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Harry Turner's Story, as told to Charlie Wells 23rd September 2013

It was February 1956 I started work at Bagley's glass works. (I was) 22, I'd already been working at Armstrong Sidley Motors in Leicester.

I've always been a centre lathe turner. So I've always worked on a lathe and anything to do with lathe work, at Bagley's machining, the parisan as they called it, or the blank mould as they called it, because I was a new starter, they didn't trust me with the actual finished mould shape so I stayed making blanks or parisan as some people call it.

There were other work as well like. I wasn't always doing that because I was between two different machines. So it was until about nineteen sixty six, it's when Jackson brothers, later Rockware glass, bought Bagley's out. Jackson's had built this new factory over here a new, modern, workshop, that they moved all the engineers up there, so then when I moved up there, they bought a brand new machine for me, and it were all mould work, or anything, because that was my job. I could machine anything that was on a lathe.

Well Bagley's have always been famous for the whiskey bottles, milk bottles…

A milk bottle, people don't realise it, but a milk bottle is a precise measurement container, more so than most other bottles. They all have to hold a certain amount, but the milk bottle has to be filled brim full, so that when they put the cap on, it causes a vacuum, to make a better seal, because it's only a foil cap. So it has to be brim full, so it makes a better seal. So yes, milk bottles have got to be quite precisely made, whereas a whiskey bottle can be so far up to the top of the neck, or a bit lower down the neck. A little bit of slight descrepancies, but milk bottles were spot on.

You always started work at 7:30am work 'til 12, this was at Bagley's and an hour for lunch. Start again at 1 o' clock until five and have half an hour for lunch and start again at 6 until 8pm. Until, that period of time where as it was reduced, the hours to forty – forty five was it, instead of forty eight, and then it was slightly less.

Depending, the weekend work for me, the work from the weekend was that, every week, they changed the moulds and blanks on the machine that actually made the bottle because they got damaged slightly so the blanks came in for, you used to take a very slight skim off the nose. They called it the nose because in this particular fitting shop I

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worked in, it was called Owen's fitting shop. The machines that made the glass were Owen's, American company. and the parisan, as it came down, it ran across t' top of the glass and sucked, the glass into it and it went round, opened up and put the blank mould of glass, into the finished mould, to be blown and finished, and as I say, the blanks got damaged, where it went into the glass, because a knife, came across and cut the glass off, and it used to just damage them slightly, so we used to take a very light skim off. Put them on the lathe because they were all in halves, so it were a lot of heavy lifting.

These moulds were in pairs, or even if it was a single one, there was still a lot of lifting because he had to lift two up, and there were twenty four, so that were like forty eight articles to put into the machine. A light skim off, take them out, that only took about, a couple of minutes or so, and then you took them back out again, so it was quite a lot of lifting, at the weekend.

Then, come Tuesdays, well they came in at the weekend, they came in about Thursday evening, so we had all day Friday and Saturday morning. Then they went back on to the machines again. If that's what they wanted, that particular shape. Then, Mondays maybe Tuesdays, Wednesdays to Thursday again, I'd be machining anything else they wanted. Whether it be the shapes with the blank mould, or anything else that was required making.

It was Monday to Friday, Saturday morning work at that period was part of the working week, until they altered the hours which then Saturday morning was like overtime. But, Sunday morning you worked every Sunday morning at Bagley's because, the glass works require somebody there all the time.

It's a non-stop, 24 hour, 356 days a year work. They only ever stop the glass production is when the big glass tanks get either at a period of time where they get thin. They start off about width o' this table thick, the walls of the containers, but, the constant heat of the glass makes them thin, and you can actually see them glowing so, they're getting thin at that point when you can see, see through a stone and then they just stop and that's drained off, what glass there. and the glass what's drained off is allowed to set, and then they smash it up again and it's called cullet and it goes back as in, the other mix and, melted again. So everything's, there's nothing wasted.

When Jackson's took over and I moved up to Jackson's, I say I actually moved up with them and as I say, I worked on, what they wanted me to do, which was again mould work, and this time it was all blanks and moulds, because the machine that they brought in was a brand new Ward, a big one, a very big machine.

It were big in that it was, what they call a capstone lathe, it had a turret on it which turned round with six different heads on it. And there were these small Wards, there were different numbers, this was a Ward 10 so it was a big one, there were Ward 4s and 5s and so on, 6s, and they were all just different lengths or widths. So it were big, in that it were new and it had this hydraulic forming attachment on it which also helped and so yes, it were big. Bigger than I'd worked on before, but it doesn't matter what the size is as long as it just does the job. but it was quicker than most, because with a six turret area you've got six different tools and *(laughs)* plus the part that goes across and moves is called a saddle so we've got a saddle, a turret and you've tools in your saddle and everything *(laughs).*

It came with an instructor from Ward's to show me how to make it go, like they wanted it to go. You could machine a mould, complete, that was the outside diameters, the inside diameters, in one hour, and that was very difficult. But they produced all the tools from Wards that came with the machine to do this particular job and, I couldn't quite do that hour (*laughs).* We had time and motion study up there as well, but to do a mould in an hour it took some doing it did, and that's a complete outside, inside at that period of time. Nowadays it's all done on computer the machines which probably do them a lot quicker, but there again, there's other factors, keeping the tools sharp and various other things, so yes, I stayed at Jackson's. I didn't stay there long because there was a new factory had opened up in Pontefract, at the bottom of Baghill Lane, called Werneth Engineering and they'd opened a new machine plant and they were advertising for workers, and the chap that ran it, happened to be the ex-foreman of Jackson's. So he'd left and started his own business and he were asking for workers naturally in that trade, so quite a few of his old mates from Jackson's left and went to work at Pontefract.

It was better money, so quite a few of us left as well and went there, and I were there nearly twenty years mould machining glass. It were all to do with the glass trade, anything at all, blanks, moulds, everything to do with glass making equipment we made. Until United Glass took us over and closed us (*laughs).*

The moulds there, (at Bagley's) it were called an IS mould, this is the Swedish company that produced the glass making machines that took this particular mould and it required… Timewise I've really no idea, but it required, first off you had two halves casting, and these two halves, they were rough on the outside and rough on the flat faces, but then they had to go on a grinder machine to grind them flat.

Well first of all they had to go on a machine called a shaper, that machined it flat on the face and at Bagley's it then had to go on a grinding machine, which gave it a better finish so the two faces were a good finish. It then had to be fastened together with nuts and bolts, to fasten the two halves together and the outside was machined.

When the outside had been machined it then had to go onto another machine to turn the ends, so they had to smash off those nuts and bolts, because they were on lugs with two bolts in. They had to break them off, turn the ends and perhaps the inside, which the bottom fit on. The bottom of a glass bottle is a shape and that's a separate piece. So that was a separate piece, so I had to machine that piece, and you did that on every one.

So that was just one job, on every 24 moulds, and then it had to be machined out, the fancy shape inside, whatever shape it was. So how long it actually took, I don't know. But when we got this new machine at Jacksons, you had to do the outside and the end and the inside within one hour. So yes, it was possible, I mean I did it just five minutes longer but, I could never do it in the hour. None of us could, because I worked days and somebody worked nights on this same machine doing just moulds (*laughs*). So we turned the outsides and the insides and the other fittings within an hour, but that machine were set up to do it. There were no other machines at that time what could do outsides, insides (*laughs*). I can't tell you how long it took actually, not even doing the bottom fitting as we called it. That'd probably take maybe thirty minutes or so, I can't really work out I don't think I could possibly think how long it took to do a mould doing as we used to do, bits and bobs. But obviously they were machined out and turned out in roughly the time they were wanted. I don't think there were any real rush jobs. It's just that Ward, the manufacturer of the machines, they produced the tools, and that were something else. One tool, it might be alright to produce a special tool and special tool tips to do this particular job, but when that job changed, you had to tool up for a different job, and you didn't have the tools that Ward had made for that specific type one mould which they said they could do in an hour a time. It meant then producing

other tools so, but once you'd made t'tools you were, set up. It were a good machine, because, one of t' hardest little jobs I had to do were that, that I think mentioned it before, that wishing scent bottle for Avon. There were no special tools for that, I had to make them (*chuckling*). But there again, I've been making tools for jobs I've been doing all me working life.

There was always a social side, Like Bagley's had the social area, there were trips out. I know we went on trips to *(laughs)* Blackpool, we had trips everywhere like. It's the same as me being in the camera club at Bagley's, we had a camera club at Bagley's which then went up to Jackson's. We had trips to, when they opened the new power station, that was interesting; a trip to CWS at Nottingham, that new factory that opened there, CWS Glass. So a good social side, it was quite a team amongst yourselves. But Bagley's was old, well historical really, because, how can I put it. Well, Bagley's produced their own electricity, produced their own gas, in fact they produced everything and Bagley's had their own bricklayers, their own plumbers. A joiner's shop, the paint shop, the bricklayers and the stone masons for cutting the blocks. They had a separate unit, across the road, that cut these big blocks for making the tanks what the glass was melted in. So that they were really self-contained. They had a good laboratory, that were all on site, there were a good nursing unit for minor sickness, health and what they call it. It were really everything you wanted, plus your section *(indicating Margaret)* which was crystal glass, which made press ware. Yeah, Bagley's were quite a good place. It had its own canteen we had our dinners there. So yes, a good place to work for.

I'd have still been there if they hadn't of shipped us up to Jackson's, which nobody wanted in the first place. It was terrible to be taken away from where you'd been working with, in fact your mates you worked with, because they split us up. I think there were only two of us out of my section, which there were about, must be nearly twenty of us, and they took only two of us up there, and perhaps a couple from the other because there was three machine shops at Bagley's. There was the Owens, that made moulds and that for the Owen's machines and also the IS machines. There was the Monisch fitting shop which, different machines again, they made moulds for the Monisch and Lynch bottle making machines. Then there was the Crystal Glass fitting shop which made Pressware for that section. Paint shops, for painting and decorating this Glassware, such a lot that they did, like the labels that went on Glassware. I mean these labels was bonded on as part of the glass, it wasn't a paper label. It was a label that wa' stuck on

and then fired. Because even some of the milk bottles had these bonded labels, so they would have had to be stuck on and then re-fired.

I say I worked then for Werneth all them years and we made everything to do with glass, moulds in wood, moulds as well. We made moulds out o' wood *(laughs)*. The wooden moulds just happened to be, a visitor from translucence glass at Wakefield came to Werneth Engineering to see if we'd make them some moulds for, they made, lampshades, glass lampshades etcetera, and they happened to see that we had pear trees, part of an orchard in the grounds which we had like and it was mentioned that, "Oh, you've got pear trees, can you make us some moulds out o' pear wood"

"Yes, alright"

We cut the trees down and we made moulds for them out of wood, and you're perhaps wondering that, about the wood part of it, that wood burns. Pear doesn't, pear wood doesn't burn. It burns to a certain extent but it doesn't explode into flames, so a mould made out of pear wood makes a beautiful glass finish because, when it burns, it causes carbon. There's nothing smoother than carbon. So the finish of the glass is absolutely mirror finish, it's absolutely beautiful. So that's why wood has been used for making glass bottle moulds for centuries, because, the iron moulds, that's made for that similar type of glass use, is cork lined. They line the mould with cork, on a glue base, so it sticks on and then when the first glass goes into it, it fires that cork and leaves a carbon finish in the mould, which is dead smooth. So you get beautiful glass finish, and it's same with the moulds for ordinary glass bottles, they're lined with graphite. There's a man on the machine as the bottles are being made, and he has a stick with a rag at the end of it dipped in graphite. A liquid graphite, not the flaky graphite, it starts off as flaky mixed with oil, and as the mould opens up for the bottle they go *(makes sound of rag whipping into bottle)* right quick, he just rubs the inside and then the glass goes in and it closes and it blows the mould. So it's a very dirty job in the glass works because of the oil made up with graphite which is as you know graphite pencil lead, but it's quite dirty. So even the glass bottles, they're not just straight from the lehr all polished. Every mould is polished when it's machined, it then has to be polished out, but when it actually goes on to the glass making part of it. There's either some oil sprayed into it as they open, or it's a man manually just, runs an oily rag into it just so the glass comes out smooth. Otherwise it'd show all the marks. Even when it's been polished smooth, where you put a mirror finish

on it, there's still a sign that something's gone round in it, so it would actually show on a bottle. There's lots of so' little things that people don't think about on a bottle.

A bottle made on an I.S. machine shows a shock mark, that, about so far up the bottle. That's when the glass comes down from the top. It comes down a shoot, into the blank, and then out, then when it's blown in the blank like which is only a very poor shape, it's not a finished shaped, and that shape then goes into the mould finishing shape, and it's still got that shock mark from where it's come down from where it's cut off at t' top down a tube, like a shoot, and when it drops into it, it's travelled about, probably six foot or more down a shoot and then into t' mould. You don't notice it until you know about it, that it shows a shock mark, from where it's dropped that distance and that shock mark doesn't leave the bottle. Even though I mean it's not noticeable, it's only noticeable to somebody that knows where to look for it.

There's all sorts of little things in memories, like. They always used to say Bagley's milk bottles didn't break when you dropped them (*laughs*). Which isn't quite true, it's not true isn't that. The thing is that, when the first bottles were made on the machine, the samples *(were)* taken off and checked by the chemist and other people to check that they are right for volume and everything. In this case of a milk bottle bouncing, they could bounce because they hadn't been annealed properly.

That means, when the glass bottles came off the machine, they went down into what they called a lehr[1], which were all hot flames and the hot flames keep the mould, the finished article, bottle, or whatever it is, in a nice state. It's not allowed to shrink or whatever, and it goes through a very hot section all flames on down a long shoot, quite a distance, probably the length of from here to the bottom of the garden, quite a distance. It's all red hot, and then it cools down slowly until it comes out at the other end cold. Finished, still a bit warm but where it's cold finish, and that anneals the glass to make it the finished article. The ones that come off sometimes before they're annealed[2], they are either very brittle or because they're not annealed properly, it's possible that they don't break when they're dropped. That's the only thing maybe, but as we know, you drop a glass bottle, it'll break (*laughs*).

[1] http://en.wikipedia.org/wiki/Lehr_(glassmaking)
[2] http://en.wikipedia.org/wiki/Annealing_(glass)

We made, this is at Werneth. We made anything for anybody, to do with glass. Like Translucent Glass at Wakefield, which was lampshades etcetera.

Kings Lynn Glass makes glass for Royalty. Kings Lynn Glass is at King's Lynn, which is quite near to Sandringham and Prince Phillip came one day, and found that the gates to Sandringham, one of the lamps were missing, it had got broken, so one thing led to another, that they got in touch with their glass makers which were King's Lynn Glass, and said we want another lamp for there like. So it came to us then at Werneth because we'd been making stuff for them, could we make a mould for this lamp which was that diameter.

If you've been on the Embankment at London, all the way down there's the circular lamps in them cast iron things all along the wall and down the Embankment. So we did, we made this huge mould which was bigger than the machines we'd got to machine it on. But we made it, and it went back to Kings Lynn, but the thing was, which were quite niggling is that we only charged Kings Lynn thinking it was just a replacing one glass globe to fit the whatever lighting system they used in it, at Sandringham, and when he saw it, the new glass thing, how nice it looked, he wanted them all doing, and that included Embankment *(laughs)*. And I think we only charged them about thirty or forty pounds, at that period, in the nineteen, early seventies or something like that. Which was pittance really, but they only wanted one so, *(laughs)* and that mould made all the rest, all that was required, so it just niggled at us at that time, when we got to know about it. That when he saw how nice one looked at Sandringham he had the other one replaced, that were two, and then all *(the)* old worn out, dirty looking things in London, that Kings Lynn Glass made all the other globes (*laughs*). So yeah, and then, as I say, Kings Lynn then got bought out by Wedgwood so, all that's Wedgwood. They make, all that sort of stuff.