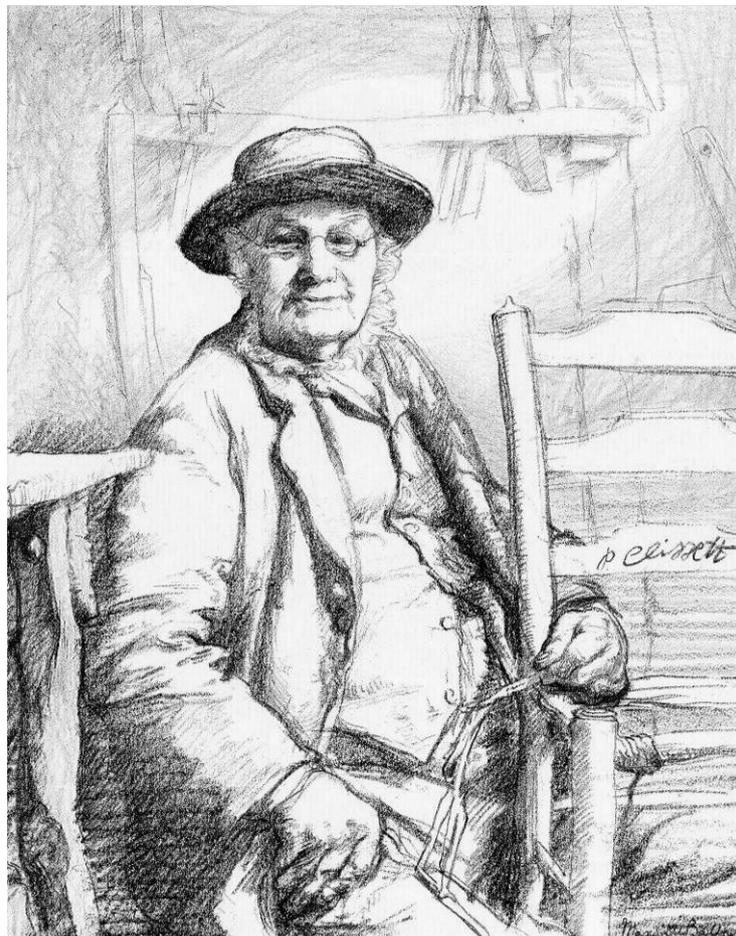


## 7. Philip Clissett's workshop and working methods

Despite the interest in Philip Clissett in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, no-one thought to make any record of how the old chairmaker worked. Ernest Gimson, as we know, spent time with Clissett learning to make chairs, but little of what he learned was passed on to his chairmaker partner, Edward Gardiner. In essence, Gardiner taught himself to make chairs, learning to use a lathe initially from books, then from Gimson's head blacksmith and, later, by employing a wood turner.<sup>1</sup> For rushing seats, he only had a most general description from Gimson (who he did not think had ever rushed a chair), and taught himself by unravelling old seats to see how it was done. He did gain a little knowledge of Clissett from Gimson, and may have added some detail after his first apprentice, Percy Watts, worked with the Clissett grandsons for six weeks.



*Figure 7.1. Philip Clissett in his workshop, drawn by Maxwell Balfour 1896.*

The only contemporary records of Philip Clissett's working method are pictorial. The earliest is the drawing of Philip rushing a chair,<sup>2</sup> with some of his tools displayed behind (Figure 7.1). Slightly later came the two photographic postcards of his workshop issued by Tilley & Co of Ledbury in about 1910 (see Figure 7.2 for the more useful of these). These can be set alongside two quite detailed accounts of his methods, both written down many years after his death. One of these accounts (by David Griffith) was the result of an interview with Will Clissett in 1954<sup>3</sup> – Will worked with Philip from about 1896 eventually

taking over the workshop. Griffith added one or two facts to his account in the early 1990s after a visit to Neville Neal's workshop. Unfortunately, the other account (by F.C. Morgan) does not record who provided the information, though the detailed description of Philip's lathe, which tallies well with the photographic evidence, suggests a close knowledge of the workshop.<sup>4</sup>

The earliest reports of Clissett's chairmaking were brief in the extreme, and it was not until after World War II that any real detail was recorded. By then, more than three decades after Clissett had passed away, memories were restricted to the later part of his life when rush-seated ladderbacks seem to have been his principal output. Consequently, some details of his work, such as the turning of decorative spindles, the cutting of thin, chamfered elm boards for seats, and the grooving of side rails to accommodate them, are not recorded.

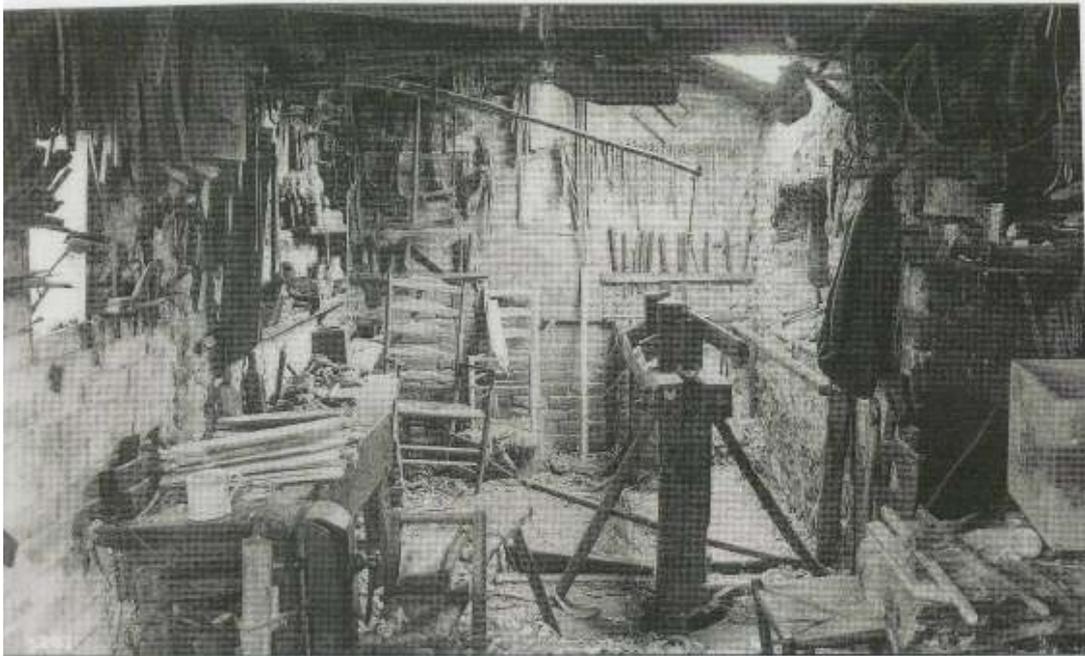


Figure 7.2. Philip Clissett's workshop, photographed about 1910.

Probably the earliest description of Clissett's working practices was made in Lethaby, Powell & Griggs' treatise on Ernest Gimson: "parts were turned in a simple pole-lathe, others were shaped with a spoke-shave, and the seats were of rushes".<sup>5</sup> Soon afterwards, in the early 1930s, Harry Peach, proprietor of the Dryad furniture and craft company, made some local enquiries about Clissett, and recorded some details of his methods from a Bosbury carpenter. In a letter written in May 1933,<sup>6</sup> he wrote:

...all the chairs were made at the cottage shop Standley (*sic*) Hill & with a pole lathe, split ash not sawn & turned after being shaped on a donkey a sort of seat that held the stick. A Draw knife was used to shape them. The Village carpenter remembered all details green wood was used & then the turned parts left to dry which made them usually oval.

A brief account of Clissett appeared in *Country Life* in the early 1940s.<sup>7</sup> The author understood that Clissett's ladderback chairs were made from green wood, hence the ovalling of turned parts. The remainder of the process seemed to have been a mystery; he thought that the turned parts must have been steam-straightened after drying, and wondered whether a wheel- or pole-lathe had been used.

The detailed accounts by Morgan and Griffith came along quite close together in the 1940s and '50s; Griffith doesn't seem to have been aware of Morgan's earlier work. Most later writers interested in Clissett seem to have found and used Morgan's paper, but the material in Griffith's dissertation remained unpublished, and not referred to until now. The two accounts present some problems for the researcher. They sometimes agree, and at other times they disagree. They do not cover exactly the same aspects of the work and, in some cases, we only have a single account of a procedure. Both writers seem to have been working from verbal descriptions of Clissett's chairmaking and tools, so some variation in interpretation is hardly surprising. Griffith interviewed Edward Gardiner at about the same time as Will Clissett, and attempted to compare their methods; there may have been some muddling of the two.

The following is an attempt to bring together the accounts by Griffith and Morgan, along with observations based on the workshop photographs. There are a few other sources. Mike Abbott has made a study of Clissett chairs, including dismantling, and has some important observations.<sup>8</sup> Other authors, such as Wight,<sup>9</sup> Sandford,<sup>10</sup> and Bethell,<sup>11</sup> largely recycle Morgan's account, and don't tell us where any additional information came from; care should be taken in using any details attributed to them. An interview in the 1970s with Clissett's youngest surviving grandson also adds a little detail, though though at a distance of some sixty years.<sup>12</sup> Some further information has been gleaned from observation of Clissett's chairs. Any direct quotes from Will Clissett come through Griffith.

This outline principally describes the making of ladderback chairs with rush seats. The lack of detail, amongst the various accounts, of the making of spindle-back chairs or wooden seats suggests that Philip's grandsons had little experience of these designs. The basic structure of the ladderbacks and spindlebacks is similar – they are both frame-built, though there are differences in the pegging. Variations in detail between the two types are not confined to the backs of the chairs, however. Turnings are consistently different, as are the shape and depth of arms.

Clissett's general method will be familiar to anyone conversant with green woodworking. The specific details, though, are hopefully a useful record of how his particular chairs were made.

### ***The workshop and tools***

Philip Clissett is often described as a "bodger". This he most certainly was not. Bodgers worked directly in woodland making turned chair parts such as legs which were then sold to workshops or factories where shaped parts were made and chairs assembled and finished. Sparkes, in his book *The English Country Chair*, describes the work of the bodgers in the beechwoods of the Chilterns, and includes photographs of bodgers at work, and stacks of chair legs set out to dry.<sup>13</sup> Clissett always described himself as a chairmaker and/or woodturner.

In contrast to the Chiltern bodgers, Clissett worked in his own workshop, made all the chair parts, assembled the frame, rushed the seat, and finally took his finished chairs to market. The modern green woodworkers, who set up in the wood like bodgers but make complete chairs, are not quite following Clissett's tradition, though clearly inspired by him in many cases.

The workshop was a brick-built room, reputedly built on to the back of Clissett's cottage though it is difficult to be certain of this given some of the details in the photograph. It has since been demolished. The workshop appears to have a fireplace to the right, and a window beyond that. Immediately above this window is a skylight, possibly constructed

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\* Thanks to Bill Cotton for passing this on to me.

specifically to illuminate the lathe below. The walls are well-covered in racks and pegs for hanging tools, and shelves for bottles, tins and jars.

The workshop is dominated by the lathe with its pole, cord and treadle. The need for good lighting over the lathe means that it is likely to have been in this position ever since Clissett set up the workshop when he arrived at Stanley Hill in the early 1840s. The lathe is described in detail below.

Behind the lathe is a rack of turning chisels and gouges conveniently to hand on the back wall of the workshop; these include the massive three-inch chisel mentioned by Will Clissett (see below). Above the chisel rack hangs a row of template rods; these are also described below. Above these is a bow-saw. Further to the left hangs a clutter of tools; most are not easily distinguishable, but there is a long augur amongst them. Below these is another rack of chisels, presumably for bench work.

Against the back wall stands a completed armchair, and a side chair clamped up with a twisted cord running diagonally between the left-front and right-back legs. This chair is unlikely to be a product of this workshop, as the back legs are sawn rather than turned. Probably, this is a re-seating job, with the chair requiring some repair before the seat is made; an indication that this workshop was not solely used for the manufacture of the familiar Clissett products.

The left-hand wall is another clutter of tools and other paraphernalia, racked, hanging and shelved. The most obvious item is an oil lamp, though it is difficult to imagine the exacting work of chairmaking being undertaken by lamplight. In the left-hand top corner of the photograph, many shaped templates are hanging from the ceiling. The broad ones appear to be templates for wooden seats, and others probably include arms and slats, all placed conveniently for the workbench and shave-horse where those parts would have been prepared.

A workbench is placed on the left-hand side of the workshop – close to the small window to catch the benefit of the light. The bench has a heavy leg vice fitted to the near end, and a plane sits at the back next to some prepared parts. Elsewhere on the bench are various bottles, tins, rags and other items, including the all-important mug of tea!

Between the bench and the lathe amongst a mess of shavings stands the shave-horse, used to hold lengths of wood so they can be shaped with a draw-knife. Like the lathe, the shave-horse is an ancient and simple invention, and would usually have been made by the craftsman himself.

On the far right of the photograph, in the lower corner, is another workbench with a three-rung side chair behind it. A board is laid on the bench with a complicated array of clamps and iron weights, possibly holding items for drilling or mortising. The clamp may have been foot-operated. Beyond this bench, some small tools and a pair of bellows hang over the fireplace. Above the coat, to the left of the fireplace, are one or two intriguing turned and jointed frames. Along with so many other items in this workshop, it would be good to know precisely what they are.

### ***The lathe***

The pole lathe is an ancient invention. Illustrations exist from the 13<sup>th</sup> century onwards, and the various parts change very little. The bed of the lathe consists of two stout beams of timber with a few inches between them, supported on legs at each end. Into the gap between the two halves of the bed are dropped the legs of two stocks that carry respectively

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\* Thanks to Bill Cotton for this observation.

the fixed and movable steel points that hold the work. These stocks (sometimes called puppets, poppets or poppies) can be slid along the bed, and each is fixed in position by a wedge driven through a hole in the leg below the bed. A cord is suspended from a flexible pole fixed above the lathe, wrapped around the work, and attached to the end of the treadle. Bearing down on the pedal causes the workpiece to rotate, and the pole pulls the work back in the other direction when the treadle is released. Pole lathe turners can only cut their work on the down-stroke, with the work rotating towards the user, so it is an iterative process rather than continuous as with motorised or treadle lathes.

Pole lathes vary in both size and form, dependent on the work they are to do, on the height of the user, and whether they are to be portable or fixed. Clissett's lathe was large, capable of holding work-pieces up to six feet in length. We can see from the photograph that it was a massively made affair with heavy timbers fixed though with large bolts. Morgan's description of the lathe (see Box) makes this clear.

Several features link his lathe closely with the illustration by Joseph Moxon in the 17<sup>th</sup> century (Figure 7.3).<sup>14</sup> Its most marked difference from most modern pole lathes is the adjustable treadle that allowed the cord to be easily moved across the work.

This arrangement seems exactly that illustrated by Moxon. In addition, Clissett's treadle has, from the photograph, some sort of vertical board arrangement alongside, possibly to reduce build-up of shavings under the treadle.

Like Moxon's lathe, Clissett's had a "seat", though this does not appear to be adjustable. Moxon clarified that the "seat" is not actually sat upon:

...the Workman places the upper part of his Buttocks against it, that he may stand the steddier to his work, and consequently guide his Foot the firmer and exacter.

The pole was made of ash according to Morgan, and of larch according to Pearce; both would work equally well. In Moxon's lathe it was fixed by a single pin so that it could move from side to side when the craftsman needed the cord in different positions. Clissett's pole appears to be fixed by some sort of iron fitting at roof height near the left-hand wall. It then passes through two large staples driven into a cross-beam. This would allow some side-to-side movement at the same time as limiting the downward pull, and appears similar to Moxon's illustration. Clissett's pole appears to be double for part of its length, perhaps affording more power.

One other feature of Clissett's lathe is worth highlighting. Morgan's description refers to a "sloping slot" in each poppet, through which the tool rest was fixed. The photograph shows that each poppet had a flat piece of wood projecting at a downward angle away from the

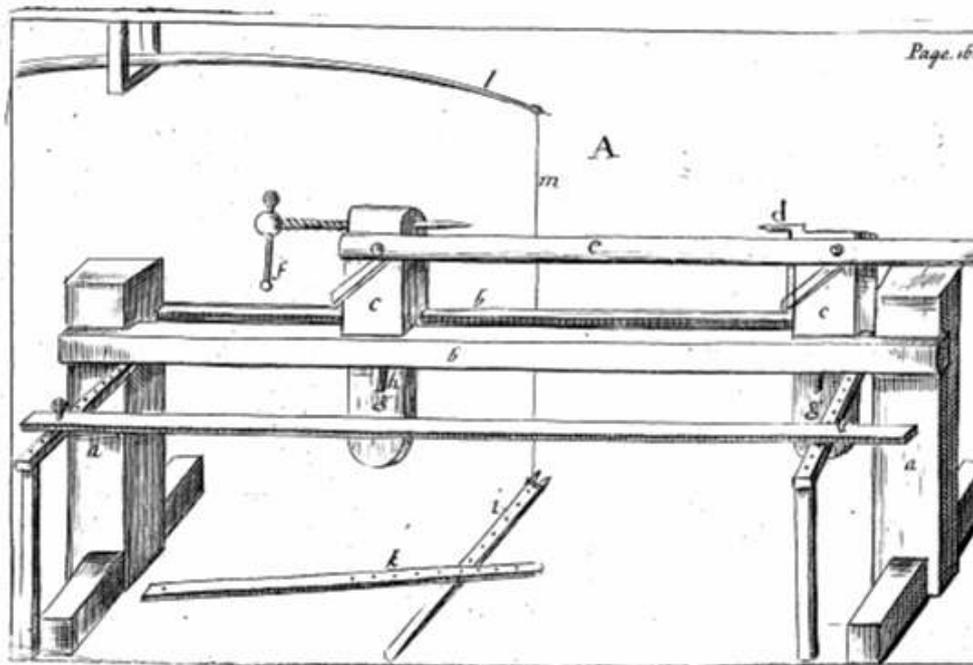
*Philip Clissett's pole lathe  
(as described by F.C. Morgan<sup>4</sup>)*

The bed of the lathe was made of two stout pieces of timber five inches wide and six or seven inches thick, with a space between (of) about four inches. Between these, two upright blocks or "poppets" were fitted; they were held below the bed of the lathe by a wedge inserted in each. Through the top of the right poppet was an adjustable screw for holding firmly the wood to be turned, and each had a sloping slot through which a length of timber was fixed for the cutting tool to rest upon. As the "poppets" were moveable they could be arranged to take any length of wood up to six feet.

The pole was made of a pliable piece of ash one and a half inches thick. This was fixed at one end at right angles above the lathe, and to the other end a horsehide thong six to eight feet long was attached. The thong was thrice wound round the piece of wood to be turned, and then fastened to a treadle.

(The treadle) was in two pieces. One, a stout piece of sawn timber, reached the whole length under the lathe and was hinged with a loop hinge on the right. At right angles to this was another piece of timber also hinged with a loop hinge to the rear of the craftsman, and passing under a beyond the first piece to which it was attached by a pin. This was also adjustable and could be moved to either the right or the left as the workman required, by altering the position of the pin, the first piece of wood being bored in several places for the purpose. It was to this that the lower end of the thong was fastened, forming an angle of about 70 degrees above and below the "poppets".

user. Exactly the same arrangement can be seen in the pole lathe erected by Ernest Gimson



*Figure 7.3. Pole lathe, as illustrated by Moxon (1678).*

in his workshop at Pinbury.<sup>15</sup> Nothing like this is evident in modern versions of pole lathes (at least as far as I can ascertain). Although the craftsman's side of the lathe is not visible, we can imagine the extension of these canted timbers on the other side, and how this would provide an angle which would hold a suitably shaped tool rest very firmly. Clissett's tool rest can be seen in the photograph; it appears to have an upper surface that slopes up towards the work.

Long thin workpieces tend to bend or "whip" in a lathe, making it difficult to maintain contact with tools. Both the long back legs and the longer stretchers suffered from this problem. To counter whip, Clissett used an adjustable steady (Figure 7.4) which could be fitted to the bed of the lathe. It had an open curved collar that fitted over the workpiece and pivoted on its fixture to the lathe bed. Its position along the workpiece could be adjusted by means of a wedge under the bed of the lathe, in the same way as the stocks were adjusted. Further adjustment, to account for the thickness of the piece, was afforded by a lead wedge behind the pivoting collar. The collar bore down on the middle of the workpiece, giving some support. According to Griffith, the collar had to be oiled to prevent the wood burning, and this tended to leave a mark on the piece which was visible on the finished chair (though I have never been able to find such a mark).

### **Materials**

Philip Clissett made his chair frames from green ash, while seats were fashioned from elm boards or twisted rush. Surviving spindleback armchairs usually seem to have arms and top splats in cherry, and laburnum is known to have been used for arms. Ladderbacks were made entirely from ash and rush, except in the single known case of a chair with unusual slats and an elm seat (possibly an earlier chair).

Clissett used coppiced ash, tall straight stems, six to nine inches in diameter (different author's give differing information on this), which would have been harvested during the winter. A 1940s hearsay record tells us that Clissett obtained his timber, in later years at

least, from Childer Wood,\* on the Hopton Estate at Canon Frome close to his home. A later writer claims that he hauled it home himself in his donkey cart.<sup>9</sup> But, of course, he got it from other places as well, and did not always have his own transport. William Bettington, a local haulier,<sup>16</sup> kept a detailed notebook of transactions for 1846 in which he mentions Philip.<sup>17</sup> On 6<sup>th</sup> December he earned five shillings for “Hauling Ash for Philip Clissett from Woodcroft”. Woodcroft is in the north of Bosbury parish, about 2½ miles from Clissett’s workshop. It seems likely that Clissett bought timber from wherever suitable material was available locally. Morgan tells us that “Clissett usually cut enough wood to make a dozen chairs at a time”. It’s not clear whether he intends this to refer to the cutting of standing timber (in which case the statement would seem questionable, as this would not be economical), or to the sawing up of stored poles (which seems more likely).

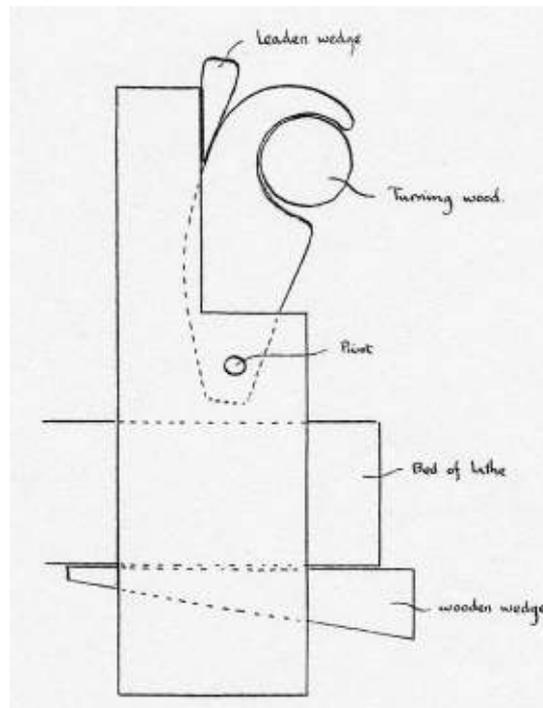
We have no information about where or how other timbers were acquired. Rushes for seats were obtained from Upton-upon-Severn, and possibly from the River Lugg.<sup>10</sup>

Although wooden pegs were used to secure several joints in Clissett’s chairs, nails were used to secure wooden seats to the frieze at the front. Other hardware is evident in Clissett’s prayer seats; hinges for the flap, and screws to secure the fixed part of the seat to the side rails.

Modern greenwood turners try to use timber with straight grain, avoiding faults, knots and so on. Clissett’s chairs, on the other hand, often have quite major faults in the timber, sometimes to the extent that the turning itself was affected (Figure 7.5). This willingness to accept less than perfect work was no doubt due to Clissett’s relatively poor circumstances where every piece of timber was potentially valuable.

### ***Cutting up the pole***

The first job was to cut up ash poles into suitable lengths for making the various chair parts. At any one time, Clissett would cut up enough to make a dozen chairs. This work was most likely done outside. Back legs were always made from the lowest part, the butt, of the pole, partly because these were the largest pieces, and partly because this is the part of the pole which warps most easily; an advantage because the back legs had to be bent. Morgan was told that the butt end of the pole was always used for the legs because the wood was tougher and stronger than higher up.



**Figure 7.4.** Clissett's steady or "collar", fixed to the lathe when needed to prevent whipping of long thin workpieces (as drawn by David Griffith).

\* Note that this is not the woodland known today as “Clissett Wood”. Childer Wood is further east.



**Figure 7.5. Fault in timber resulting in an abnormal bulge in the tapered arm support. This chair is in the Butcher Row House Museum, Ledbury.**

The next part of the pole was used for front legs, and higher still for the slats of the ladderback. If there was enough length left in the pole, the remainder would be used for stretchers. We have no record of the cutting of timber for the arms of armchairs, the spindles of spindlebacks. Scraps were used for the side rails of rush-bottomed chairs; these would not be seen when the chair was completed.

Modern chairmakers tend to look for ash with a straight grain and without knots. Clissett seems to have been a lot less fussy. Knots and other timber faults are often seen in his work. Sometimes timber was used that could not be turned into an entirely round form along its whole length. This acceptance of faults hints at an extremely economical use of timber, perhaps the only possible strategy for most poor rural craftsmen.

#### ***Roughing out the parts***

Lengths of timber intended for rounded parts (legs and stretchers) would be split into four, six or eight segments, depending on the thickness of the pole, each with a more or less triangular section. This cleaving or rending was done with a lathing axe (known as a froe in some localities) driven by a large wooden mallet or “maul”. Splitting started with dividing the length in half; “Making sure you went all the way down through the centre was part of the art” according to William Clissett.

The pith, heartwood, and the corners were removed from these triangular pieces with a facing axe to produce a square section. Then the corners were removed with either the facing axe or a draw knife (depending on author) to produce an octagonal. A draw knife was then used to straighten up the pieces, holding each in the shave-horse, and William Clissett considered that it took keen judgement to take off shavings in the right places. If any pieces couldn’t be trued up by this method, then a special bending brake was used. Sometimes a ½cwt (25 kg) weight was sufficient to remove the bend in the time it took to turn a piece.

According to Griffith, to make slats pieces were split radially with the lathing axe from the cleft pieces of ash, and he provides a diagram showing how this was done. This must be wrong – it would result in very clear regular grain, effectively stripes along the long axis of each slat. Examination of Clissett’s chairs shows no such grain. Mike Abbott is very clear about this. He describes three ways of splitting timber; radially, tangentially, and “through and through”.

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\* Will Clissett was taught to call stretchers “staves” or “bars”, and the slats of the ladderbacks were “flats” or “benders”. Morgan, who presumably got his account from a Clissett family member, agrees over staves or bars, but refers “slats” rather than flat or benders.

“Through and through” (splits the piece) in the same way as a log might be sawn into planks. This is less common as it is much more difficult to carry out successfully. It is a technique often used by Philip Clissett when cleaving the back slats for a chair out of small-diameter logs.

Griffith may have muddled Clissett’s method with that of Edward Gardiner, with whom he spent a few days at about the same time. Gardiner used a band saw rather than splitting logs.

Slats for the ladderbacks were split out at a thickness of half an inch using a lathing axe. They were shaved down to about three-eighths of an inch with the draw knife, then planed down to their final thickness of just over a quarter of an inch.

### **Turning legs, stretchers and seat rails**

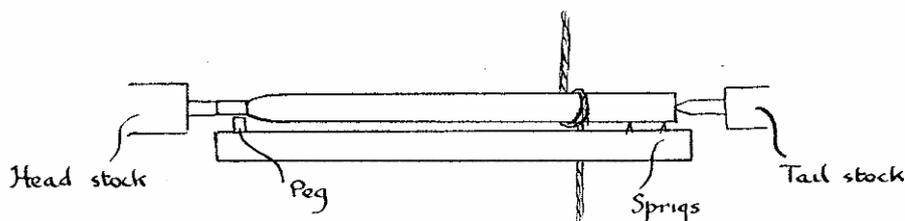
Clissett was regarded as a master on the pole lathe, and took only two minutes to turn a stretcher using a smoothing chisel, including the shaping of the tenons at each end. Ernest Gimson was impressed with Clissett’s speed, as he told Edward Gardiner:

Mr Gimson told me how quickly Clissett could turn out his work from cleft ash poles on his pole lathe, steam, bend and all the rest. He seems to have made a chair a day... and rushed it in his cottage kitchen...

Each piece would have been roughed out on the lathe with one of the gouges seen in the rack at the far end of the lathe (Figure 7.2). Finishing was apparently done with the three-inch “planing chisel”, again seen in the rack. The method used for turning stretchers was to turn an over-length piece to size, and then turn one tenon by eye. Then a template rod was taken down off the wall. It was fitted with a peg to rest against the shoulder of the freshly-turned tenon, and two sprigs which would mark the position of the other tenon (Figure 7.6); this was done with the workpiece stationary in the lathe. Presumably, the excess length was then sawn off. A similar approach must have been used to produce the thicker seat rails of elm-bottomed chairs.

There is no separate account of turning the legs or spindles. This is a pity as it means there is no description of the templates for turned decoration.

Clissett’s speed in turning chair parts does not seem to have affected his accuracy. The dimensions of the chairs at the Art Workers’ Guild are “almost micrometrically identical, his turning and finishing is excellent and the tight fitting of the green wood dowel mortices and tenons quite superb”.<sup>18</sup>



**Figure 7.6.** Clissett's method of marking the second tenon on a stretcher, as illustrated by Griffiths after discussion with William Clissett. Similar stick templates with sprigs were used for other turned parts to mark the position of mortices.

### ***Bending legs and slats***

After turning, the back legs needed to be bent to give the marked curve that makes for a more comfortable rake to the chair back. Clissett's method for this is not entirely clear. Usually, wood is steamed or boiled to make it pliable enough to be bent into shape and held in some sort of former (or "brake" to use the Clissett terminology) to fix the new shape during drying.

But neither Morgan nor Griffith describe any prior steaming or boiling, and William Clissett told David Griffith that sometimes, legs would even bend of their own accord; "You got to know which pieces would go". He described to Griffith how the former holding the bent parts was put into a cooling bread oven and the parts left in the "steam from their own moisture" for between twenty and thirty minutes. They were then dried out, in their formers, in front of the fire in winter, or outside in the sun in the summer. Morgan omits the oven part of the process, describing only the winter and summer drying "for two or three days". It looks, here, as though Morgan only captured part of the process.

The earliest observer of Clissett's method, D.S. MacColl, described Clissett as making chairs "with no other apparatus than his cottage oven for bending the wood", again no mention of boiling or steaming.<sup>19</sup>

Another take on Clissett's bending process came from Harold Clissett, Philip's youngest grandson;

I recall he used to steam the wood needed for any curved parts in the old shed down the garden. That'd make the wood pliable. Then he'd place several pieces at a time in his special iron "framer" where they were held in a curved position. Finally, he'd pop the frame, full of wood, into his neighbour's bread oven next door, to dry off.<sup>12</sup>

So Barbara Pearce, in reporting Harold Clissett's memories, apparently added an elaborate process that the other two reporters seemed to have missed out. This may be because Pearce understood furniture (being an antique dealer), and prompted Harold to remember how the chair parts were bent. On the other hand, we can't discount the possibility that steaming was an assumption on Pearce's part, and this fed into the discussion with Harold Clissett. Harold was fifteen years old when Philip Clissett died (and he did not live in Bosbury), so will have had little experience of his grandfather actually making chairs. Harold's memory of the former (which he called a "framer") also seems faulty, as other descriptions have it in timber, and Gimson's copy of it (still used by Lawrence Neal) is in timber.

Edward Gardiner told how Ernest Gimson described the speed of Clissett's chairmaking, including steaming.<sup>1</sup> But Gardiner never visited Clissett and, as his account of Gimson's reminiscences were fifty years after he heard them (and seventy years after Gimson visited Clissett), they may not be accurate. As Gardiner used largely seasoned timber, he may have made some assumptions about how Clissett worked.

It is perfectly possible to bend some timbers without steaming or boiling. In Jonathan Benson's survey of methods for bending timber, he points out that the high moisture content of green fresh-cut wood makes it supple and easy to bend.<sup>20</sup> Looking at his table of 82 timbers from around the world, European Ash is one of only nine listed as "excellent" because of their ability to be bent to a minimum radius of three inches (this test was carried out by steam-bending one-inch thick kiln-dried timber after about 40 minutes in a steam box). Perhaps small-diameter green ash will bend without steaming.

I was prompted to try exactly this as a result of observed differences between the bend on legs of Clissett's chairs, and those of Edward Gardiner and the Neals. Clissett's chairs have

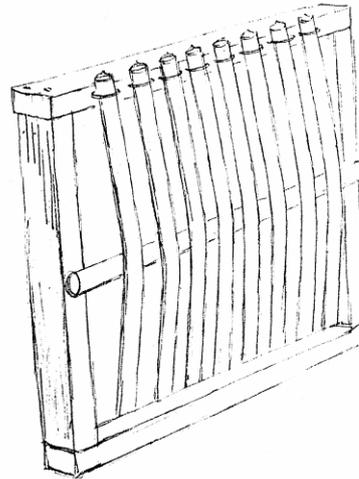
an apparently continuous bend, while Gardiner's are much more sharply angled. We can see exactly how the Gardiner bend is achieved by viewing video of Lawrence Neal bending boiled chair legs.<sup>21</sup> Lawrence uses a former very similar to that used by Clissett. Essentially, the softened leg is bent by hand over a fulcrum, resulting in a sharp bend at the fulcrum. My view was that bending a piece of cold green wood over the same fulcrum would result in the more or less continuous curve we see on Clissett's chair.

Green woodworker Mike Abbott kindly tried this out with legs he had made himself. It turns out that, cold, they bend without much effort, and produce exactly the sort of curve we see on Clissett's chairs – much to Mike's amazement. To produce fuller curves with steamed legs, Mike usually uses an elaborate system of former, lever, and clamps.<sup>22</sup>

Putting bent green wood in a medium-hot oven for a short time will “fix” its shape; this can be tested by anyone with short length of thin whippy hedgerow wood held it in a bow shape with string. If put the oven for 20 minutes or so, once cool it will keep its bend indefinitely. So it seems that Clissett *could* have used this method. It's certainly less effort than steaming or boiling, and explains the use of the oven, which wouldn't be necessary with steaming or boiling. And we should bear in mind that we are not talking about the sort of extreme bending that might be necessary for parts of a Windsor chair, but only a quite minor deflection.

The three descriptions of Clissett's bending method make it difficult to conclude anything definite, particularly in view of Harold Clissett's account which is further supported by Edward Gardiner mentioning steaming amongst the list of tasks that Ernest Gimson said Clissett could do very quickly. Certainly, steaming *and* putting the legs in the oven, as Harold is supposed to have recalled, seems altogether too elaborate a process.

Morgan and Griffith both give descriptions of the formers used for back legs. In contrast to Harold Clissett's description of an iron contraption, they agree with one another that they were constructed from four-inch square timber, their size limited by the size of the oven. Those for back legs held eight, while those for slats held twenty-four blanks. Legs were bent at right angles to the grain to prevent splintering, and this is easily confirmed by examination. Griffith provided a drawing of a leg former (Figure 7.7), but this differs from Morgan's description in several important ways. According to Morgan, legs were placed alternately on each side of the former rather than all on one side. This would result in a much narrower shape far more likely to fit in a cottage bread oven.



**Figure 7.7.** *Clissett's former for back legs, as drawn by Griffith. This is almost certainly incorrect (see text) as it would have resulted in too much bend in the legs. It would also have been too large, as configured – legs were actually arranged on both sides.*



**Figure 7.8.** *Marks left on legs by the hooks of the former can be easily seen on some chairs. On a 5-slat ladderback, they occur alongside the 2nd slat from the top.*

Morgan described the leg former as “two uprights with two stout flat pieces of wood nailed at an angle along the bottom at either side”. This formed a slot into which the lower end of each leg was inserted, and this is clearly different from Griffith’s drawing where the lower end is simply caught behind a four-inch timber. About half way up the uprights was fixed another length about four inches thick, and slightly rounded. A further piece of timber was fixed at the top with a row of four hooks on either side. The legs were bent against the rounded piece, and fixed into the hooks at the top. This describes quite closely the former used by Lawrence Neal, which traces its descent from Gimson’s time in Clissett’s workshop. The hooks referred to by Morgan and Griffith left marks in at least some legs, and these can be seen with varying degrees of clarity on surviving chairs (Figure 7.8). Different leg lengths would have required different sized formers.

Griffith’s description of the former, with the bottom of the leg caught behind a 4-inch timber, then bent around another timber fixed to the other side of the former, would have achieved a massive deflection of more than four inches, whereas the tall armchairs show a much smaller deflection in the back legs of about two inches. This can’t be correct.

Slats also had to be bent in a former. In this case we only have Griffith’s

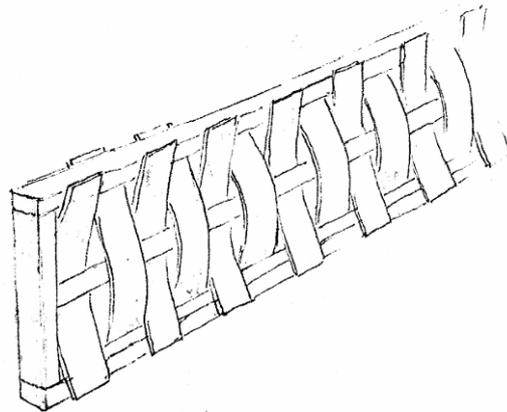


Figure 7.9. Clissett’s former for slats, as drawn by David Griffith.

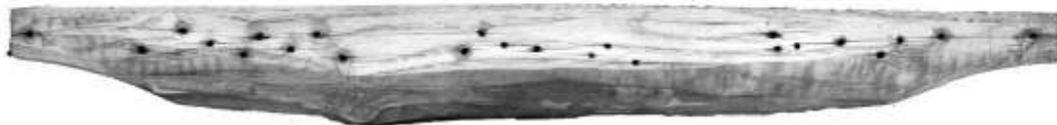


Figure 7.10. A seat rail from a rush-bottomed chair. Note the rough shaping, that the tenons are not shown, and that the holes in the surface are a result of a non-standard seat having been fitted to this chair.

drawing (Figure 7.9), and the dimensions are not clear, though he tells us that each former held twenty-four slats. However the slat former was built, it only needed to produce a deflection of about one inch (the deflection of each of the slats in a finished chair is only about  $\frac{3}{4}$ -inch from middle to end. Griffith’s drawing implies that the slats were bent before shaping; unfortunately, his text does not clarify this.

Spindle-back chairs also have curved slats and bars across the back, and these would also have had similar formers.

### **Shaping other parts**

Any parts of the chair which needed shaping – the slats, the arms, the seat rails of rush-bottomed chairs, and the friezes and seats panels of the elm-bottomed chairs – were first cut out with a bow saw, following the templates for that particular chair. Shaping was then completed, if necessary, with the draw knife, spokeshave or plane, held in the shave horse or on a bench, as appropriate. The seat-rails of rush-seated chairs were made from scrap pieces of timber (Figure 7.10). The turned seat rails of elm-bottomed were grooved along

one side, presumably with a plough plane, to receive the corresponding chamfer on the seat board (Figure 7.11).

**Marking and cutting the mortices**

Griffith contrasts Clissett's method of marking out with Edward Gardiner's. Gardiner used a notched template stick, placing a scribe into each notch to mark rings around workpieces that are clearly visible in the finished chair. He did this while the legs were spinning in his rotary lathe. Clissett used template rods fitted with sprigs for marking out centres for drilling, but marked up on a stationary workpiece, so no rings are seen. He apparently tapped the template rod with a hammer to leave what must have been pinprick marks on the workpiece.



**Figure 7.12. A clear scribe mark locating the position of a side stretcher mortice. (Photograph courtesy of Acme Antiques, Bexhill)**

While there are no scribe rings on Clissett's work, clear workshop scribe marks of a different sort can usually be found (Figure 7.12). These are short, and often obscured by dirt or varnish, but are consistently seen on all PC-stamped chairs, and on ladderbacks known to have been made by Clissett. They mark where the side stretchers are mortised into the legs, on the back legs and the front left leg – never the front right. Occasionally,



**Figure 7.11. Seat rail and panel from an elm-bottomed chair, showing groove and chamfer arrangement. (Photograph courtesy of B.D. Cotton).**

similar marks (though rarely identical) are seen on other West Midlands chairs. On Clissett's ladderback armchairs, similar short scribe marks often mark the mortices for the arms on the back uprights, but they are absent from the spindlebacks I have examined.

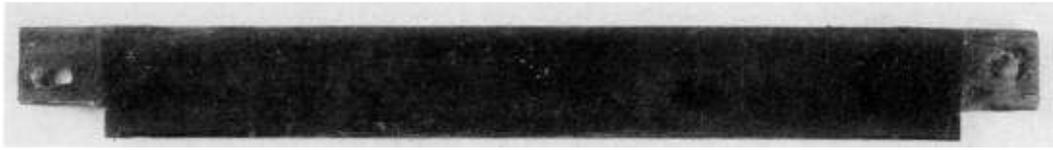
Legs were drilled almost all the way through at each centre. A chairmaker's bit was used to produce a tapered hole almost all the way through the diameter of the leg. According to Morgan, Clissett always sharpened his own bits with "a tool made from a hand-saw file with the blunt edge ground down to a point, to get three perfect cutting edges".<sup>\*</sup> The

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<sup>\*</sup> No-one I've spoken to understands quite what this method really consists of. It seems similar, however, to a method for sharpening the inside edge of a spoon bit with a scraper made from a

rectangular mortices for the slats were also drilled prior to chopping out, and a similar method may have been used to make the mortices to accommodate the frieze of spindleback chairs.

### Assembly



**Figure 7.13. A frieze from an elm-bottomed chair showing tenons drilled through for pegging. (Photograph courtesy of B.D. Cotton.)**

The front and back of each chair was assembled separately, then the two joined by the side stretchers and rails (and arms in the case of armchairs) to produce the complete chair frame. Each stretcher, rail and arm had to be rammed tightly into its matching mortice in the appropriate front or back leg (modern chairmakers usually use a clamp to do this, but we don't know Clissett's method). Slats were pushed into their matching rectangular mortices, and the topmost one pegged into position; sometimes, other slats were pegged as well. Care had to be taken to keep parts parallel, and this was checked by sight. Once the front section of the chair had also been assembled, front and back were ready to be drilled for the side stretchers and rails.

The fronts of rush- and elm-bottomed chairs were made somewhat differently. On the former, a roughly finished rail (Figure 7.10) would form part of the frame for the rush weaving – this wasn't pegged, in contrast to the front rails of spindlebacks. On those, a narrow slat (Figure 7.13) either rectangular or with a fancy shaped lower edge, was pressed into a rectangular mortice. This inherently weaker construction was pegged through the back of the leg into the frieze (Figure 7.14). When the front and back of the chair were united, the side sea rail would also be pegged into the front and back legs. In contrast, rush-seated side chairs were only pegged at the top slat at the back with none elsewhere in the chair other than, sometimes, one or more additional slats. Armchairs were pegged, in addition, through the mortices at either end of the arm.\*

Pegging on these chairs capitalised on the greenwood method. Counter-intuitively (to those familiar with the proverb), a square peg was knocked into a round hole. As the green timber of the legs dried out further after making, it would grip tightly onto the peg just as it gripped the tenons of stretchers and rails.

Timber seats must have been put into place in their housing grooves as the front and back frames were united by the side stretchers and seat rail. In doing this, Clissett, along with all the other West Midlands chairmakers who employed this method, was echoing an ancient method that was used on three-legged stools made since at least the 15<sup>th</sup> century and, later, on four-legged chairs. The only real modification appears to be the replacement of the front grooved dowel with a flat frieze, so introducing a significant improvement in comfort.

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triangular bit with the sides ground down to form a sharp edge ([www.youtube.com/watch?v=px6np8vpuMc](http://www.youtube.com/watch?v=px6np8vpuMc) accessed 13 Jan 2017).

It's a tiny point that hardly seems worth mentioning, but Clissett's ladderback armchairs almost always have the blind mortice at the front of the arms pegged on the *inside* (i.e. seat side) of the arm. Conversely, the spindleback armchairs are almost always pegged on the *outside* of the arm.

According to Morgan, Clissett used glue to assemble his chairs. But chair frames made in the West Midlands tradition were typically assembled without glue.<sup>23</sup> After disassembling a large number of the Art Workers Guild's chairs for restoration, it was concluded that they had been put together without glue; indeed "reassembly once there is the slightest touch of adhesive on the tenons is amazingly difficult".<sup>18</sup> That Morgan's informants thought that glue was used is a puzzle. It suggests that either they may have had little direct experience of how Clissett's work was actually done, or that practices changed in Philip's old age when his grandsons had taken over (or that Morgan simply assumed that glue was used, being ignorant of the greenwood method). There is nothing in Griffith's account of his discussions with William Clissett to support the idea that practices changed and that glue was used. Only one chair I know of, a child's high chair, has no pegs in the usual places, suggesting the possible use of glue.

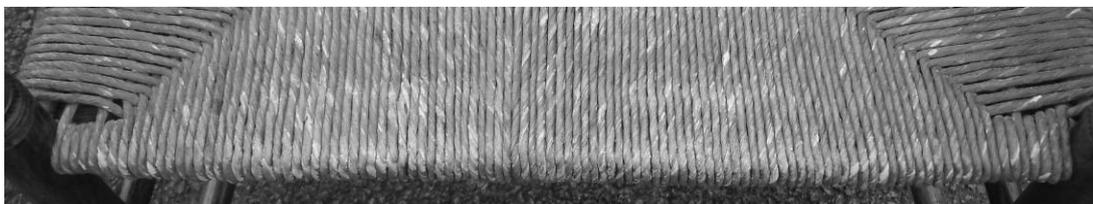
### ***Seating with rush***

Seating a chair with rush saved the need to make a board seat, but was itself a complex process. Ernest Gimson was particularly impressed by the fineness of Clissett's rushwork, and thought that the rushing done locally on his own chairs far too coarse – "about the size of a hemp clothes-line". Gimson recalled that Clissett sometimes used strands as fine as one-eighth of an inch and that, on his famous high-back armchairs, he graded the rush as the work proceeded, finishing with the finest in the middle of the seat.

Clissett's method of rushing was distinctive. Instead of filling the front corners by adding extra strands of rush, he merely wrapped around the front rail for 7-8 turns on each side, leaving a distinctive empty area (Figure 7.15). This method has been found on more than twenty ladderback chairs of good provenance, including one with Clissett's stamped initials under the arms. The distinctive pattern can be seen in the earliest available photographs of Clissett's, including the armchair at the back of Clissett's workshop in . In the drawing of Clissett by Max Balfour, he is just starting the rushing, and has made six or seven turns around the left-hand side of the front rail (Figure 7.1) which appears to be the early stages of this method.



***Figure 7.14. Front leg joints on a timber-seated chair showing pegging for side rail and front frieze. (Courtesy of B.D. Cotton)***



***Figure 7.15. Clissett's distinctive style of rushing the front corners, as seen on many ladderback chairs of good provenance.***

Counting strands on these original seats indicates that Clissett's rushes were, as one might imagine, variable in thickness. While five to six strands per inch is common, it is possible to find seats that comply exactly with Gimson's recollection. Amongst the chairs at the Art

Workers Guild, those with original seats have noticeably much finer rushwork than those with replacement seats.

### **Finishing**

The chair was now essentially complete. The surface finish was entirely achieved by the edged tools used during its manufacture; there was no rubbing down with abrasives. Whether chairs left the workshop with some additional finish was, presumably, the choice of the customer. Of the chairs at the Art Workers' Guild, the high-backs are stained, and the low-backs unstained. Amongst chairs retained within the family there are, again, stained and unstained examples. Chairs were given their colour finish *after* rushing – this is clear from the lack of staining on legs under the rush, and on the rush itself where original seats survive. Clissett's original finishes were often applied without a lot of finesse – it has often collected under the stretchers in drips interspersed, sometimes, with bare patches. Finishes are usually brown, but a black finish is seen fairly frequently. Sometimes, a reddish ground colour is seen under the top coat.



**Figure 7.16.** Philip Clissett's stamped mark, usually made on the tops of both back legs. Note also how the grain runs front to back.

A couple of examples of decorated Clissett ladderbacks have been found. This decoration is unlikely to have been done in the Clissett workshop. One example is highly decorated in gold over black paint, with lettering and a date (1896). The other is again black-painted, this time over the seat as well, and the slats are decorated with very naïve, probably stencilled, floral motifs.

Some, perhaps all, of Philip Clissett's spindleback output was stamped with his initials, usually on the top of both back legs (Figure 7.16). In the case of the prayer chairs in Hereford Museum, one is stamped on the top of the both front legs, under the lift-up seat. Clissett's ladderback chairs do not usually have these stamped initials, but a few chairs have been found with his stamped initials under the arms.

### **Selling the chairs**

Morgan's informants told him that Clissett would often take a load of chairs in his donkey-cart to Hereford and the surrounding districts to sell them. Local couples about to be married are known to have ordered sets of chairs from Clissett. Once Clissett's chairs were seen at the Art Workers' Guild, he received orders from much further afield.

Many ladderbacks were apparently exported to the USA before 1900 (though there is no independent evidence for this, and any chairs I have located in the USA turned out to be recent imports), and there was good trade with London and some with Glasgow.

Edward Gardiner passed on a story from Ernest Gimson concerning Clissett's attitude to orders for chairs.<sup>1</sup> Apparently, when orders were received, they were simply stuffed into a teapot on Clissett's mantelpiece. When some chairs were ready, Clissett simply pulled an order at random from the pot and fulfilled that one. Gimson wondered whether some customers ever got their chairs at all. True or not, Clissett made and sold an enormous number of chairs, evidenced by the large number still around today.

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