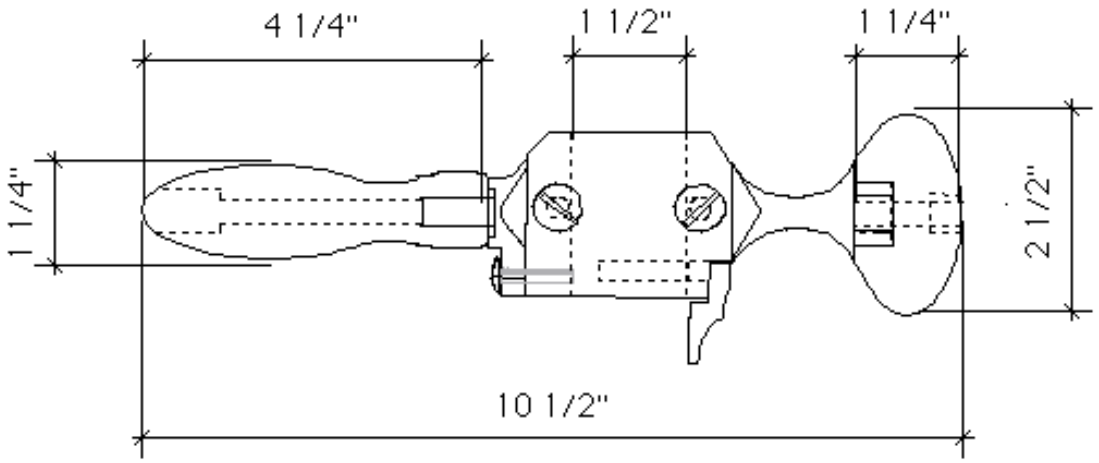
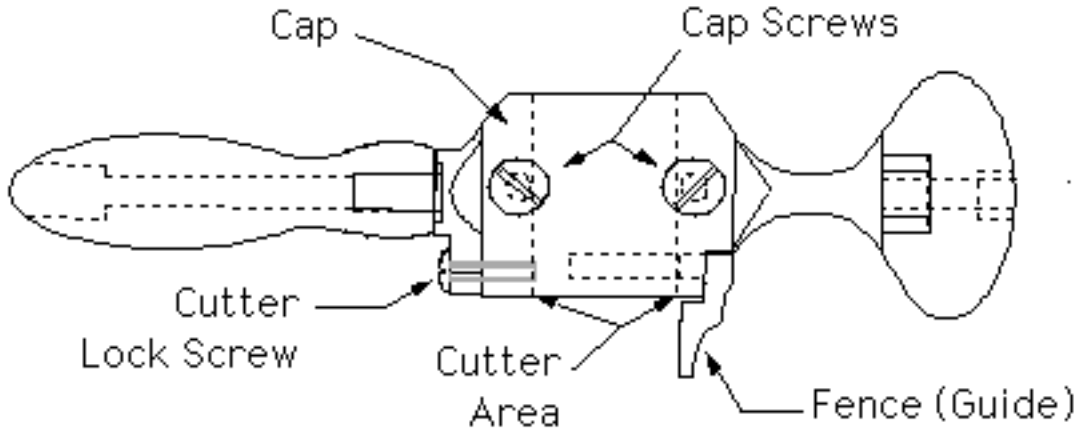
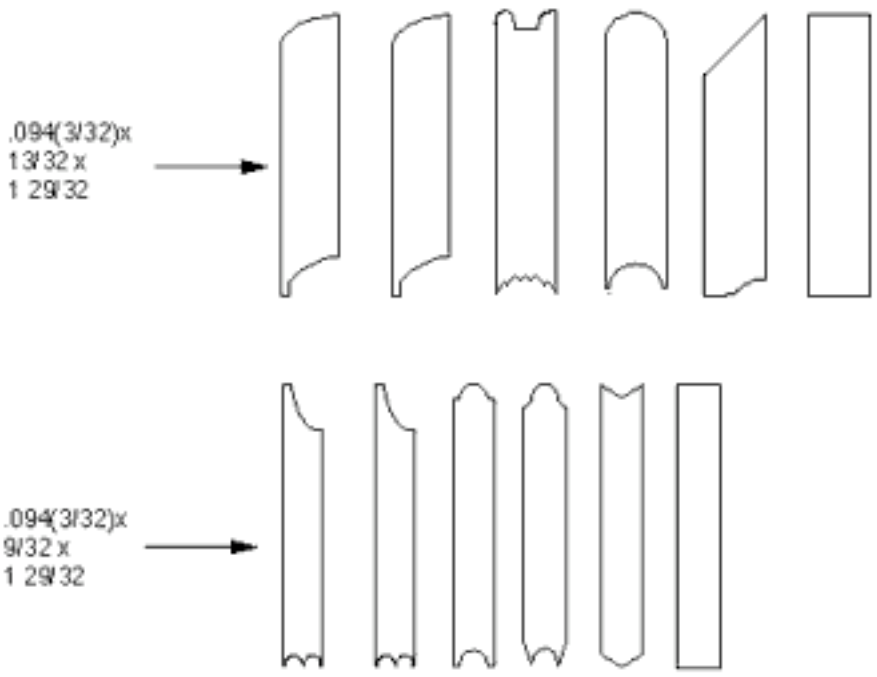
Kansas City Windsor Tool Works
No.5 Windsor Beader

SPECS & INSTRUCTI0NS







Some Notes on Dressing the Cutters:

Note the tool comes with sets of both brass and steel setting screws. The brass will work fine in most instances but if you are going to use the tool regularly, and especially in hardwoods, the steel screws will probably be best. Another tip: black, socket-head cap screws work well in these tools too with the added bonus that the allen wrench much less likely to slip out and a scratch the bronze than a screwdriver.

The beader cutters are cut from spring steel by a laser, which leaves a small tab so they don't fall from the plate. I pop out the set and grind down the little stub left from the tab. The laser leaves a minute bit of slag where it cuts through. The cutters seem to work less raggedly with this slag taken off. I use 220 grit sandpaper to do this but you can take it to a finer grit if you want. Lay them flat on the abrasive and rub until the face is smooth.

The jury is still out on whether they cut better with or without a burr. I'm more inclined to think a strict 90 degree edge and no burr is better. Whatever you do to the edge be careful not to round it. If you need to square a side use a piece of wood with one square edge and hold the cutter against it while you rub on the abrasive. I would recommend a ceramic or diamond slip stone to work the profiles if they need it - be careful to keep your 90 degree edge all around.

In the cutter sets sold with the original Beaders it appears the two large cove shapes had little hollow grinds on both sides. You can achieve the same effect with a small hand grinder with a cone if you like. The two cutters without profiles are intended to be used as spacers and can also be ground to a shape to fit your specific need.

Beader Instructions:

To use the beader, first remove the two cap screws and cap. Back the cutter lock screw out of the cutter bed and the fence locking screw a couple turns. Lay out your cutters to match the desired profile. Obviously the shallower and narrower the cuts the easier it will be to achieve the profile but you can cut all the way across. Three of the large (plus one small) or up to five of the small cutters will fit in the bed. Combine them any way you want but you must fill the space with cutters. Not all cutting edges need to be exposed but the lock screw must reach the leftmost cutter. I've included a longer screw in case you come up with a combination of cutters the shorter screw won't reach. Don't tighten either of the lock screws yet. You can also adjust your fence at this point. If your profile is cut flush to the fence it is usually better to get the rightmost cutter edge (just) behind the small indentation on the lower half of the fence.

Once you've got your cutters laid out the way you want them return the cap to the top. Squeeze down on it a little to hold everything while you put the screws back in. It isn't necessary to torque down on these too much, just make them snug (the cap isn't designed to clamp the cutters in place, it just keeps them flat). Now tighten the locking screw on the side, again not too much. When you do this watch it doesn't move the leftmost cutter down. Next, lock the fence. You're ready to go.

You can use the tool in either direction, push or pull, whatever seems to work better; grain probably has as much to do with it as anything here. Take some light strokes at first to establish the first line and follow that down until the tool bottoms out. Tilting the tool slightly seems to help also. The T-handle gives you a lot of control. Once you're at the bottom a few more strokes will burnish the edges and usually take out any chatter marks.

When I was working on the examples below I found the smaller pieces were difficult to hold in the vice while working them. You can hold one end or the other but the stuff tends to flex the further you get from the vice, which makes it easier to slip and scratch the profile. I made up a reusable cleat from a length of mdf plywood. I drilled some holes in it every six or eight inches so I could run multipurpose screws up through it and into the bottom of my molding stock. This held nicely in the vice and made for a nice stiff and straight work surface.

I also found it difficult to get the last few inches of the profile to bottom out. Sometimes turning the work around so I can pull the last bit works, sometimes I just make the stock longer than I need and cut off the end.

For really deep or elaborate moldings you might want to lay them out with a gauge and think about roughing things in with a rabbit or plow or moving filletster. Much like you would prior to using hollows and rounds. The No. 5 will eventually work it's way down to whatever but a scratch beader is not really designed to hog out lots of wood. I keep a rabbit plane handy even for the simpler stuff to help define some of the smaller fillets and to clean up here and there.

Some of the more elaborate or larger profiles will require more than one setup. Unless you are sure you will never repeat make an extra piece (a mullet) as sort of a story stick. If its

large enough you can note on it with a felt tip pen which cutters and planes were used and in what order things are done.

Revised: 4/08/05