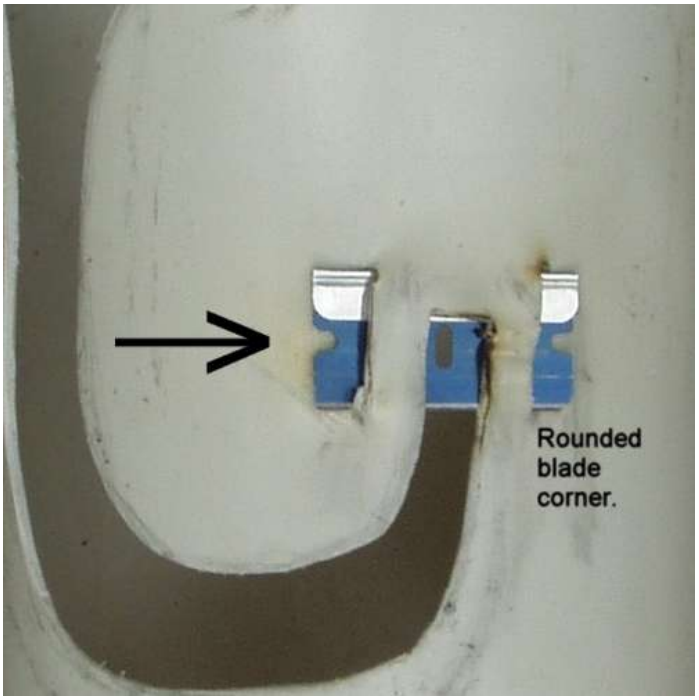
Mounting the razor blade is a little difficult. Be careful to avoid cuts.

You have already gained some experience heating and shaping PVC when you folded the fingers that close the bottom of the pipe. This step calls for more precise heating. You will need a propane torch. Needle nose pliers are also useful, for holding the razor blade during insertion.

I made several of these pickers and modified one of the razor blades to use as a tool for forming all the slits. I ground off the sharp corner of the blade so it would enter the slit more easily, without snagging on the plastic.

After making the slits in the plastic, the plastic will probably have cooled and hardened up again. Bring the local area back up to temperature with the torch. Keep the flame moving to avoid scorching areas.

After the blade is mounted, cover the exposed blade ends with electrical tape to prevent accidental cuts.



step 5: ATTACH THE HANDLE

By now you know the basics of heating and forming PVC. The mounting bracket below is made from the same diameter pipe as the base. Heat the central area with the torch to soften it. Press the soft plastic around a section of handle pipe with blocks of wood until it cools. Pop rivet it in place.

The pole is held in the bracket with a single sheet metal screw.

step 6: ALTERNATIVE WAYS TO MOUNT THE POLE

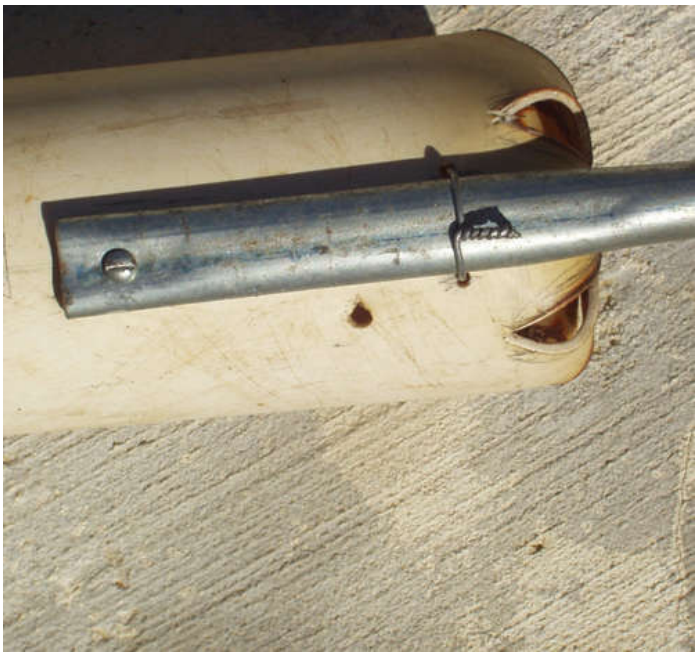
These alternative ways to mount the pole are maybe not as elegant as the molded plastic bracket. They are, however, lighter, faster to make, and suitably strong.

Flatten the end of the metal pole to keep the pole from rocking sideways.

One picture shows the use of a bolt at the end of the pole and a wire wrap further down.

The other picture shows the job done using only wire tying techniques.

Depending on factors of time and materials available, choose the technique you prefer.



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