

Master glass

Following an amusing exchange of emails with a master glass blower, I found myself trying my hand at glass blowing which was great fun although enormously difficult. It all started when I looked up glass blower, Stewart Hearn, on the internet and emailed him to enquire about purchasing a vase I had seen in a magazine. As he was out of stock, he offered me the opportunity to visit his studio to choose the colours I wanted. I was so taken aback by his offer that I told him how exciting it would be to have a bespoke vase. Stewart responded that if I really wanted bespoke I should do a glass blowing course offered by him and his studio members, where I would make a paperweight, tumbler and bowl. I responded that anything I made would not be bespoke; rather it would be homemade! Nevertheless, my interest piqued, I looked up the site he suggested and signed up. On the appointed Saturday morning, six of us arrived at the studio to be taken through our paces by Stewart and his colleagues Mark and Wayne.

The making of glass products begins with the gathering of transparent liquid glass. This entails placing the tip of a rod at the aperture of the furnace which is heated to 1,100°C. At this level of heat the interior of the furnace is white, a blinding arctic white. When the tip of the rod glows cherry red, you slide it in the furnace watching for the shadow of the stick on the surface of the glass. On seeing the reflection, the rod is dipped into the crucible, twirled 360°, then tipped such that it just skims the surface of the glass and then run forward along the surface, all the while turning the rod to gather the glass, before pulling the rod out of the furnace. This process takes a few fleeting but literally painful moments as the instinct to flee from the searing heat, which is not deflected by the extra layers of arm coverings, is overruled. Once away from the furnace, when I silent gave thanks for the shift to cooler air, the shaft of the rod is rolled along a steel table so that the glass settles evenly all around the tip, before returning to the furnace to plunge the rod back into that white heat to gather a second layer.



Having collected sufficient glass, the glass blower walks to a bench, all the while taking care to rotate the rod in order to keep the glass from falling to the ground in big seething blobs, places the glass end on a ledge, changes his hands around in order to perform an opening and closing of gates manoeuvre and sits alongside the ledge, shielded from some of the heat by a wooden barrier, resting the top end of the rod along another ledge. This exercise is epitome of multitasking. The molten glass, now lightbulb-yellow and fringed with fiery orange, is coaxed away from tip of the rod using a pad of sodden newspaper. While the rod is rotated, sparks and pieces of burning paper shoot off the glass while the pad of newspaper blackens. An assistant squirts water on the newspaper from time to time to keep it sufficiently damp.



Once the molten mass has been suitably shaped, the glass is blown. The first blow is a quick puff of air followed by an immediate sealing of the rod with your thumb – hence the practice being called thumbing. The heat of the rod and glass causes that puff of air to expand, so pushing a bubble into the glass. Sounds simple: blow and let the laws of physics do the remainder of the work. It was, however, surprisingly difficult to achieve. Perhaps I wasn't getting air into the rod or I wasn't blocking the aperture fast enough, but it took numerous attempts – during which time the glass had to be reheated – before I succeeded in creating an embarrassingly puny bubble at the very base of the molten mass. Happily, though, the slightest of bubbles is sufficient to allow for glass blowing to proceed.



The glass is then reheated by sticking it in a glory hole – similar to the furnace but operating at a lower temperature. And so follows a process sitting down to mould the cooling glass bulb, which now glowed an angry red, and standing to blow air into an increasingly larger and transparent bulb, looking every bit a Swiss alpenhorn player. The blowing is now pure brute and sustained force as opposed to being dependent on exquisite timing and physics. As a result of the glass's strength and density, I didn't experience the sensation of air actually moving out of my lungs into the blob in the same way as we experience that sensation when blowing into a balloon. Actually, it felt as if nothing was happening except for my stretching my cheek muscles. But, the glass does expand, imperceptibly at times, and so the beginnings of a vessel take form.



In between blowing into the glass and shaping it, a groove along which to eventually break open the neck of the vessel is created. This entails holding a giant set of pliers against the narrow portion of the bulb as the rod is rotated and having to withstand the heat radiating off the glass on to the side of the hand. But the glass is sufficiently solid now making it tricky to keep the rod steady to form a single groove while it is still sufficiently molten so that the exercise needs to be done with a light touch in order not to deform what will be the opening of the vessel. Yet another skill which will take some time for me to acquire: my glass bulbs had enough grooves to start LPs!

The creation of a flat base is achieved easily enough by rolling the glass against a wooden paddle, which soaks in a bucket of water while not used. Once a base has been created, a dent is made at the base using the top of the pliers and a companion places a glass plug at the end of another rod which the glassblower guides to the base using the set of pliers. Once the plug is attached, a few sharp bangs to the original rod result in the glass vessel breaking off from that first rod along the groove. Rods are switched and work starts on opening up the aperture. First, one arm of the set of pliers is inserted into the opening and run along the rim and then both arms are inserted, and while running along the rim, the grip on the set of pliers is progressively relaxed, so resulting in an ever large mouth. The trick here is to apply just the right amount of pressure to the rim so that a uniformly round mouth is created.

This is the final step in creating a tumbler but not for a vase or bowl. For a bowl, the glass is reinserted in the glory hole which glows a sunset orange, and while in the glory hole is rotated. The depth in the glory hole to which it is inserted and the speed of the rotations together influence the depth of the bowl and the width of its rim. Whether the spinning continues or is stopped on extracting the bowl from the glory hole determine whether a smooth or wavy rim will result. It is remarkable too think of the infinite multiplicity of outcomes that are possible as a result of such nuanced movements.

The glass at this stage is about 550°C, and must gradually cool otherwise it will shatter. It is placed in an enormous kiln which is set at 550°C when the glass is first placed in it, and the air around it shimmers when it is opened. Over the next 16 hours the



temperature in the kiln, along with the glass in it, is steadily reduced resulting in the final product. While each of the pieces I made is deeply flawed, with bubbles and little wisps of clouds where there ought to be none, irregular and lopsided rims and unsteady bases, it is deeply satisfying to see and hold the final products. The bowl will be taking pride of place on my dining room table but I won't be trimming the legs of the table to make the bowl appear even!

