

MEDIEVAL GLASSWORKERS IN NORTH STAFFORDSHIRE

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ON the Roman sites at Wall, Rocester, Uttoxeter, and Hales, but not at the Borough Hole fields in Wetton, fragmentary glass of Roman workmanship has been found along with Roman pottery, and in all probability this is the earliest glass that has been discovered in the northern part of the county, though of course no claim can reasonably be made that it is of local origin.

Although it is not possible to state definitely when glass was first made in Staffordshire yet there are certain references in early times which show that the industry was carried on in the county long before the advent of the Huguenots from the south. In the medieval state documents relating to Staffordshire which have been published by the William Salt Archæological Society there are some references to individuals whose surnames are suggestively derived either from Glascote or Glazeley. Certainly Glascote, a part of the town of Tamworth, connotes a place where glass was once made. But we have no reason to believe that the de Glascotes, met with in records of the thirteenth and fourteenth centuries were glassworkers. They merely took their name from a place where glass once had been made.

Similarly the de Glazeleys of Staffordshire, a short genealogical table of whom appears in volume IV of the William Salt Archæological Society's volumes, are not glassworkers, and they derive their name from Glazeley in county Salop.

ABBOTS BROMLEY GLASSWORKERS.

The earliest glassworkers of Staffordshire so far recorded occur on the subsidy roll of the sixth year of the reign of Edward III [1333] when Simon le Glasemon and Richard le



INTERIOR OF RESTORED FURNACE.



GLASS FURNACE RESTORED.

Glasmon, both of Abbots Bromley, pay 4s. 8d. and 6s. 8d. respectively. By the beginning of the next century the descendants of these people have the surname *Glassman*, but there is no indication that they are glassworkers. Rogerus Glasemon [there is no distinctive "le" to his surname to indicate that he is a glassworker] in a rental of the Bagot property in 1402 is mentioned as holding one garden lying next the high way at the will of his lord at 12d. per annum. He is most likely the same man who occurs on the Plea Rolls in Trinity term 1414 and there he is described as Roger Glasmon of Rugeley, *yeoman*. In the same rolls of the same year, but in the Easter term William Glasemon of Rugeley, *yeoman*, was one of a great number of persons ordered to be produced by the sheriff for divers trespasses and insurrections.

Both Roger Glasmon and William Glasmon, yeomen of Rugeley, in 1415 were fined 40 shillings for accepting a livery of cloth from Edmund Ferrers of Chartley at Christmas 1413. Although all these names in the fourteenth and early fifteenth centuries denote that glass was being made in Staffordshire in early times, there is only one definite piece of evidence so far which proves that the Staffordshire glassworkers were of more than local repute.

Some of the most important glassworks in England in the fourteenth century were in the Wealden district of Surrey and Sussex, and perhaps the most important glassworker of them all was John Schurterre who settled at Chiddingfold in 1343 and owned three glass works in the neighbourhood.

After his death in 1379 his widow Joan wanted a manager until her young son grew up and was capable of taking over the glass works. The man that Joan Schurterre engaged in 1380 was John Glazewryth from Staffordshire, and in the last year that he was manager at Strudwick, viz. 1386, it is probable that some of the glass then supplied to Winchester College and New College, Oxford, came from the Schurterre glassworks.¹ That John Glazewryth should be brought all the way from Staffordshire suggests that the glassworkers in that county were well known to their fellow craftsmen in southern parts.

¹ S. E. Winbolt's letter in "The Times", 26 November, 1932.

GLASS HOUSE HAY.

Nearly a century afterwards from a case which was opened at Stafford in the reign of Edward IV we know that not later than some time in the fifteenth century there was a glass-works in Wolseley Wood. According to the Plea Rolls in the Michaelmas term 14 Edward IV [1474] presentation had been made at Stafford eight years earlier that Thomas Wolseley, gentleman, and Ralph Wolseley, late of Wolseley, gentleman, on 12 March 5 Edward IV [1465] had enclosed 1000 acres of pasture in the demesne of Heywood so that the Bishop of Chester and all his predecessors in right of their Cathedral Church of St. Cedde of Lichfield and their tenants in Heywood, Rugeley, etc., as well as John Stanley, kt., and his ancestors and John Colwyche and his ancestors had been deprived of their common of pasture in the said 1000 acres. Thomas and Ralph Wolseley appeared by their attorney and denied that the plaintiffs had any common of pasture in the said 1000 acres or that these lands were part of the demesne of Heywood.

Also they denied that they had enclosed more than 300 acres out of the 1000 in question. As regarded the enclosure Thomas Wolseley stated that at the date of the presentment he was seised of the manor of Wolseley in demesne as of fee and that the 1000 acres of pasture now in question from time out of memory had been parcel of the manor and had always been called Wolseley Wood and that he and all his ancestors had been accustomed to enclose portions of the said 1000 acres at their pleasure and to hold them in severalty at all times of the year and that among other parcels his ancestors and those who held the status of the said Thomas in the manor of Wolseley had enclosed divers parcels of the said woods and pasture, viz., one parcel called Glashoushay, another parcel called Milneconynger and two other parcels called Le Riddyngge and had held them in severalty and finally the said Thomas stated that he had enclosed the said 300 acres of pasture with palings which were within his manor of Wolseley as was lawful. The case came up again in Michaelmas term 21 Edward IV [1481] when Thomas Wolseley was dead and

Ralph Wolseley had succeeded his father. The particulars detailed were nearly the same as those given on the Plea Roll in 1474 except that the enclosure was 200 acres instead of 300. This case shows that prior to the year 1466 an enclosure or "hay" had been made in Wolseley Wood for the purpose of glass-making. Sir E. C. J. Wolseley, the present owner of the enclosed Wood does not know where the site for the Glass House is, but he still possesses the deed from Edward IV granting permission to enclose a park for deer and to erect saltoria (i.e. deer-leaps). Some of the deer-leaps have been kept in repair up to the present day.

GLASS WORKS IN BAGOT'S WOOD.

Besides these medieval glassworkers at Abbots Bromley and Wolseley Wood to the south-east of Stafford, we have mention in 1508 of a glazier on land belonging to the Bagots of Blithfield.

On 15 July 1508 Lodovicus Bagot of Blithfield in a grant to Sir John Montgomery and others mentions one pasture called Wynsleys then in the tenure of Thomas Harve, glasier. Also we know from the Bagot MSS. at Blithfield that Richard Bagot established glass furnaces in Bagot's Wood late on in the sixteenth century, and the references come to an end in 1612 when by Act of Parliament glassworkers were no longer allowed to use charcoal for their fuel.

There is not much doubt that the glassworks set up by Richard Bagot were in the Marchington Woodland district in Bagot's Wood on the north-east side of Bagot's Park. At Gorsty Hill a hilly field to the south of Glasshouse Farm is called Glass House Meadow. The parts of Bagot's Wood which adjoin the meadow are known by the names of Glasshouse Bank and Glasshouse Coppice. When from Uttoxeter I walked out to investigate this site on 23 August 1933 I found no traces of the glass industry in the woodland parts, though there is evidence that charcoal burning has been carried out there; but in the meadow, a rough pasture field, without any digging, I found five pieces of old glass, three being fragments of window glass and one a small thin green

rod. There were no indications in the field where the glass furnace had originally been, but when the field is next ploughed relics of the glass industry are sure to be revealed.

GLAZING ACCOUNTS.

During the latter part of the sixteenth century there are quite a number of references, chiefly in churchwardens' accounts to windows in the Staffordshire parish churches which were evidently glazed and repaired locally. For instance, in 1543, from the Ministers' Accounts (No. 167) we know that twelve feet of glass for the chancel window of the parish church of Leek cost 52s. 4d. Also in the churchwardens' accounts of St. Michael's Church at Lichfield in 1589 there is the following item: "Payd to the glasier for fyve foote and halfe of newe glasse and for mendynge windows in the churche iiiis." At St. Mary's Church, Lichfield, on 12 January 1596 (new style) Ann Boylston was married to James Glasyer, but there is no indication that this man was a glassworker.

HUMPHREY AND THOMAS LIVERSAGE, GLASIERS.

Fortunately we do get some information about the members of one local family who glazed the windows of the churches and schools in the early seventeenth century, just about the time when the foreign element in Eccleshall parish was introduced into North Staffordshire. On the Quarter Sessions Rolls for Staffordshire which have recently been published by the William Salt Archæological Society we find several references to Thomas Leversiche, late of Abbots Bromley, glazier, who was indicted for assault and battery on 2 January 1590 [new style]. He is described as *late* of Abbots Bromley. Where had he gone? We are not sure but another glazier named Liversage is of record in the Pottery district a few years later. Only in quite recent years has the Rector of Stoke-on-Trent been able to get back into his custody some of the early churchwardens' accounts which had escaped destruction but had fallen into the hands of private individuals. Among those documents recovered by the Rector are the accounts for 1601, 1606 and 1610.

Raphe Turner, as churchwarden of Stoke, in 1601 renders account and states that two shillings have been paid to the glasier. A similar item occurs in Thomas Bucknall's account in 1606. Then in Thomas Tittensor's list of disbursements in his churchwarden's account of 1610 we get the name of the glasier.

"Item paid to Humfrye Leversuch for glasing ... 4. shillings." It is reasonable to infer that Humphrey Liversage who glazed the parish church windows of Stoke-on-Trent in 1610 was a relation of Thomas Liversage described in 1590 as late of Abbots Bromley—perhaps he was his son. Prior to the advent of Humphrey Liversage into the Pottery district much trouble had been occasioned in the large woodland areas of England by glassworkers who cut down so many trees to make charcoal for their fuel. Quite a number of glassworkers had been forced to leave some of the woodland districts where their wastage of the woods was deeply resented.

The use of coal had recently been found to be effective both in the smelting of iron and the making of glass, and it was only a matter of a few years before charcoal fuel would be stopped by legislation, so no doubt Humphrey Liversage was using glass made in a furnace where coal was the means for supplying the requisite heat. For other particulars about the Liversages who were glasier we turn to the records at Newcastle-under-Lyme. In the minute book of the borough for the year 1612 there is a long list of those people who pay rent for houses, land and encroachments and among the items there is this one: "Thomas Lyversage for a porch at his howse in Pencle Strett per annum iid." Perhaps this man is the glazier who was indicted for assault in 1590.

Two years later Humphrey Liversage is of record at Newcastle-under-Lyme. In the Corporation minute the following entry occurs:

"1614. Humphrey Liversage was admitted this year into his liberties upon this condition following, it is to say that he shall from time to time keep and maintain the windows of the church, schoolhouse, and steeple in sufficient repair, and shall yearly have from the town vis. viiid." This entry

implies that Humphrey Liversage was a foreigner who was admitted to the privileges of the borough on condition that he plied his craft and glazed the windows of the church of St. Giles and of the borough school, which latter had been built in the churchyard through the benefactions of Richard Cleyton in 1602 and John Cotton in 1609. For another eight years Humphrey Liversage carried on his work of a glazier in Newcastle-under-Lyme and then he resigned his rights as a burgess in favour of his son. Here is a transcript of the record: "1622. The 4th day of October, anno domini, 1622, Humphrey Liversage came before the Company, being a full assembly, and here resigned his place of a burgess, and at the same assembly the same company admitted Thomas Liversage his son, upon the same terms and condition, his father was admitted—viz., 'That he shall from time to time keep and maintain the church windows, the schoolhouse windows, and steeple windows with glazing sufficiently, and shall have yearly from the town vis. viiid.' "

The name of Thomas Liversage occurs in the list of common burgesses resident within the borough in 1624 when Charles Glemmon, Esq., was elected to be a burgess to serve as a member of Parliament for Newcastle-under-Lyme.

Nearly two years later, viz. 23 January, 1626 (new style) Thomas Liversich is one of the burgesses when Sir John Skeffington, knight, and John Keeling, Esq., were elected to serve the borough in Parliament. Similarly he is on the burgess roll of 23 February 1628 (new style) when Sir George Gresley, bart., and Sir Rowland Cotton, kt., were elected as burgesses to serve as members of Parliament. There is no doubt that this Thomas Liversage was the glazier because on 9 May 1628 we have the following record: "At the assemblie aforesaide it was concluded that Thomas Liversage shall have xxs. given him to repaire the scholehowse with glasse which he is content to accept of." In October 1629 he was elected one of the two churchwardens of the parish church of St. Giles.

Most likely he is the Glasier denoted in the following minute in the borough records:

“ 7 May 1629. It is also ordered at the saide assemblee that the Glasier that married Randull Smyths daughter, and widdow Mobberley Tho : Moreton his tenant shalbe removed and not suffered to dwell within the liberties of this Borowgh.”

In the parish church registers of Newcastle-under-Lyme the first record of a Liversage is the baptismal entry of Jane daughter of Thomas Liversuch and his wife on 17 October 1629. Was his wife the daughter of Randull Smyth? Of his numerous progeny recorded in later years it is interesting to note that Thomas Liversage's daughter Elizabeth, baptized in 1634, became in 1666 the second wife of the Reverend Edward Orme, one of the greatest benefactors to Newcastle-under-Lyme, for he founded in 1705 the Orme School, and its accumulated funds of nearly £30,000 in 1872 caused the Endowed Schools Commissioners to put forward a scheme for building the Newcastle High School, and the Orme Girls' School. The burial of “ Thomas Liversage, glasier,” occurs in the parish church register under date of 13 August 1653 and the burial of Elizabeth wife of Mr. Edward Orme, minister, occurs on 2 November 1684.

FOREIGN GLASSWORKERS.

So far we have been dealing with rather scanty records of English glassworkers in North Staffordshire up to the end of Queen Elizabeth's reign and on into the reign of James I. But for the last twenty years of the reign of Queen Elizabeth foreign glassworkers originally from Lorraine came into the old parish of Eccleshall via Sussex and Hampshire and perhaps Warwickshire. The parish church registers of Eccleshall have been printed by the Staffordshire Parish Register Society and from the entries of names of glassworkers in those registers Mr. A. A. Rollason published an account in the *North Staffordshire Field Club Transactions*, volume LIV, about these foreign craftsmen. It was only a short paper calling attention to the presence of the foreigners but no attempt was made to locate the sites of their works or to find out what kinds of glass they actually made. So that we may understand why these foreigners chose the

woodland districts of north-west Staffordshire for their manufacture of glass we must go back to consult the national records and see what foreigners were encouraged to come over to England. Besides the glassworkers in the Low Countries, Lorraine and Normandy—all noted for their work in various ways—some of the finest glass in Tudor times was made in the republic of Venice on the island of Murano, and about the middle of the sixteenth century workers in Venetian glass came to London. Before 1549 eight glassworkers from Murano had gone to Antwerp because they wanted work all the year round and at home they were unoccupied for two and a half months annually. By tempting offers in the reign of Edward VI they were induced to come over to England and they set up their works in the hall of the Crutched Friars in the city of London. The Venetian Council strongly objected to their skilled workmen teaching their craft—especially the making of crystal glass vessels—to foreigners, so on 8 September, 1549, they ordered the workmen in London to return and they threatened penalties if they failed to come. To this ultimatum the eight Venetian glassworkers replied that they would not be allowed to return because they had undertaken contracts which they must fulfil and if they tried to return they would be imprisoned in the Tower.

On 13 June, 1550, the Venetian Council allowed their truant craftsmen eighteen months in which to complete their English engagements. This arrangement proved satisfactory because seven did return. Josepo Casselari remained in London with Thomaso Cavato from Antwerp until 1569 when he went to Liège.¹

Another noted glassworker was Cornelius de Lannoy who came from the Low Countries towards the end of the year 1564, having been subsidised by Queen Elizabeth's government to introduce glasses of an ornamental kind "*verres façon de Venise*". According to Armigill Waade, Clerk to the Council, in a letter to Cecil, the English glass blowers could not make a single glass to please their master because the

¹ Hartshorne's "*Old English Glasses*", p. 149.

English materials were unsuitable, so he had to send away to Hesse and Antwerp. For one thing the crucibles or melting-pots were made from an ill-tempered clay which entirely failed at the high temperature required for the advanced crystalline quality of 'flint glass'. After the experiment of subsidising foreigners skilled in the making of glass had been tried, a Patent or Monopoly for twenty-one years was given to two foreigners to make window glass, and this Monopoly Patent was the means of bringing the Lorraine glassworkers into North Staffordshire.

It is rather difficult to estimate the effects of Monopoly Patents and the history of most of them has still to be written. It is not sufficient to base conclusions on the Monopoly debate of 1601, but the contemporary evidence of State Papers and Patent Rolls must also be studied.

Certainly at first, between the granting in 1561 of the Monopoly of Soap and 1567 when a Patent for glassmaking was made out, a great impetus was given to establishing industries in various districts, such as the copper industry at Keswick, alum in the Isle of Wight, brass and iron wire at Tintern, besides the introduction through these agencies of improved machinery and processes in all kinds of industries. Whether they really benefited the industries in the long run is another matter.

'THE LORRAINE GLASSWORKERS.

The man chiefly responsible for bringing over to England the Lorraine glassworkers was Jean Carré, a Fleming who had learned his craft in Antwerp, which city in the latter half of the sixteenth century was second only in importance to Venice as a European centre of glassmaking.

In August 1567 Pierre Briet and Jean Carré, being recommended by the Vidame (he was an officer who managed the bishop's temporalities and commanded his troops) of the Bishop of Chartres, wrote to Queen Elizabeth's minister Cecil asking for a License for twenty-one years to set up a glass house in London similar to those in Venice, for the manufacture of crystal glass for drinking vessels.

They stated that all the necessary materials except soda existed in the country and that fuel would be procured from Arundel. The petition was accompanied by a request from a body of French workmen from Normandy, who were evidently then in the Weald, for a monopoly of the window glass manufacture. On enquiry, one of the Chiddingfold glass-masters declared that he neither had made nor could make window glass: he only 'of his occupation' produced small things such as orinaux, mortars, bottles, etc.¹ Then the Frenchmen demanded a privilege of thirty years so that twelve furnaces in England and six in Ireland might be erected near the woods for fuel, near the sea for sand or sea-weed, or near the rivers for pebbles. In the request it is stated that such other materials used for the manufacture of glass as fougère (bracken or fern) ronces (briars) and cailloux (flints) are of little value. This application supported by Carré was not entertained by Cecil. But Carré was not easily put off. On 9 August he wrote to say that he was informed of the Queen's interest in the proposal and he followed this up by saying that he had erected two glass houses, one at Fernefol, Sussex, for Normandy and Lorraine glass by Her Majesty's License and one in London by leave of the Lord Mayor for crystal glass. He stated that he was sending for soda from Spain and that he required the patent for twenty-one years, though he heard that another wanted the privilege of making glass. The latter was a man named Anthony Becku (alias Dolin) with whom and the Queen Carré entered on a joint agreement on 12 August. This was the basis for the Monopoly Patent granted on 8 September 1567.

The substitution of Becku for Briet soon led to trouble. The following is a summary of the concession granted to J. Carr (Carré) and others [Pat. Rot. Eliz. p. 11 memb. 4. 33, 8 Sept. 1567]:

Anthony Becku alias Dolyn and John Carr born in the Low Countries petitioned for the privilege and license to practise within the realm of England the 'Mysterie of

¹ Hartshorne, "Old English Glasses", 1897, p. 154.

makinge of glas for glasinge such as is made in ffraunce Lorayne and Burgondy' and to inhibit any other person for twenty-one years. Becku and Carr are to supply all glass for glasing and to sell to subjects as cheap or 'better cheape then the like glass made in foren partes' and to teach English subjects. License was granted to every of them for any place in England for building furnaces and Mayors, Sheriffs, Bailiffs and other officers were to help them. They were to set up before the Feast of the Nativity of our Lord Christ 1568 two furnaces and keep them fully working; also a convenient number of Englishmen in the City of London were to be bound to serve them as apprentices and they were to pay similar sums for this privilege as were paid by 'aney marchauntes strangers for any suche kynde and quantitie of glasse before mencyoned transported from aney the partes beyond the seas into this oure saide realme of England'. By reason of this Patent Jean Carré made a contract with some Lorraine glassworkers to come over to England and set up furnaces in accordance with the terms of the Patent. They were the more willing to do this because their own glass house in Vosges, Lorraine, had only recently been closed down. This was chiefly due to a depression in the glass industry by reason of over production, but the Lorrainers were also in disfavour because they were converts to the reformed religion, though they were not actively persecuted.

In Lansdowne MS. No. 76, 1568, which is a letter from Anthony Becku alias Dolin to Cecil, there is enclosed a contemporaneous translation out of the original French of the contract between Thomas and Balthazar de Hennezel, John Chevallier and John Carré. These are the main extracts from the contract.

"We Thomas and Balthazar de Hennezel esquiers dwelling at the glass houses of Vosges in the countrie of Lorrayne, John Cheuallier, Chastelain and receyvour of Fonteney le Chastell."

"I the said Cheuallier as well in myn owne name as of John Quarre of Antwerp at this presente dwelling in London . . . who has permission for 21 years to make and builde in England ouens to make great glas."

“ We said Thomas and Balthazar de Hennezel esquiers shalbe bounden to transporte ourselves as soon as possible to England and to cause to be built 2 ouens to make great glass, and to bring fower gentlemen glasiers, that is to say two Tercieurs and two gatherers and with their aid to make every day in each of the said ouens the quantity of 30 bundles of glas whyte or coullers.”

“ As touching buying of woodes, asshes, sandes, saffre, etc. and edifying of the ouens and pott makers and wages ” Carré and Chevallier were to distribute and sell the glass and to be at all charges and to keep accounts. The charges of the Hennezells working at two ovens were to be 200 crowns every year for recompense “ of our third of the glass as have the other glasiers, which shall be paid as charges of the above Company as agreed.” Any surplus profit was to be divided in halves of which one half was to go to the Hennezells and the other half to Quarre, Chevallier and fellowship. The contract was for nine years beginning from the day the de Hennezells began working the said ovens and glass. “ We, the said esquires and Chevallier, as well in my name, as the said John Quarrey, do promise,” etc. 17th Aprill 1568 after Easter.

“ So subsyned Thomas de Hennezel
 J. Chevallier
 Balthazar de Hennezel.”

Jean Carré and Anthony Becku were not skilled glassworkers but were contractors for the glass industry. According to the contract made for bringing over skilled glassworkers from Lorraine Jean Carré did not consult his partner Becku but got in touch with John Chevallier “ chastelain and Receyvour ” of Fontenoy Castle. Through him the real workers in glass were obtained, viz. Thomas and Balthazar de Hennezel, Esquires, who were to come over to England as soon as possible, bringing with them four gentlemen glasiers, and their contract was for nine years.

We learn from a letter¹ written in 1568 by Carré's partner, Anthony Becku, to Sir William Cecil, Knight, Queen

¹ Lansdowne M.S. No. 76, 1568.

Elizabeth's principal Secretary, that the terms of the Monopoly Patent granted in September 1567 had not been fulfilled, and he writes to explain why. He complains about Carré's procuration of Lorraine glassworkers through the agency of John Chevallier ; also that Peter Briet (the original partner of Carré), whom he had tried to use as a mediator for getting these Lorrainers quickly to work, had let him down by getting the workers to set up a furnace at Boulogne.

So to make glass in England he asked an Englishman, a citizen of London, named Fernando Poynts, to help him, and workmen had begun on 23 October [1567] and had worked until Easter [1568] but they had not done proper work. He suspects that the workmen of Normandy glass have been led away in like manner as the Lorraine workers by Peter Briet who has come to terms with Jean Carré. Becku also states that he has sent his son to Germany to get workmen to come over and that now he has been promised some after three months there, and he winds up by complaining that the workmen at the glass house [in the Wealden district] have misused his son-in-law as formerly they wounded his son. An enquiry¹ into the assault on James Arnold, son-in-law to Anthony Becku, was held in 1569 by Richard Onslow and William More. Peter and John Bongar had sorely wounded Arnold and they had refused to instruct Englishmen in the art of glass-making, as they were not bound by Carré's contract. The Bongars were fined forty shillings and it was ordered that Becku's men were to be treated as civilly as Carré's Lorrainers.

When we examine the registers of the parish church of Wisborough Green, in Sussex, we find that between the years 1581 and 1600 there are entries relating to the following foreign glassworkers: Henzey (De Hennezel), Tyzack (Du 'Thisac), Tyttery (De 'Thiétry), Bongar (De Bongar), Cockery (De Caqueray). The following are some of the more important entries: 1599, December 30. Abraham son of Jacob Hensey, gent., of Wisborough Green, baptized. 1603, December 6. Isahac son of Edward Hensey, baptized.

¹ Loseley MSS., Hist. MSS., Com. Rep. VII. Appendix 621.

1610, August 6. Tobias Henzey and Susan Bungar, both of North Chapel, married.

There is one entry of very great importance for north Staffordshire: it is the record that Edward Hensey had married at Eccleshall Sara Tetrye on 24 October 1602. Evidently Isaac Henzey, born in 1603, was a son of this marriage. Jean Carré's burial entry is not at Wisborough Green but is thus recorded at Alfold, Surrey: "1572, May 23, Johⁿ Carry M^r. of ye glashouse was bur: at Awfolde".

Rather more than three years after the death of Jean Carré a Special Licence¹ on 15 December 1575 was granted for twenty-one years to James Verselyne [Verzelini] for making drinking glasses like those usually made in Murano and for teaching English subjects the art: all others were prohibited.

In 1576 Pierre Briet and Pierre Appell, the assignees of Carré's share in the patent for "broad glass," sought a renewal of the Licence for twenty-one years but they did not get it.

In the same year we find entries of foreign glassworkers in the registers of the Walloon church of Southampton. From 1576 to 1579 these are the names of the foreigners from Buckholt in Hampshire (close to the Wiltshire border east of Salisbury) who were admitted to the Lord's supper at Southampton:

" 1576, 7 October

Jan du 'Tisac	}	ouvriers de verre à la
Pierre Vaillant		verriere de boute haut
Claude Potier		

1577, 6 October

Monsieur de Hennezé et s.f.	}	tous de bocque
Louis de Hennezee		haut.
Arnoul Bisson		
Jan Perné		

1577, 7 October

Jan Buré, J. F. [i.e. Bachelor].

1579, 4 January

Monsr. du Hou, verrieren, à bouque haut."

¹ Pat. Roll 17 Eliz. p. 13, m. 39, 3.

In 1860 when the site of the Lorrainers' glassworks at Buckholt was excavated and the rectangular base of the furnace was uncovered more glass for vessels than for windows was found, which was considered remarkable as the Hennezel by their contract with Carré in 1568 had come to make only window glass. At any rate in 1576, at the latest—it may have been earlier—the Lorraine glassworkers had begun to leave the Surrey—Sussex district. The original contract for nine years was nearly up and there was trouble about using the timber from the woods as fuel. When Verzelini got his patent for making glass vessels in 1575 considerable opposition was expressed by the glass-sellers of London, who estimated that 400,000 billets of wood would be used every year in the glass-house. We learn from a record of 1624, to which reference will be made in chronological order later, that Buckall [Buckholt] within six miles of Salisbury, being a wood of great content, and seated in a scarce country was wholly consumed by Glassworks to the great damage of the city and country about, being now driven to fetch their wood ten miles from their habitations. Where next did the foreign glassworkers go? Until quite recently it was thought that they moved westward into Gloucestershire, to Newent in the Forest of Dean and to Woodchester. Certainly the glassworkers were there but the entries relating to them in the parish church registers of Newent date from 1599 to 1601, so that there is a gap of twenty years between these entries and the last entry connected with Buckholt. Here are the Newent entries:—

“ 1599, May 6, Bapt. Thomas son of Anthony. . . [? Voydyn] of the glasse-house.

1599, Oct. 29, Bapt. Abraham Tyzack sonne of a frenchman at the glasse house.

1599. John Pillney a Frenchman of the glass house buried.

1601, Feb. 24, Bapt. Margaret daughter of Anthony Voydyn, glass-founder.”

LORRAINE GLASSWORKERS IN STAFFORDSHIRE.

The gap between the glassworkers at Buckholt and the glassworkers in the forest of Dean is closed and more than closed by considering entries in the parish church registers of Eccleshall, to which Mr. A. A. Rollason¹ first called attention.

Here are the entries :—

- “ 1582, May 20. Jane Yevans bapt.
 1586, Oct. 28 Perigrinus Hensie, bapt.
 1589, March 25, Jehuditha Hensye, bapt.
 1589, Sept. 27, Maria Amerye, perigrina, bapt.
 1604, April 5, 'Thomas s[on] of Jone Henzey of Blower p[ar]k, widow, bapt.
 1597, Jan. 15, 'Thomas Yeardlye and Ellyne Evence, married.
 1600, Feb. 2, Stephen Botting, of the Glassechowse, glass-maker, and Ane Lowe, of the P[ar]ke, widow, married.
 1600, Feb. 15, John Esquire, of Blower P[ar]ke, and Margret Yevonce, dau. of Yeaven Aprice of Blower P[ar]ke, glassmakers, married.
 1602, Aug. 31, James Leggeeye, a Frenchman, of the Songles, glass-maker, and one Judeth 'Tyzake, of the same place, married.
 1602, Oct. 24, Edward Henzey, parish of Greene, Co. Sussexe, glassemaker, and Sara 'Tetrye, parish of Eccleshall, married.
 1584, Jan. 26, Catherina 'Tysacke, buried.
 1603, Aug. 7, George Henzey, of Blower P[ar]ke, glasse-maker, buried.”

As Catherine 'Tysack was buried in 1584 and 'Thomas Henzey was baptised in 1604, so for at least twenty years the glassworkers were in the old parish of Eccleshall. In the very year in which we get the first record at Eccleshall of foreign glassworkers in the Burnt Wood and the Bishop's Wood, an Act was drawn up 16 February 1584/5, “ against the making of glass by strangers and outlandish men within the Realm, and for the preservation of timber and woods

¹ *North Staffs. Field Club Trans.* Vol LIV. pp. 33-5.

spoiled by glasshouses''. Although the Bill passed all the stages it did not receive the royal assent to become law.

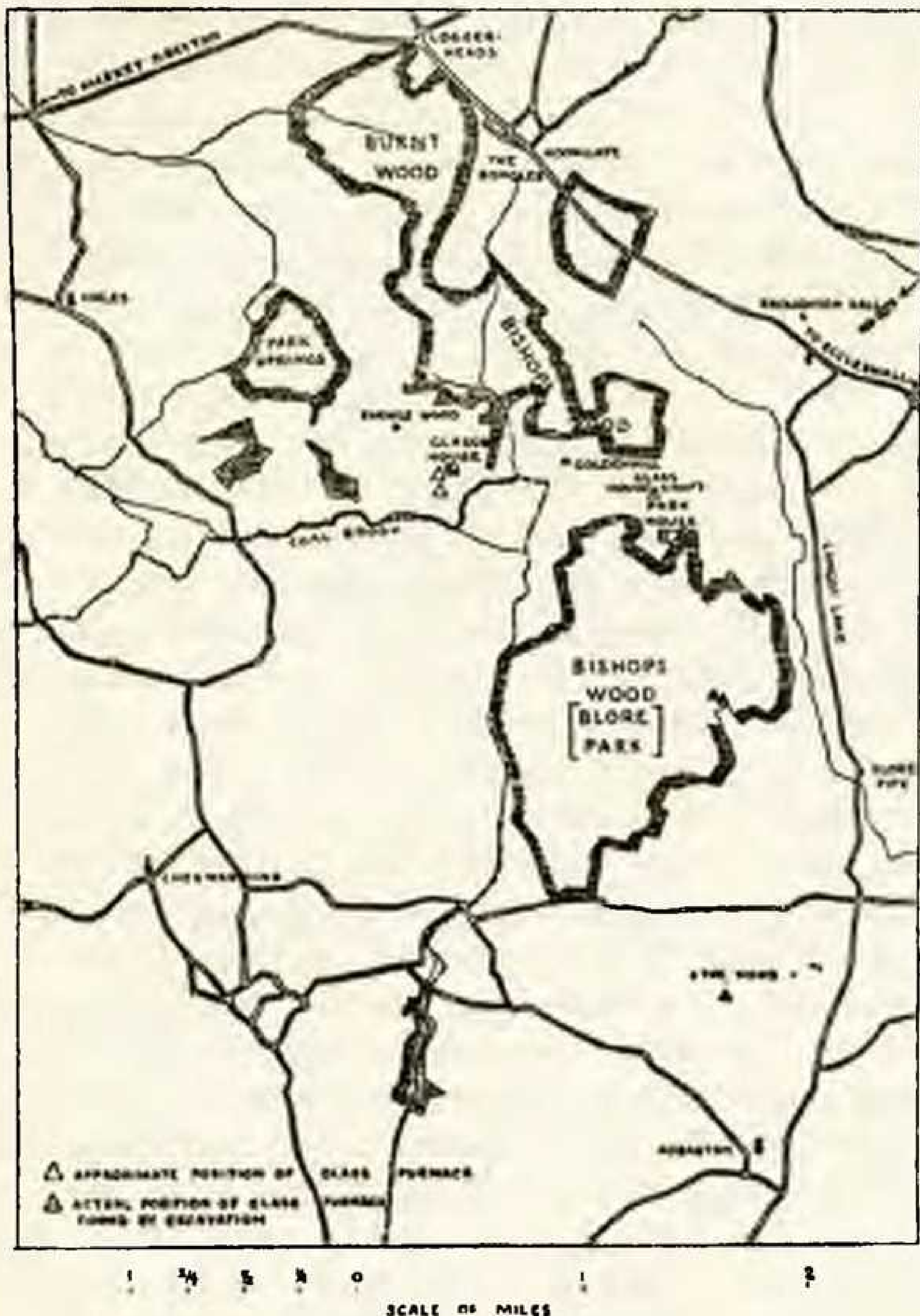
One of the most important documents about the glass industry in England, which explains why the foreigners migrated from the Surrey—Sussex district, occurs in the Lansdowne manuscripts. It is a letter¹ dated 1589 from George Longe to Lord Burghley. He stated that when the troubles began in France and the Low Countries so that glass could not conveniently be brought from Lorraine into England, Anthony Dolin and John Carré, merchants of the said Low Countries, got a Patent for twenty-one years, and that the Patent expired fully a year ago. As Dolin and Carré had no knowledge they leased out the benefit of the Patent to Frenchmen, who would not teach Englishmen nor at any time paid one penny custom. 'Through non-performance of their covenants, the Patent being thus void, about six years after their grant other men erected glasshouses in sundry parts of the realm and having spent the woods in one place they have erected new works in another place without check or control. About seven years past 'your Honour' [Lord Burghley] called them that kept glasshouses before you to know who should pay the Queen's custom. The answer generally was that no custom was due except by conditions of a special privilege which no one of them did enjoy and they were not to pay custom for commodities made within the realm. He [George Longe] humbly desires the Patent to repress thirteen of the glasshouses in England and to reerect them in Ireland, leaving two out of fifteen in England. He has spoken to Dolyn and has already applied for the Patent about which he has already spent £300. He also states that he has kept twenty-four persons in making glass in Ireland for two years and he cannot keep them in Ireland unless he has the English patent.

Had George Longe knowledge of any glass furnaces in the old parish of Eccleshall and did he include them in his list of fifteen for all England?

¹ Lansdowne MSS. No. 59, Art. 72, 1589.

WOODLANDS OF NORTH STAFFORDSHIRE.

Before we study in further detail the migrations of the foreign glassworkers, especially those connected with north



SITES OF GLASS FURNACES.

Staffordshire, let us see where the Lorrainers set up their works in the north Staffordshire woodland area. In the country between Market Drayton and Eccleshall, commonly known as the woodland quarter of north-western Stafford-

shire, the two most extensive woodland areas at the present time are: (1) the adjoining Burnt and Bishop's Woods sloping southwards from the Loggerheads towards the valley of the Coal Brook with Park Springs Wood nearly joined up to them and (2) south of the peaty valley, which contains the almost stagnant waters of the source of the Coal Brook, is the 'great wood' or the Bishop's Wood proper. All these woods are the remains of the ancient forest of Blore. On the 1834 ordnance map the 'great wood' is marked as Blore Park and still at the north entrance to the wood is Park House. In the fifteenth century south and east of Tyrley New Park (which contained Park Springs, now a modern farm) there was a large woodland area known as Knowl Wood stretching down to the Coal Brook. North and east of Tyrley New Park the wood was called Rounhay or Rowney Wood.¹ In an old document the corner site at the Loggerheads between the road to Newcastle and the road to Mucclestone is known as Rowney Gate. The old name of Rounhay has been superseded by Brand or more commonly Burnt Wood, doubtless due to the amount of fuel obtained from the trees by the ironfounders, the charcoal burners and the glassworkers. The natural advantages of this area for the glassworkers were very many. In the first place the district was quite remote from man's habitation, just what the glassworkers desired for practising their 'mystery'. The glass furnace in the Bishop's Wood is still very difficult of access, as it is six miles from the nearest railway station and is a considerable distance from a main road. The Bishop's Wood lies chiefly on the Bunter sandstones and pebble beds, but to the west of the wood and right across the Coal Brook valley northwards into the Burnt Wood near the Loggerheads the geological formation consists of the red marls and sandstones of the Keele beds in the older Coal measures. There is a similar area south of the Bishop's Wood between Cheswardine and Adbaston. So the glassworkers could easily get the hard red sandstone for building their furnaces; the oak trees of the woods provided the material for making charcoal, the fuel

¹ Twemlow's 'Battle of Bloreheath', 1912, map facing p. 10.

used in the furnaces ; sand was in abundance and potash was obtained from the burnt bracken. Altogether the natural advantages were very considerable.

GLASS RELICS FROM BROUGHTON.

Before any search in recent years was made for the sites of the glassworks, quite interesting finds of glass objects had been made at Broughton Hall near the main road between the Loggerheads and Eccleshall. Since Plot in his quaint "History of Staffordshire," published in 1686, depicted the hall as a fine half-timbered dwelling it has undergone many alterations. Between 1686 and 1760 it was covered over with stucco. Since 1917, when the late Mr. John Hall bought the Broughton estate from Sir Delves Broughton, the stucco has been removed and a commendable scheme of restoration, which retained as far as possible the old interesting features, has been carried out. In the course of some very necessary draining work part of the old moat was dug out and all sorts of relics were found there, including a number of glass objects, which, by comparison with broken pieces from the sites at the Glass House and the Bishop's Wood, were evidently made locally. One small phial of thin iridescent green glass is almost perfect. It stands just under $1\frac{1}{2}$ inches in height and is $4\frac{1}{2}$ inches in circumference. Of a number of phials, long and narrow, from the moat three in Hanley Museum appear to be made of glass at a rather later date than the early seventeenth century, but there is, however, one small phial quite perfect which is made of transparent bluish glass of exactly the same colour and texture as glass found on the site in the Bishop's Wood. This small bottle is cylindrical in shape, with the circular lip at the top turned downwards on one side, $2\frac{1}{2}$ inches in length and $\frac{3}{4}$ of an inch in diameter. When found it was filled with some extremely dark blue stuff, smelling of linseed oil that had solidified in the course of time. There was no stopper : that had most likely rotted away. Several wine bottles of an early type were found and illustrations and particulars of four of them can be studied in the *Archæology and History* report of the *North Staffs. Field Club Transactions*, vol. LXVII.

THE GLASS HOUSE.

One of the most interesting glass objects from the moat was part of the base of a crucible with green glass firmly embedded on the inside. A similar piece of a crucible was found near the Glass House which is situated just north of the source of the Coal Brook, and here was made the first search in the autumn of 1929. The Glass House is not in the old parish of Eccleshall but is in the extreme east of the Staffordshire part of the old parish of Market Drayton. It is now a substantial brick-built farm with numerous out-buildings, situated on the southern slope of a well-wooded hill in beautiful undulating country and connected with the main roads round Hales by a private modern concrete road. Immediately to the north of the farm buildings is Badger Wood, a part of the Burnt Woods which still stretch northwards for two miles from the Glass House to the Loggerheads. On Yates's 1775 map of Staffordshire the Glass House is not marked, but it occurs on the one-inch 1834 ordnance map. Evidently the original Glass House had fallen into decay before 1775 and the main part of the present house was built between 1775 and 1834. These dates accord very well with the appearance of the farm. In all probability the squared sandstones used to form the retaining wall of the present front garden are part of the building material of the first Glass House. In the garden on three sides of the modern house all sorts of glass objects have been found and every time the soil is dug over still more fragments are turned up. The glass is more abundant on the west side where an enlargement was made five years ago. The most important objects found were great lumps of sandstone with a thin layer of glaze on one side. They were broken pieces of a glass furnace which must have been almost on the site of the present farm. Also the numerous fragments of crucibles provided good evidence that here was one of the glass furnaces used in the early seventeenth century. Glass slag was in abundance as well as window glass and various pieces of bottle glass. These finds were made in the autumn of 1929, and since then on many occasions other glass relics have been

collected from the site. The main sites examined in 1930 were at the Glass House Croft in the old parish of Eccleshall and the Glass House in the old parish of Wolstanton. As the latter has no connection with the woodland area under consideration and is of later date than the reign of James I, it is dealt with in an Appendix. The Glass House Croft has nothing whatever to do with the Glass House in the Staffordshire part of the old parish of Market Drayton. More than a mile east of the Glass House, the Glass House Croft is one of the large fields belonging to a very old established farm, Golden Hill, and it lies some distance to the east of this farm towards Fair Oak, right away from the western part, in which direction is the Glass House. There is an old track leading through the Croft, across the swampy source of the Coal Brook which is the southern boundary of the field, straight to Park House at the entrance of the Bishop's Wood. The track is on the eastern side of the Croft and most of the glass slag and fragments can be picked up in the lower part of the field just west of the path when the land has been newly ploughed. Although the Croft was visited and searched on many occasions during the spring and autumn of 1930 and again in the same seasons in 1931, it was not until October of 1931 that the site of the glass furnace was discovered. Miss Butter's ploughman reported that in the lower part of the field, about a dozen yards west of the track and thirty yards north from the brook the plough had cut through and turned over some glazed sandstones and red earth which looked as though it had been through fire. Early in January 1932 a little probing and digging soon revealed an incomplete and broken up base of a glass furnace. It was less than a foot down and practically all the glazed surface had been destroyed. The sandstones had become soft enough for the plough to cut through them and all about were pieces from the glazed surface. Many fragments of crucibles, plenty of glass slag, fragmentary glass similar to that found near the Glass House and one piece of dull blue glass were found either on the surface or were unearthed near the base of the furnace. The latter had been so much disturbed that its measurements could not be taken

with any approach to accuracy and all that one could say was that it had been oblong originally.

One entry in the Eccleshall registers was the marriage in 1602 of James Leggeeye, a Frenchman of the Songles, glass-maker, and Judith Tyzack of the same place. According to the *New Oxford Dictionary* the word "Songles" meant the fields where ears of corn were gleaned. Two fields on Mr. H. Mason's farm, Fair Oak Grange, just to the right of an old road leading from Hook Gate through the Burnt and northern Bishop's Wood to the lane near the Glass House, are called to this day the Songars, so the Frenchman's dwelling in 1602 was most likely on that site.

THE BISHOP'S WOOD SITE.

A visit early in the summer of 1931 was paid to the Park House, now the Keeper's home at the north end of the Bishop's Wood, within easy view of the Glass House Croft less than a quarter of a mile away. The house appears to have been built not later than the reign of Elizabeth. In its lower part the building consists of local sandstone and the upper part half timber with renewed brick filling. The windows, roof and south entrance porch are of much later construction, but the main part of the house was no doubt once the home of some of the glassmakers mentioned in the Eccleshall parish church registers. From these entries we know that within the period 1600 to 1604 four different names of glassmakers were connected with Blore Park, therefore it seemed probable that there were other glass furnaces in the district besides the one in the Glass House Croft.

Ane Lowe of the Parke, widow, is mentioned in February 1600 and in the same month when John Esquire married Margret Yevonce he is described as a glassmaker of "Blower Parke", and so was Margret's father, Yeaven Aprice. When George Henzey was buried on August 7th, 1603, he also was called a glassmaker of Blore Park. Accordingly, in July, 1931, application was made to the agents of the Ecclesiastical Commissioners for permission to search the Bishop's Wood

for evidence of early glass-making. Strangely enough only a few weeks earlier the chief woodman, Mr. E. Lockley, had called attention to some large mounds, with glass fragments close by, near the eastern edge of the wood. Of the three mounds, overgrown with bracken and thick turf and with irregular pieces of sandstone protruding, the largest was nearly round, about six feet high and eleven feet in diameter. From the centre of the second a large tree had grown to full size, a silent but significant witness to the age of the mound. Between the mounds and an old deep-cut track the soil was very black and bits of old glass were in great profusion. As at least one of these mounds might contain the remains of a glass furnace, arrangements were made for the woodmen to remove the turf and loose stones and report anything of interest. The smallest heap was soon cleared and a circular sandstone floor, showing no signs of firing, was found at the ground level. Unfortunately it was broken up to see what lay underneath, but there was nothing except the natural soil. The mound out of which grew the tree contained a glass furnace, crushed out of all shape by the growing roots, and this could only be removed piecemeal.

UNIQUE ELIZABETHAN FURNACE.

In the centre of the largest mound, nearly three feet up from ground level, the woodmen came across a glass furnace built up from very thick sandstones glazed on the inside. Fortunately the woodmen did not try to dig this right out but carefully covered it up with large sods of grass and reported the discovery. Altogether they shifted about a ton and a half of large stones. On November 2nd, 1931, the furnace was carefully excavated and various trenches were dug chiefly by senior boys from Wolstanton County Grammar School to recover as much typical glass as possible. Photographs were taken, the trenches filled in, and, to preserve the furnace from the weather, it was covered first with bracken laid on branches and then with sods of grass on top and all round.

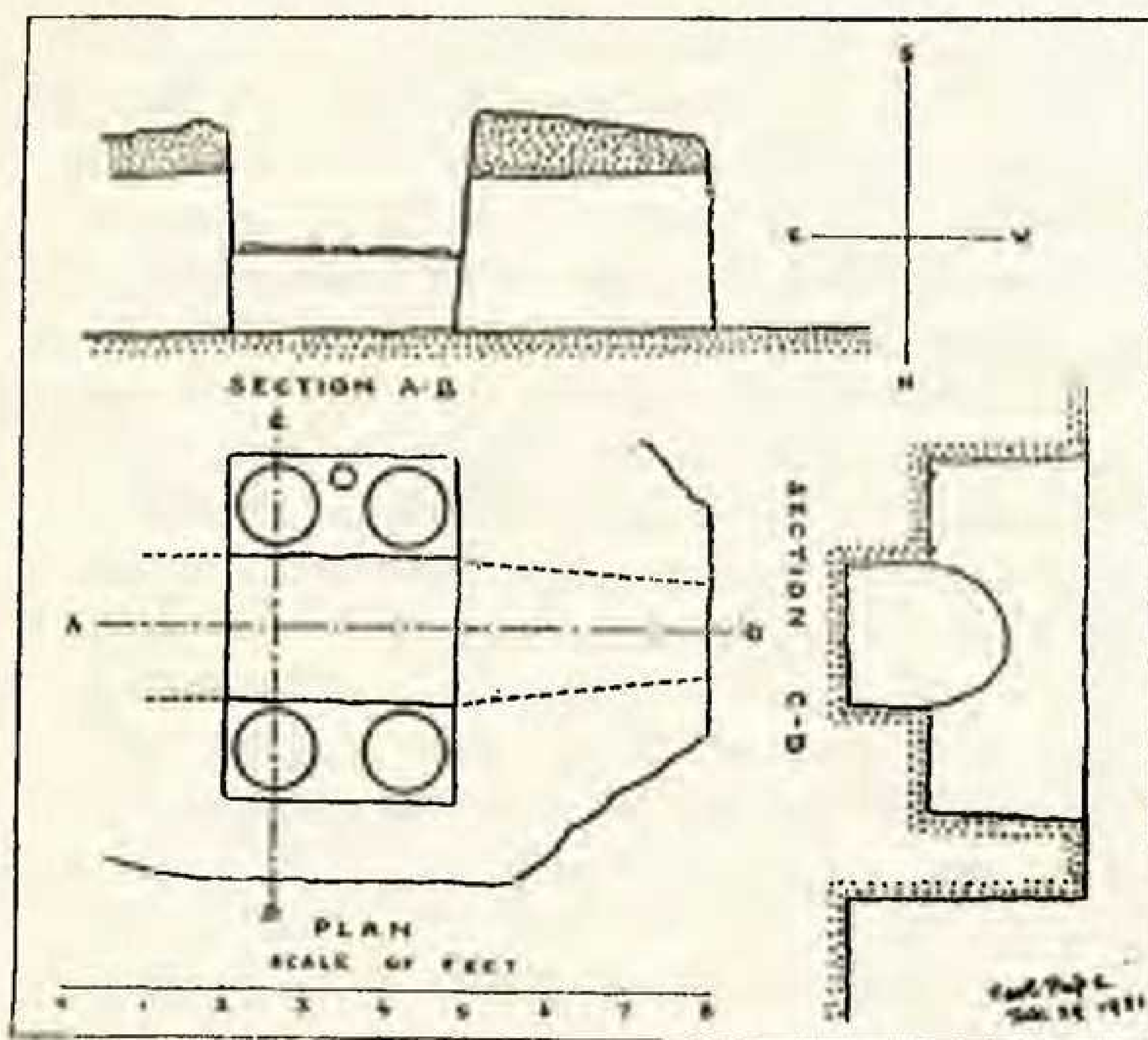


UNRESTORED GLASS FURNACE, BISHOP'S WOOD.

The furnace had been built up solidly from large squared local sandstones. The western side for about two feet six inches up was fairly complete and the greater part was three feet two inches in thickness. Right through the centre from west to east was a fire trench twenty inches wide and the blow-hole on the western side was complete, though the sandstone arch on the inside was broken and would have fallen in if all the supporting soil had been cleared away. This was left in position so that the loose glazed stones inside could be easily restored by the careful use of cement. Although the eastern side was nearly all broken and the arch of the central blow-hole had been destroyed, yet the two corners were well defined, and the curved central glazed sandstones of the arch along with slag and fragments of some thick green glass vessel were found at the bottom of the trench. The lower part of the furnace is rectangular, four feet five inches long from north to south and two feet ten inches in width; the sides are not perpendicular but slope gradually outwards. At the north and south ends are platforms raised up one foot from the central fire trench, each sixteen and a half inches in width and, of course, two feet ten inches in length. On each of them firmly fixed are the bases of two circular crucibles or siege-pots, each a foot in diameter. Also, between the two crucibles on the south, the base of a small round pot is cemented into the green glazed surface of the platform.

For their better preservation most of the central trench was filled up with the largest pieces of green glazed sandstones that had been knocked down when the mound had been constructed originally. Further excavations for the recovery of glass relics from the site were made on two days in April, and on the Whit Tuesday, 1932; and on July 7 the furnace was uncovered for inspection by members of the North Staffordshire Field Club and the Old Stafford Society. An article which appeared in a local paper about this unique glass furnace induced strangers from a distance to come in their motor cars to view the site. Someone pulled down the protective wood, turf and bracken and took away several of the glazed stones, including unfortunately part of the arch

of the fire trench. This piece of vandalism, however, proved to be a blessing in disguise, because the Ecclesiastical Commissioners, who hitherto had been unwilling to spend money on the preservation of the furnace, now agreed to provide half of the sum of £15, which was the estimate of Mr. G. Bloore, architect, for putting the furnace into a proper state of preservation, on condition that I would superintend the work



PLAN AND SECTION OF BISHOP'S WOOD FURNACE.

done and be responsible for raising the rest of the money. Mr. Bloore engaged Mr. Walker of Cannock Chase, who had repaired Lord Audley's Cross most satisfactorily the year before, to undertake the job, and before the end of October the work was completed. Practically no restoration was carried out, but only preservation. The three glazed walls which were loosely in position were firmly cemented and the southern wall—not as thick as it originally had been—was built up. On the bases of the pots, firmly fixed in the two platforms, were built up those parts of the crucibles which had

been broken away and could be identified as belonging to them. Then once again, for preservation from the weather, the furnace was covered up.

GLASSWORKERS IN CHESWARDINE REGISTERS.

On April 14th, when the work of trenching the site had been in progress for about half an hour, Colonel and Miss R. Donaldson-Hudson from Cheswardine Hall rode up. They had seen in "The Listener" Mr. S. E. Winbolt's note on the discovery of the glass furnace in the Bishop's Wood and they had found out from Mrs. Kibble at the Glass House that excavations were to be carried out on that day so, being very much interested, they had come, Colonel Donaldson-Hudson to help in the work and his daughter to explain that in preparing a history of Cheswardine she had noticed in the parish church registers entries relating to the glassworkers at the Glass House. The following are the entries gleaned from the Cheswardine parish church registers by Miss Donaldson-Hudson :

- “ 1601. Hester daughter (of) John Sqyer glasseman of the parish of Eccleshall baptized the 12 of June.
- 1602/3. Susanna daughter of Adam Pilmaye of bloor Parke baptized 23 January.
- 1603. Susanna daughter of John Sqyer borne in Knowle Wood baptized 20 daye of March.
- 1605. John sonne of John Squyer [' Add. Pylmaye' had first been inserted, was crossed out and 'John Squyer' put in] glassemaker of the parish of Dreaton, baptized May 5.
- 1606. John son of Adam Pilmaye baptized the 12 of October.
- 1606. Jasper Pilmaye buried 12 of November.
- 1608. Adam Pilmaye glassmaker buried 25 daye of Februarye.
- 1610. Edward sonne of John Squyer baptized 8 of Aug.
- 1611. Jane the daughter of James the founder att the glasse house was baptized the 6th of October.

1611/12. John the sonn of James Conyer of the glasse house in Drayton parish was bapt. the 26th of January.

1612. John the sonn of Anthony Bigoe of the glasse house was baptized the 25 of October: he was buried 30 of October.

1612. Margaret the daughter of John Squire was baptized the 22nd of November.

1613. John de Hoc a french man of the glasse house was buried May 10.

1613. Ann the wife of Anthonie Bigoe was buried the 19th of June."

Besides these entries relating to the glassworkers in the Cheswardine parish church registers Miss Donaldson-Hudson has contributed the following notes about people who lived at the Glass House in later times but who were most likely not engaged in glass-making:

"After 1613 there is no further reference to the glassworkers or their families, though there is still occasional mention made of the Glass House, as in 1639 when we read of 'Constance Williams of ye Glasshouse buried Oct. 11.' In 1658 the baptism of 'Thomas, son of Robert and Ann Percifall of the Glasshouses in the parish of Drayton is recorded. Then from about 1690 to 1730 the names of Percifall of the Glasshouses and Ostin of the Glasshouses occur at frequent intervals. We read also of 'Turner of the Glasshouses and Mathews of the Glasshouses, and again of Percivall of Wetwood, all of these occurring at the beginning of the 18th century. These are some of the entries in which the Glasshouses are mentioned in that later period:

'1703/4. Thomas 'Turner of the Glass houses in Drayton parish was buried ffeb. 21 and certified 23 day. Being the first Buryall after the assessment made and a copie of the Register taken to the Commissioners.

1709. Ephraim, son of Thomas and Susanna Ostin of the parish of Drayton (at the Glasshouses) baptized Dec. 26th.

1711/2. William the son of William and Frances Matthews (of the Glasshouses in Drayton parish) was baptized March 2 day at Cheswardine Church being about one week old when baptized.

1718. Joseph the son of Thomas and Susanna Ostin of the Glasshouses in Drayton parish baptized Novem. the 8 day being new born and very sick and weake.

The Glasshouses are mentioned for the last time in the Cheswardine register in 1741, when there is this entry:

'James son of Edward and Mary Bood of ye Glasshouses Bapt. Oct. 4th.' "

The earlier entries in the Cheswardine parish church registers relate to some of the glassworkers in the Bishop's Wood or in the Glass House Croft of Golden Hill Farm, both of which are in the old parish of Eccleshall, but the later entries relate to glassworkers not far away to the west at the Glass House in the old parish of Market Drayton. In consequence of these records the registers of the parish church of Market Drayton from 1580 to 1608 were searched but only one name which might refer to a glassworker was found. It was the burial on 15 February 1606 of Sara daughter of Jacob de Hooe. Perhaps these people were relatives of John de Hoc a Frenchman of the Glass House who was buried at Cheswardine in 1613. Evidently those who worked at the Glass House preferred to go to the nearest church which was upon the wooded hill a short distance away across the county boundary to the south of the glass works.

SECOND SITE AT GLASS HOUSE.

The next discovery was also connected with the Glass House. When Mr. Kibble in the spring of 1932 had ploughed up the large field to the south-west of his house he had noticed numerous fragments of glass so he reported the matter. No investigations could take place until the crop had been harvested. In the autumn of the same year and since December 1932 many pieces of glass and crucibles as well as big lumps of glazed sandstone from a furnace have been found. On two occasions probing for the base of the furnace was tried

but was unsuccessful, as the field is very large and only certain parts of the southern area where the glass was most abundant were fairly thoroughly explored.

GLASS FURNACE AT THE WOOD.

The latest of all these discoveries connected with the Huguenot glassworkers was made at another site, a long way from those already mentioned. Considerable local interest had been aroused by the various discoveries connected with the glass industry and one result was that Mrs. R. Ball living at The Wood not far from Adbaston church told her friends that old glass similar to that found in the Bishop's Wood had been abundant years ago in some of the fields on the farm. The Wood is a farm half a mile south of the large Bishop's Wood but not joined up to it. Close to the house there now occurs the only wooded part, a picturesque retreat known as the Dingle, constructed out of an old marl pit. A visit in January 1933 at the time seemed unproductive. No glass was seen where Mr. Ball thought there ought to be some, but a farm hand remembered that glass fragments had been found at one time in one of two large rough pasture fields. Not a scrap in either could be found but after studying the lie of the fields a small hump was noticed near one corner of the further field and there was a small depression some yards away. The farm labourer was positive that in this field called the Wood Leasow glass had been turned up by the plough very many years ago, so these two uneven parts were marked for a trial excavation later in the year. After this visit the early maps of Staffordshire were studied and on Yates's map of 1775 that very field was marked not as cleared land but as a small wood which no doubt originally gave the name to the farm. For two reasons a second visit was not paid until as late as the latter part of April, the first reason being that the ground was too hard to excavate and the second was the difficulty of reaching this out-of-the-way place. After arriving by motor 'bus at the Loggerheads there was a walk by woodland tracks and rough paths of rather more than seven miles to The Wood.

On April 26 Mr. and Mrs. R. Ball had put one of their men to dig trial holes at the two selected spots an hour before we arrived. His instructions were to look out for any glazed stones or glass and put them on one side and not to disturb any arrangement of stones or bricks if he should come upon them. The trial holes were all that could be desired. The selected slight hump was caused by the nearness of the sandstone base of the glass furnace to the surface. Only one of the large sandstones uncovered had been shifted out of position and among the glass objects recovered was the complete hemmed base of an ale glass, similar to two which had been found on the Bishop's Wood site. We continued operations until one o'clock and got all the proof required for a glass works in Elizabethan times.

By arrangement the Adbaston parish church registers were searched the same afternoon, but there was not a single glassworker's entry in the early years down to 1615. Then we were informed that The Wood was not in Adbaston parish and never had been. It was in the modern parish of Broughton and Croxton, carved out of the old parish of Eccleshall, so of course the entries already extracted from the Eccleshall registers included the glassmakers who had their works at (1) Glass House Croft of Golden Hill Farm, (2) the two furnaces in the Bishop's Wood and (3) The Wood, between the Bishop's Wood and Adbaston Church. In the last case the glassworkers evidently registered at their parish church and did not go to the nearest church. At this preliminary digging the trial holes made in the Wood Leasow were roughly filled in to prevent any injury to the cattle. On Whit Tuesday June 6 and again on Thursday July 27 the excavation of the base of the furnace was carried out. It was rather disappointing because, like the base discovered in the Glass House Croft, the glazed superstructure of the furnace had all disappeared, though pieces of it were fairly abundant, and the form of it was nearly as shapeless. As in the case of the furnace base in the Glass House Croft, so here, the sandstones used had originally formed an oblong base. A central trench between two foundation walls was dug down to an

undisturbed level and nothing of importance was found there. In tracing the walls on the outside, on the long side of the base towards the south-east charred wood was in abundance and all the soil was black with burning. This was the only site where any bricks whatever had been used. We found four or five broken bricks, not laid in position but close to the sandstone base. There was not an abundance of glass fragments near the furnace, though there were sufficient typical pieces to show that the glass made here was similar to that made on the other local sites. From the trial hole made in a slight depression several useful fragments were found. According to the owners' wishes we left the furnace base uncovered, as it is not quite a foot below the surface soil, but we partially filled in the inner trench and the trenches outside the walls so that no harm might happen to cattle straying over the site.

SHAPE AND TYPE OF FURNACES.

It is quite possible that there are other sites of glass furnaces in the woodland area between Eccleshall and Market Drayton. The two in the Bishop's Wood, the one in the Glass House Croft and one other at The Wood may be all there are in the old parish of Eccleshall, but those at the Glass House (there were in all probability two, viz., one by the present house and the other in the lower part of the field to the south-west) do not seem enough for the old parish of Market Drayton, according to the entries in the Cheswardine registers. There still may be an undiscovered furnace in that part of the Burnt Wood known as the Songars or Songles, and another likely place is in the original Knowl Wood. No doubt all the furnaces were rectangular in shape, most likely with two platforms for the crucibles as was the case with the well preserved one in the Bishop's Wood.

Luted clay was found between the sandstones both at The Wood and at the Glass House Croft, but both these bases were considerably lower than the parts on which the platforms would be constructed.

It is impossible to say what was the form of the roof over one of these glass furnaces. From the platforms for at least two feet up the rectangular walls sloped slightly outwards, but how they were roofed in we do not know, nor do we know where the openings were for gaining access to the molten metal in the crucibles.

THE CRUCIBLES.

Judged by the amount of fragments of crucibles at all the sites there is no doubt that the pots were continually being broken and their renewal must have been a very expensive item in the making of glass. At the Bishop's Wood there were so many pieces that some belonging to the four bases cemented into the platforms were able to be picked out, and so reconstructions in part were able to be carried out. The crucibles varied considerably in texture, size and thickness. The texture was generally a dull white or a dark grey, glazed inside and out with a thin layer of glass. By the curvature of the base fragments and the rims, the larger crucibles, which were in abundance, had round flat bases twelve inches in diameter and they curved barrel-shaped to an open top eleven inches or slightly more in diameter. Perhaps their height was twelve inches. The rims of nearly all the crucibles were rounded, in section showing a half circle, but occasionally a fragmentary rim showed the curve on the inside, then flattened out on top and came down straight on the outside. The thickness of the walls of the crucibles showed great variety. The bases varied from $1\frac{1}{2}$ to 3 inches and the walls from $1\frac{3}{8}$ inches to $\frac{1}{2}$ an inch; the average wall thickness was perhaps not quite an inch.

Only one length of an iron blow pipe has been found. It was much corroded and rusted up, $3\frac{1}{2}$ inches long, with $\frac{7}{10}$ of an inch outside diameter, of which the hole measured $\frac{3}{10}$ of an inch, and it was found by the chief woodman, Mr. E. Lockley, near the furnace in the Bishop's Wood. Quite a number of broken flints of very dark colour were found on all the sites. Only two small ones were near the furnace base at The Wood, four came from the Glass House Croft, about half a dozen from the Bishop's Wood and eight or nine from

the Glass House south-west field. Their occurrence can hardly be fortuitous: they were most likely used for marking lines of fracture. Certainly the flints do not belong to the geological structure of the district but must have been brought to these sites for a particular purpose.

THE GLASS.

On all the sites there is a good deal of rough glass material such as shapeless lumps of crude glass, rods of all sizes, small drips, many of which are beautifully transparent, and twisted cuttings. In most cases fragments of glass vessels are commoner than the pieces of window glass but window glass is found on all the sites. Several pieces of disc glass with selvaged edges were found at the Bishop's Wood site and in the field south-west of the Glass House. Some of the window glass is deep green in colour and rather thick but the commonest type is of medium thickness and yellowish green in colour, while some thin pieces have only a faint yellow appearance. If we except two bits of brilliant blue found at the Bishop's Wood site there is no coloured window glass at all, but there were several pieces of deep blue coloured glass bottles. Glass vessels of all sizes and shapes were found, the commonest being fragments of ale glass bases with hemmed rims turned over and hollow. Wine glass bases were similar, though they were not so common as the ale glasses. From the Bishop's Wood we got only one complete base of an ale glass, clear light green in colour and measuring $2\frac{7}{8}$ inches in diameter. Also the complete base of a glass bowl, dull dark green in colour and $3\frac{1}{4}$ inches in diameter, was found near the base of the ale glass. One complete ale glass base was found near the furnace foundations of The Wood, mottled yellowish green in colour and $3\frac{1}{4}$ inches in diameter. Only fragments of ale glass bases were found at the Glass House Croft and at the Glass House, but at the latter site in the south-west field the complete base of a glass vessel, probably a bottle but certainly not an ale glass, was found, light green in colour and $2\frac{5}{8}$ inches in diameter. One large fragment, presumably a piece of the hemmed base



1. BASE OF WINE GLASS.



2. BASE OF GLASS BOWL.

of a vessel of the ale glass type, found in the same field, by its curvature, had a diameter of no less than seven inches.

The best fragment of a wine glass has half the hemmed base, $3\frac{3}{4}$ inches in diameter, rising in the centre to a slender stem less than $\frac{1}{2}$ an inch in diameter. Some of the thickest pieces—about half a dozen—of bluish-green bottle glass were found in débris at the bottom of the fire trench of the glass furnace in the Bishop's Wood. Similar odd pieces elsewhere were common. Most of the bottle glass, however, was much thinner, green in colour without the bluish tinge, and in a good many cases parts of the base, neck or rim were found. The small phials usually had rounded bases. There was one large base of a bottle of bluish coloured glass from the Bishop's Wood which suggested the onion-shaped type of bottle fairly common fifty years later. It had the central kick-up complete and the outer curvature was well indicated in two parts. Fairly large bowls must have been made in the Bishop's Wood for two pieces of rims showed that the diameters at the top were in each case about the same, viz., 7 inches. Although they were both made from a bluish-green coloured glass their turned under rims were of different type.

Several pieces of green, or nearly black glass, cylindrical in shape and quite solid, were puzzling but Mr. J. A. Sidney Stendall of Belfast Museum identified the best fragment as part of the handle of a "slicker" or mushroom-shaped glass rubber used for smoothing out the web when weaving cloth. Two pieces of rounded green glass with the central handle broken away seem to be parts of the smoothing base of these slickers.

External diagonal fluting seems to have been common on small bottles. Several tops were found with a diameter of an inch across the projecting lip, a smooth neck in length about $1\frac{1}{4}$ inches and then, where the body of the bottle joins on to the neck, the diagonal fluting begins. The lower part of a large wine glass tapering down to a slender stem finishes the lower external diagonal fluting where the inner diameter of the glass is $1\frac{1}{4}$ inches. One rim of a bottle $1\frac{1}{4}$ inches in diameter has a thick plain edge and then external fluted moulding.

Occasionally a piece of plain rounded bottle glass was found having applied ornament which consisted of thin circular bands. One thin fragment of very light bluish-green curved glass had a moulding of alternating lozenges. Another fragment of similar glass had upright and rather wide linear mouldings. A tiny cup with handle made perhaps from devitrified opalescent glass was found on the Bishop's Wood site. It may possibly have been dropped there later, but glass slag of exactly the same texture was found in the vicinity. One misfit handle showed to perfection the beautiful blue-green variety of glass for which the Lorrainers in Surrey and Sussex were famous. There was a good deal of glass which in colour went further than the blue-green variety and could definitely be labelled blue. Of the really brilliant blue there was not nearly so much and practically all of it was found in two places at the Bishop's Wood site. One of the pieces is part of the base of a small phial. Two bits may be of window glass but they are so small that a definite identification is impossible. One of the most brilliant small pieces is an applied ornament. It looks like a cluster of sapphires arranged in a small circle with the largest in the middle. Late on in September 1933 Mr. W. A. Thorpe, the author of the standard work on English and Irish drinking glass vessels, paid me a visit to see the glass objects recovered from all the sites described. He drew many of the objects and was much interested in all he saw. My best thanks to him for what he taught me. I learned that the small, brilliant blue, sapphire-like cluster was a small ornament known as a "prunt", which had been on a wine glass, perhaps at the top of the stem or below the bowl. I also learned that "trailing" is the correct term for the thin applied glass bands. Besides the help I received from Mr. Thorpe in regard to the technique of the glass, I am very much indebted for kindly help to Mr. S. E. Winbolt of Horsham, Sussex, who in recent years has been locating the sites of the early glassworkers in Surrey and Sussex and has since published a book on the subject entitled "Wealden Glass."



GLASS OBJECTS MAINLY FOUND IN BISHOP'S WOOD.

DATE OF GLASS FURNACES.

A most important point about these sites, certainly those of the Glass House Croft, The Wood, and the Bishop's Wood, is that glass was manufactured on them only from about 1580 to a period not later than about half way through the reign of James I, about twenty years in all. The entries in the Eccleshall parish church registers prove this. Just to see if any lease of Blore Park had been made in Elizabethan times to glassmakers, the Ecclesiastical Commissioners kindly caused the pertinent deeds to be searched, but as there was no such lease after 1666 (the date of the earliest deed relating to Blore Park) this was good evidence that the glass furnaces had been set up prior to that date. It was from Mr. Winbolt that I learned how important was the find of the furnace in the Bishop's Wood. When I described to him what we had found in November 1931 he immediately wrote to tell me that the find was unique. He had excavated about thirty glass sites and the only parts of any furnaces discovered were the lower levels of the oblong bases. Here is the opening sentence of his letter dated 6 November, 1931 :

“ Congratulations on a tip-top find. Your furnace, with the pot platforms or sieges and bases of pots in position, is the most complete thing I have heard of ; I certainly have not had such luck.”

I explained to the Ecclesiastical Commissioners the importance of this discovery and they were much interested, but, before contributing to the preservation of the furnace, they waited to see what could be done by those who were interested locally. The act of vandalism committed in July 1932 roused them to action. They immediately agreed to share the cost of the first of Mr. G. Bloore's two estimates, viz., that of cementing together the loose stones, etc., to preserve the furnace from falling to pieces. The second scheme of a cement surround and of a permanent lock-up rustic shed erected over the furnace was left in abeyance for a time. But it was felt that a permanent shed would have to be built over the furnace, otherwise this relic of Elizabethan times could only be properly inspected by the expenditure of much

time and energy whenever the furnace was uncovered. Accordingly during the early summer of 1933 arrangements were made whereby the Commissioners gave practically all the timber required for the shed and interested people subscribed about £22¹ for carrying out Mr. Bloore's scheme with Mr. H. Emery as the builder.

The result was that on 11 August, 1933, before a large assembly Mr. George Middleton, the First Estates Commissioner, officially opened the shed and the preserved furnace was seen under ideal conditions.

Now, under proper safeguards, the furnace can be inspected by anyone who makes application beforehand. The best of the glass finds are on exhibition at Hanley Museum and anyone interested can study all the glass fragments there.

MIGRATIONS OF THE GLASSWORKERS.

In conclusion let us analyse the migrations of some of these foreign glassworkers who were in north-west Staffordshire for about twenty years at the end of the sixteenth century.

The leading gentlemen glaziers brought over from Lorraine in 1568 by Jean Carré, through the influence of John Chevallier, were 'Thomas and Balthazar de Hennezel, termed 'Esquires' in their nine years' contract. On his return to Lorraine Balthazar de Hennezel is said to have met a violent death in 1580 and Thomas de Hennezel to have died before 1584. Who was Monsieur de Hennezé at Buckholt in 1577? Most likely he was one of these two original emigrants from Lorraine and he had a son Louis. Next in chronological order we meet with the Hennezels, shortened to Henzey, at Eccleshall. Two Henzeys were baptized at Eccleshall, viz., Perigrinus Hensie on 28 October 1586 and Jehuditha Hensye on 25 March 1589. Who their father was we do not know. They may have been children of George Henzey of Blore Park [Eccleshall], glassmaker, who was buried 7 August 1603. At any rate Thomas son of Jone Henzey, widow, of Blore Park, baptized 5 April 1604, appears to have been the son of this George Henzey.

¹ A balance sheet is given later.

Then in 1599 in Sussex Jacob Henzey is described as a gentleman when his son Abraham was baptized at Wisborough Green on 30 December. In the same year Albertyne Henzey was a witness to the will of Daniel Tyterye of Wisborough Green. Du Thiétry was one of the gentlemen glaziers from Lorraine. One of his relatives, Sara Tetrye, of the parish of Eccleshall was married on 24 October 1602 to Edward Henzey, glassmaker, of the parish of Wisborough Green. Evidently they went to live at Edward's home in Sussex, for their son Isaac was baptized at Wisborough Green on 6 December 1603. Also at Wisborough Green Tobias Hensey married Susan Bungar on 6 August 1610.

After 1604 there are no entries of Henzeys either at Eccleshall or Cheswardine. But there are several entries in both the Eccleshall and Cheswardine registers relating to a glassmaker called "Esquire" or "Squire". Was his real name Hennezel (Henzey)? Let us refer to extracts already quoted from the 1568 contract whereby Thomas and Balthazar de Hennezel came over to England to make glass. Whenever they are mentioned the title "esquiers" follows immediately after the surname Hennezel and near the end the name Hennezel is dropped and one sentence begins as follows: "We, the said Esquires and Chevallier, as well in my name, as the said John Quarrey, do promise", etc. It is probable that John Esquire of Blore Park, glassmaker, who married Margret Yevonce on 15 February 1600 was really John Hennezel, Esquire. He seems to have been the leading glassmaker. Let us trace his movements. In June 1601 when John Squer's eldest daughter Hester was born he is described as a glassman of the parish of Eccleshall, yet his daughter is taken to Cheswardine church to be baptized. If he were living at the Park House and was working the furnace in the Bishop's Wood, Cheswardine would certainly be much the nearest church. Two years later John Squer is living at Knowl Wood when his second daughter Susanna is born and she also is baptized at Cheswardine. In 1605 John son of John Squer glassmaker of the parish of Market Drayton was baptized, also at Cheswardine. In 1610 his son Edward was born and in 1612 his daughter Margaret.

It would therefore appear that the first glass furnaces were set up in the old parish of Eccleshall, at 'The Wood, at "Blore Park" (the Bishop's Wood), and at Glass House Croft. The glassworkers were there before Perigrinus Hensie was baptized in 1586. About the end of the century having consumed a lot of the timber in the woods they were on the move, and they are not of record in the Eccleshall registers after 1604. In all probability for some time afterwards glass-making was carried on in Eccleshall parish, but we have seen that by 1603 at any rate John Esquire has moved from Blore Park into the Burnt Wood district, and for some years no doubt glassworkers were in both the old parish of Eccleshall and in the old parish of Market Drayton. Judging by the register entries we may infer that the glass furnaces in Eccleshall parish were abandoned soon after 1604 and others were set up at the Glass House in Market Drayton parish and they flourished certainly down to 1613. In the first case the glassworkers would leave 'The Wood and Blore Park because they had used up so much of the timber for their fuel. In the second case they most likely abandoned the district after a Royal Proclamation had been made 23 May 1615 that glass henceforth was to be made not with wood as fuel but coal.

Already in 1612 a Licence for twenty-one years had been granted to make all sorts of glasses by coal fuel, not wood. This Patent on 19 January 1615 came under the control of Vice-Admiral Sir Robert Mansel, Treasurer of the Navy. In 1613 his Lambeth glass-works, supplied by coal from Scotland, are mentioned. After setting up glass houses successively and unsuccessfully in Broad Street, London, the Isle of Purbeck, Milford Haven and Nottinghamshire he finally, about the middle of 1617, established glass-works at Newcastle-on-Tyne. That certainly is one of the districts to which the Staffordshire glassworkers migrated.

The register of All Saints', Newcastle-on-Tyne, contains this entry: "1617 [1618 new style] February 11, Edward Henzey, servant to Sir Robert Mansfield, buried." In the same register in 1619 Isaac and Jacob Hensey, glassmakers,

are mentioned. Also about 1625 Perigrinus Henzey (born at Eccleshall) and Daniel Henzey were broad glassmakers at Newcastle-on-Tyne.

In 1619 on 22 November, John son of Tymothie Teswicke, glassmaker, a Frenchman, was baptized at St. Nicholas church in the same town. His godfather was Abraham Teswicke. Also in 1620 at Newcastle Samuel Tizick and David Tyttre are of record as glassmakers.

Another district—where coal was being used for the making of glass—to which some of the north Staffordshire glassworkers migrated was round Stourbridge. The first entry connected with the glassmakers is in the Kingswinford register under date 26 April 1612 when John son of Paul and Bridget Tyzack was baptized. The Henzeys and others occur a little later in the Oldswinford register. The earliest and therefore the most important entries are the baptism of Paul son of Jacob Henzie on 9 December 1615 and a week later the baptism of Zacharias son of Fowler Henzie.

In 1617 John Brettell married Mary Henzie; in 1619 Jeremy Bago married Susannah Henzey and in 1621 Edward Henzey of Amblecoat, parish of Oldswinford, Staffordshire, glassmaker, was buried. The Jeremy Bago who married in 1619 Susanna Henzey later had a glass house at Greenwich and with his English partner, Francis Bristow, gave trouble to Mansel.

Bago or Bigoe is the English form of the De Bigault family of Lorraine. There was an Anthony Bigoe at the Glass House in the old parish of Market Drayton. Adam and Jasper Pilmaye mentioned in the Cheswardine registers would no doubt be relatives of John Pillney the Frenchman of the glass house buried at Newent on the borders of the Forest of Dean in 1599. The De Bongars do not seem to have come into the North Staffordshire district and that perhaps is the only important family of the original Lorraine glassworkers who are not represented in the Eccleshall and Cheswardine registers. The most important family was De Hennezel and Thomas and Balthazar de Hennezel brought over gentlemen glassworkers in 1568 from the Lorraine families of Du Thiétry, Du Thisac, De Bigault, Du Houx and De Bongar.

The first three are of record in the Eccleshall registers and two of the last named three are mentioned in the Cheswardine registers. It remains then to trace some of those glassworkers surnamed Du Houx (du Hou, de Hoc, de Hooe). Monsieur du Hou was at Buckholt in 1579. Then on 15 February 1606 Sara daughter of Jacob de Hooe was buried at Market Drayton. On 10 May 1613 John de Hoc, a Frenchman, of the Glass House was buried at Cheswardine.

Now in Haughton in Lancashire, on the other side of the river Tame, which here divides Cheshire from Lancashire, there is a hamlet called Glasshouse Fold, where glass was manufactured early in the seventeenth century.

From 1605 to 1644 entries relating to the glassworkers occur in the Stockport parish church registers. The first is the burial of an infant of one Dionise, a glassman, on 31 July 1605. In 1615 Isaac son of Robert Hartley a glassmaker was baptized. Then on 8 September 1616 Katherine daughter of Isack de Howe, now of Hyde, was baptized. When his son Francis was buried on 5 November 1621 the glassmaker was styled Isaac de Hooke.

These are the only two entries relating to du Houx. Thomas Bagley was Clerk of the Glass house in Haughton in 1636, and Robert Wilson in 1644 is the last glassman mentioned. The du Houx family is also of record at Stourbridge where Jacob du Houx married Anne Tyzack and had a family.

Although we can account for the departure of the glassworkers from North Staffordshire, it is rather difficult to understand how they came to know of the great natural advantages for glass-making in this district when we consider that all their work so far had been carried on in the south of England.

As already pointed out the Huguenot glassworkers were in North Staffordshire very soon after some of them are of record at Buckholt in Hampshire and long before they were in the Forest of Dean. The natural route for them would have been from Hampshire through the midlands especially via the woodland districts of Warwickshire. In contemporary records there is one reference which seems to show that this was the way by which they came. When Sir Robert Mansel

was having trouble in 1623 and 1624 with some of the glassworkers who did not recognize his monopoly he stated that the inhabitants and commons of Warwickshire felt the consuming of woods and timber for glass so grievous that they rose in tumults and expelled the Glassmakers by force. His subsequent account of what great damage the glassmakers had also done at Buckholt within six miles of Salisbury we have already quoted. His opponent, Isaac Bungar, in reply says that concerning the decay of wood supposed by Glasshouses in Warwickshire and Wiltshire, if any such thing were, it is so long since done that no man living remembers it. That was in 1624. Surely some one was still alive who remembered the Lorraine glassworkers at Buckholt in the years 1576 to 1579. Perhaps some day we shall have evidence from church registers in Warwickshire that the glassworkers were there about 1580. At any rate these names of glassworkers and their places of residence which have come to light in North Staffordshire have filled in a notable gap in the history of the migrations of the foreign craftsmen; and the interest of these records is enhanced by the fact that through them the discovery of the Lorrainers' unique glass furnace in the Bishop's Wood was made.

FINIS.

APPENDIX.

WOLSTANTON GLASS HOUSE.

A link between the glassworks, which were set up as a result of the Monopoly Patents granted during the reigns of Elizabeth and James I, and the more modern glassworks, which became well established later in certain districts, is the derelict works at Red Street, Chesterton, in the old parish of Wolstanton. According to scanty documentary evidence and relics from the site itself the glassworks there flourished about the middle of the seventeenth century.

Until quite recently a farm, and now a dwelling house, the Glass House stands high up just to the south of Red Street. The original glasshouse has gone and the present house was built perhaps about one hundred and fifty years ago. Only in one field, just to the north-west of the house and bounded on its eastern side by a path which leads from Red Street to Waterhayes, can relics of the glass industry be found and they are intermingled with refuse tipped there from a disused adjacent potworks. The broken crucibles differ somewhat from those of the earlier type. They are thicker and by the curvature of the rims much bigger. The rims of the pots are rounded on the inside, flatten out on top and then go straight down outside, like a few found in the Bishop's Wood and in the south-west field at the Glass House, but they are distinguished from these latter by the deep grooves filled with a glaze of thin glass on the outside. The glaze inside and out is of a brownish tinge. Only a few pieces of glazed sandstone from the furnace have been found and these were all obtained from a hollow part of the field on the southern side. The glass fragments were only of bottles or window glass, no ale or wine glasses.

The bottle glass was usually deep green in colour, but the window glass did not differ materially from that found on earlier sites. No charcoal was used for fuel, only coal. It was rather puzzling to find on this site quite a lot of glass slag that showed an opaque blue colour. It really was manufactured at the glass works as was proved by some fragments of bottle glass. When looked through these pieces were of a yellowish green colour, nearly transparent, but the broken edges, about a quarter of an inch in thickness, showed clearly the turquoise blue colour.

Except for a reference from the Heathcote deeds that George Sparrow (evidently not a glassworker) owned the Glass House in 1713, the records of the Glass House occur in the Wolstanton parish church register. One of the overseers for the poor in 1664 was John Beech of Glassehouse. The burial of John Beech of Glassehouse occurs on 18 August 1682. Another entry in the register is the baptism on 16 May 1683

of Richard son of Richard Beech of Glassehouse. The Beeches most likely were the owners of the Glass House but Randle Bristow or Bristol was the glassmaker, because when he died in 1668 he is so styled and yet at the same time John Beech was of the Glass House. The burial entry in the register is: "1668, April 4, Rand. Briscow"; and the following inscription is on a gravestone in Wolstanton churchyard: "Heare lyeth the body of Randull Bristall, Broad Glasse Maker, who died the secnd of April in the yeare of our Lord God, 1668."

THE GLASS FURNACE FUND.

Before any appeal was made to members of the North Staffs. Field Club towards the preservation of the Bishop's Wood glass furnace Miss R. Donaldson-Hudson of Cheswardine volunteered a donation of two guineas when she knew that I intended to get the job done. Members were asked at the monthly meetings during the winter of 1932-3 to clear off half the sum of £15 which had been paid on their account to Mr. Walker of Cannock Chase for carrying out Mr. G. Bloore's scheme of proper preservation. The Ecclesiastical Commissioners had promptly paid £7 10s. as soon as the work was finished. The following subscriptions were received from our members:

	£	s.	d.
Ten shillings from Mrs. Montford, Mr. C. Billington and Mr. O. W. A. Oulton	1	10	0
Five shillings from Mrs. E. C. Myott, Miss M. S. Bickley, Dr. E. C. Myott, Dr. H. M. Fraser, and Messrs. J. A. Audley, H. J. Steele, A. Hunt- bach, F. S. Stringer, H. V. Thompson, R. Hamnett, and J. Poole	2	15	0
Half a crown from Miss C. Williamson, Messrs. H. W. Daltry and J. H. Jackson, and Anon. ...	0	10	0
Total	4	15	0

When in the spring of 1933, with the approval of Council, I began to solicit subscriptions for the erection of a rustic lock-up shed over the furnace and for the making of a concrete surround, I was appealing for a sum of nearly £22. Mr. G. Bloore's estimate had been between £50 and £60 but, as the Ecclesiastical Commissioners promised all the rustic slabs, the four large corner posts and other woodwork, the builder, Mr. H. Emery, of Newcastle, who did the work, agreed to carry out the job for £21 9s. 6d. The only extras were additional keys for the lock, viz., 4s. 6d., so that members of the North Staffs. Field Club and of the Old Stafford Society could have special facilities for viewing the glass furnace. My appeal was made to all Field Club members who had not already subscribed, to members of the Old Stafford Society and to local people who were interested. Two of our members, Messrs. H. W. Daltry and H. J. Steele gave me additional subscriptions and in answer to personal letters the local people responded so generously that a printed circular to make up the last few pounds—always a most tedious and annoying business—was not required.

The following were the subscribers:				£	s.	d.
Mr. E. B. Hall of Hales	...	...	...	3	3	0
Mr. J. T. Webster of Shallowford	...	...	...	2	2	0
Miss Harrison of Maer	...	...	...	2	0	0
Dr. A. Hilton John of Stoke	...	...	...	1	1	0
Mr. P. W. L. Adams of Woore	...	...	...	1	1	0
Mr. J. T. Homer of Sedgley	...	...	...	1	1	0
Major Moat of Johnson Hall	...	...	...	1	1	0
Mr. H. E. Sherwin	...	...	...	1	1	0
Rev. Prebendary F. Page	...	...	...		10	6
Dr. A. W. Ashton	...	...	...		10	6
Dr. E. G. Ashton	...	...	...		10	6
Mr. S. A. H. Burne	...	...	...		10	6
Mr. H. J. Steele	...	...	...		10	6
Mr. Roy Malkin	...	...	...		10	6
Mrs. Mellor	...	...	...		10	0
Major Cavenagh-Mainwaring	...	...	...		10	0

					£	s.	d.
Dr. G. R. Malkin	...	...	...	...	10	0	
Mr. R. Bassett	...	...	...	...	10	0	
Mr. Spencer Till	...	...	...	...	10	0	
Misses E. A. and P. Ashwell	...	...	...	...	9	6	
Rev. S. J. Daltry	...	...	...	...	5	0	
Mr. J. Hughes	...	...	...	...	5	0	
Mr. F. Barke	...	...	...	...	5	0	
Mr. G. Great-Rex	...	...	...	...	5	0	
Anon.	...	...	...	...	3	0	
Mr. H. W. Daltry	...	...	...	...	2	6	
The Old Stafford Society per Mr. P. T. Dale	...				2	19	6
					<hr/> £22 17 6 <hr/>		

Therefore the total subscriptions for the two schemes amounted to £29 14s. 6d., made up as detailed for the first scheme £4 15s., for the rustic shed £22 17s. 6d. and Miss Donaldson-Hudson's two guineas. Out of this total I have paid £7 10s. to Mr. Walker and £21 14s. to Mr. Emery. The balance of half a guinea will be handed to the Treasurer of the North Staffs. Field Club to be used at the discretion of the Council. My grateful thanks are hereby expressed to all subscribers, also to Messrs. J Poole and H. W. Daltry who helped in the work of excavation; and to Mr. E. B. Hall of Hales, who kindly allowed me to inspect his deeds to see if there were any early ones relating to the Glass House.

[Since going to press I have received 4s. 6d. more from the Old Stafford Society and 2s. from Mr. S. W. Dale, so 17s. will be handed over to our Treasurer.]

I desire to thank the proprietors of "The Connoisseur" for the loan of two of the blocks of illustration.