

Easter
Eggs
Suck!

Tinker Time



Making & Breaking
at 228 Mill

April 2007

Inaugural Edition

For the 3rd year in a row, Mascha has painted Easter eggs with her class. This is an admirable thing to do in a day and age when most people would have the kids PhotoShop the eggs or some other fandangled thing. In ever increasing quantities, I have been asked to "assist" in blowing out the eggs. "Assist" as in "honey can you blow out the eggs. Now being the proud supporter of our educational system I found it my solemn duty to help wherever I could. The first year it was a dozen and was performed (admirably) using pure manual labour. The second it was 3 dozen and this year it was 6 dozen! 72 eggs! No problem I thought I have tools lots and lots of tools including a great big compressor.

The first attempts at "blowing" out the eggs were not pretty. Making a hole at each end of the eggs, while not catastrophic, substantially weakens the egg's normally strong structure. No matter how much you try and finesse 90PSI using a needle normally used to blow up a basketball inserted into an egg, the egg tends to instantaneously liberate its contents in multiple directions. A really sticky mess. Lowering the pressure helped, but the failure rate was almost 4 out of 5. Time for "Plan B." I needed to find a way to suck the contents of the eggs out.

A couple of years ago I came across a small compressor pump at a flea market that has been sitting idle on the shelf since. I figured that I would someday turn it into a vacuum pump (for gluing and 'stuff') and that's exactly what I did. The air inlet would be the vacuum end, and the port where the air normally went to be compressed into a tank was left open. It worked well enough pulling about 24mmHg (not sure the Torr or kPa of that is) good enough for what I needed. Only problem was that you can't very well suck the inside of an egg into the inside of a compressor/vacuum pump they don't like that.

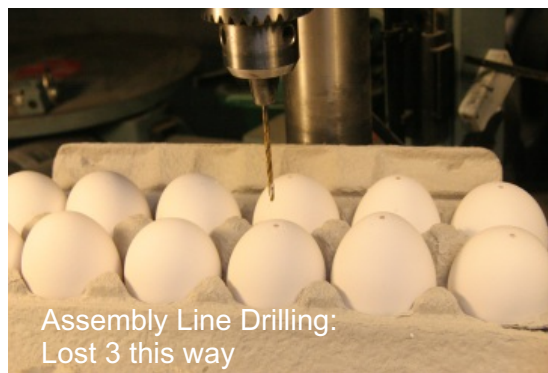
The solution was to lead the vacuum hose into a jar with a second hose leading to the egg. The hoses were placed high in the lid (the vacuum one higher than the egg one) so that the pump would create a vacuum in the jar, the jar in turn would suck on the egg hose the contents of the egg would land safely at the bottom of the jar leaving the pump free of egg goo.

The final problem was how to get the hose on the

egg so it could suck the contents out in a production-life fashion. The solution lay in one of those small kitchen funnels you can find for a couple of cents at the local mart. Using this as the "egg stand" we were able to clean out 72 eggs in under an hour! The eggs were first drilled on both ends with a 1/8" bit and then placed on the funnel for the "clean out." The drilling process yielded 3 casualties and the sucking process killed another 2

so all in all we had a failure rate of about 7%. The 2 sucking casualties could have been avoided as I discovered it was best to stick the eggs in with the pointy side in the funnel as it goes down deeper and gets supported closer to the hole. None of the eggs broke that way.

All in all, it was a lot of fun and it was great for Luca and Emilio to explain to all their friends how the eggs were made.



Assembly Line Drilling:
Lost 3 this way



A closer look



In action



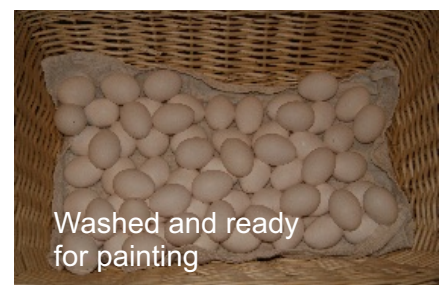
Drilled and ready for
draining



A gallon of egg guck



Pump and vacuum jar



Washed and ready
for painting