

Toy Making Tips

From Larry Lockwood and Gary Claytor

The following techniques have been used by us and we offer them knowing that others may have different and perhaps better ways of doing things.

When gluing up multiple parts, it is best to use glue sparingly and on only one surface. Set the piece aside for about five minutes to let the glue get tacky and then place the two parts together and clamp. If two clamps are required, just barely place one clamp in place and then put the other clamp in place and tightened both clamps at the same time. This will avoid some slippage with these small parts.

When gluing four parts, glue two at a time and then put the sub-assemblies together. It is just too difficult to avoid slippage with these small parts when trying to do four at a time. All glue ups should be checked for slippage after about five minute before they are set aside to dry. For some reason these small parts want to slip around even after they are clamped.

Glue squeeze out is also a problem with these small parts. The best solution is to let the glue dry for about 20 to 30 minutes, until it gets rubbery, and then remove it with a sharp chisel. Any attempt to wipe off the glue while it is wet will just smear it all over the small piece. Sometimes it is necessary to wipe off the glue just to see if there has been any slippage. That is why it is best to use the glue sparingly.

All of the plans call for 7/32 inch axle holes, however; this is a really tight fit. We have found that a 15/64 inch hole works better especially if you have to make any adjustments to the placement of the wheel. (a ¼ inch bit is definitely too large). We have found two methods to the placement of the wheel that work equally as well. The first is to place a washer behind the wheel to provide some space between the wheel and the body of the car. The second method is to use a credit card (The fake kind they are always sending you in the mail). Cut a slit in the card the same width as the axle peg. Place the card behind the wheel to provide the proper spacing during glue up and then pull the card out once the wheel is in place.

It is best to just put glue in the axle peg hole using a very small brush. The goal is to try to avoid getting any glue on the wheel. Again just enough glue to line the sides of the hole. (If the wheel doesn't turn, it's not a toy car, it's a sculpture). Even after using a spacer and being careful with the glue, it is still a good idea to go back and check all wheels after about five minutes to make sure the wheels are turning freely. You may have to "carefully" pry a wheel loose with a thin screwdriver to provide enough clearance for the wheel. Check them again after another five minutes just to make sure that all wheels are turning freely. (This will avoid a lot of aggravation later on).

Some plans call for painted cars and trucks and nobody can fault a kid for wanting a bright red toy. However, some woodworkers don't like to paint wood. One alternative is to glue up contrasting woods. A dark piece sandwiched in between two light pieces or vice versa. Using 3 pieces of ½ inch stock, you then have a glued up piece that can be used with a 2 x4 pattern. Using a simple non-toxic finish like salad bowl finish that has dried for 30 days, gives the toy a nice look. (It won't be bright red, but it will still look nice).

Using a template is a much simpler and faster way of making toys. The contrasting woods can be glued up in long strips. Glue can be applied to both surfaces because squeeze out and slippage is not as big a problem. Once the piece is removed from the clamps, the toy can be cut on the band saw and the construction part is finished (It still has to be sanded and routed, but there is no more glue up involved). The glue up of small pieces takes a lot of clamps and is time consuming. By clamping long pieces of contrasting woods, all the glue up is done over night.

When using a template that has holes for windows, we have found that rather than cutting out the holes on the template, it is easier to use a scratch awl in the center of the hole. Re-enforce that mark on the wood, then use a brad point (forstner) bit. The same thing applies to the axle peg holes. Using a brad point bit in the scratch awl hole keeps the bit from wandering around.

If you don't have a 15/64 inch brad point bit use the next smaller size (3/16) and then ream out the hole with the 15/64.