

## Chellaston Alabaster.

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IN the last number of our *Journal* the word Chellaston is said, by an expert in etymology, to signify "the enclosure of Cēolheard," a "well-authenticated" old English personal name (vol. xxxvi., p. 212). An earlier volume (xix., p. 62) gives the credit to this town to one "Celdred."

We may then, put aside a more popular interpretation perhaps, to be inferred from a sentence in A. W. Davison's *Derby; its Rise and Progress*, in which, with reference to Saxon times, he tells us how, "on the hill to the north was Quarndon, where these early colonists quarried their *querns*, or small millstones, and away to the southward lay Chellaston, the *chalk-town*, where they found the lime with which they plastered their wattled huts."

It might however be expected that the thoughts of anyone searching for the meaning of this place-name, should have run in the direction of the natural deposit which is so conspicuous a feature of this particular locality.

For miles along the Trent valley, gypsum may be found in greater or less quantities, but it is at Chellaston that it lies in great masses nearest the surface, and is therefore obtainable in larger blocks suitable for the monumental carver, and it is the Chellaston quarries therefore, that have been most famous in this district.

The deposits of gypsum in the long low-lying stretch of county beyond Chellaston, in Derbyshire, and over the borders into Nottinghamshire and Leicestershire, belong

to the Triassic age, and occur in the red marl of the Keuper series. They are of very varying thickness, and occur at different depths. At times they lie just as thin layers in the clayey marl, while occasionally they are many feet in thickness. In 1876, borings for a well were made near Cavendish Bridge, by Messrs. Le Grand and Sutcliffe, and gypsum was found at four different levels, 64 feet, 70 feet, 131 feet and 140 feet, below the surface of the ground. The well was required for brewing purposes, but of this more anon.

At Chellaston the gypsum, or alabaster as it is more commonly called, covers many acres, in massive blocks sometimes 14 feet in thickness. Its formation is of deep interest. Apparently, gypsum has been formed by the gradual precipitation of lime sulphate held in solution in water. If so, what is now the crown of a small hill, must in distant ages have remained for long the bottom of an inland lake, and then have been upheaved by some violent disturbance. The huge separated masses with the clayey marl intervening, would seem to indicate the forcing upwards and breaking up of this bed. The topmost sides of these masses are rough and jagged.

Into this confined lake, flowing streams must have continuously carried the minute floating particles of calcium sulphate, and while the water escaped by evaporation, these particles settled down, slowly hardening into alabaster. The process therefore is somewhat similar to the formation of rock-salt, though not so slow. In an interesting article on this subject, by Mr. A. T. Metcalf, in the Transactions of the Federated Institution of Mining Engineers, he says:—"Gypsum is thrown down when 37 per cent of the water containing it has been evaporated. Salt is not precipitated until 93 per cent of the water has disappeared."

There are yet further indications of wonderful changes, to be observed in the *drift* at Chellaston. In the red marl,

narrow verticle fissures may be noticed, filled with a different coloured soil, and closely impregnated with round pebbles and flints, as though these fissures had been filled in by some over-whelming rush of sub-soil. Mr. George Fletcher, F.G.S. (see our *Journal* xviii.) writing on the Chellaston deposit says, "This deposit contains well-glaciated boulders which have been derived from cretaceous rocks. Chalk and chalk flints are to be found, together with gryphæa and other Liassic fossils. But there are no hills to the east capable of giving rise to glaciers. From whence then did this ice come?" His conclusion is somewhat startling to the imagination, namely "that during this period intense cold prevailed, and that an enormous ice-sheet fled from the Scandinavian mountains, moved across and filled the shallow North Sea, and, joining and brushing aside the ice from north-east Britain, brought fragments of Scandinavian rocks to our shores."

The uses to which alabaster is put are numerous, and depend very largely both on its quality, and the position in which it is found. When it lies at some depth, and has to be procured underground, it is of course more difficult to obtain large blocks. In such mines therefore, as that for instance near Aston-on-Trent, the stone is severed by pick and blasting, and afterwards ground for various purposes. In olden days the plaster-floors then so common in dwellings were largely made of this material. I have read that before machinery came into vogue, gypsum was often tediously pounded by the flail. A large quantity of gypsum is now specially prepared by drying in ovens, and grinding for Plaster of Paris. This is used not only by surgeons in the setting of limbs, but in making casts for sculpture, and for decorative mouldings. It is not suitable for out-of-door work, as it is liable to absorb moisture, and soon decays under the stress of weather. Unfortunately the uses to which powdered

gypsum are put, are not always so legitimate, and cases in which it has served in the adulteration of flour have not been uncommon. This is an old practice. In the *Nottingham Review* for October 10th, 1817, the following occurs:—"Last week, a person who had been recently selling American flour in Coventry, was detected by the police officers in the abominable practice of mixing a quantity of burnt Derbyshire stone with his flour. An information having been laid against him before the magistrates, he was only fined in the mitigated penalty of £5."

But if the presence of gypsum be considered injurious in bread, it is not so, apparently, in beer!

It is indeed claimed that the excellency of Burton beer is largely indebted to the gypsum contained in the local water. Mr. Molyneux in his *History of Burton-on-Trent* calculates that 350,000 pounds of gypsum are annually imbibed by the consumers of Burton beer. Mr. Metcalf, in the article already referred to, states that "as gypsum is soluble, attempts have been made with varying success, to add analagous salts, artificially prepared, to the water of districts not situate on gypsum-bearing beds." He does not however conclude that "Burtonization" has met with perfect results, although "large quantities of gypsum are used for this purpose."

Gypsum seems to lend itself happily to a multitude of purposes. It is rendered capable after heating, of digesting colouring, and the *Encyclopedia Britannica* informs us that in this way, a very good imitation of coral has been produced. It is also of service to manufacturers in the "filling" of paper.

But where great blocks of alabaster can be obtained, these have long been valued for monumental work, and for this the stone is admirably adapted. When fresh from the quarry, it is easily chiselled, being of a softer texture than marble, and less liable to chip, and it hardens

with exposure, if not subject to damp. The purest quality is almost snow white, with a look of semi-transparency, but generally the stone is tinged and veined with a brownish-red, the effect of oxide of iron, while rarely it may be found delicately clouded with a greenish tinge due to the influence of sulphide of iron. This latter tint, I have observed in the quarry at Chellaston, but I do not think it is common. The best way to bring out the colour and markings is to throw a bucket of water over the stone.

There are of course several places, both near and far in the country, where alabaster is found. The great pillars in Kedleston Hall were supplied from the quarry at Red Hill, or Ratcliffe-on-Soar. Tutbury gypsum too, is well-known, and there are pits, amongst others, at Wheatley, near Newark, Carlisle, Yeovil, and Blue Anchor, near Watchet in Somersetshire. But Chellaston, in past days was well-able to hold its own; of its modern effort I shall speak presently.

In the middle ages there was a vast demand for effigies, and statuettes; heads of Saints, figured panels for triptyches, and a considerable trade was carried on in alabaster carving, not only in this country, but also for exportation to the continent. As in all skilled work, certain workshops and localities took pre-eminence, and had their own method, or *motif*, or favourite designs and studies. In this way, it is frequently possible to decide from which particular "school" a piece of sculpture emanated. There is a clever article on the *Tombs of the School of London at the beginning of the fourteenth century*, by Count Paul Biver in the *Archæological Journal* (vol. xvii., March 1910) in which he touches on certain characteristics to be found in the monumental tombs carved by the London, Hereford, Doulting, Purbeck and Nottingham "schools."

Among these, the Nottingham "alabastermen" were

celebrated, and had an extensive clientele at home and in France. To them must be credited the excellent workmanship of a large number of the "Altar-tombs," as they are often called though "Table-tombs" is a preferable term, which adorn so many churches, and on which repose the recumbent effigies of armoured knights, and esquires, and fair ladies.

Alas, that so many of these figures should have been mutilated by acts of vandalism, and by irritating idle wantonness, while many have altogether vanished as "carved images" to be swept away by Puritanical zeal, or have been unfortunately displaced in some time of restoration!

Happily, however, there are still a number of fine examples remaining in Derbyshire, at Bakewell, Longford, Swarkeston, Barrow-on-Trent, Kedleston, Norbury, Kirk Langley, Aston-on-Trent, Radbourn, Wirksworth, and several other old parish churches.

Probably many influences led to the complete cessation of erecting such monuments. Count Biver, says, "the brilliant school of London tomb-makers was struck down in the zenith of its vitality by the Black Death in 1349, a blow from which it never completely recovered." Probably also the Wars of the Roses had a good deal to do with the decreased demand for expensive ancestral monuments. Perhaps also, a growing feeling that space could not be spared in parish churches for cumbrous tombs of local worthies had a share in the falling off in their erection.

The stone used by the Nottingham carvers was mainly supplied from Chellaston, and indeed, a large number of beautiful monuments all over the country, owe their material to this ancient quarry. The late Mr. Henry Forman of Chellaston, informed me that Dean Stanley, shortly before his death, found a document in the archives of Westminster Abbey, stating that the alabaster of

which the monuments in one of the chapels of the Abbey were made, came from "Chellaston in Derby," and that one of the carvers was named Nelson. Some of these monuments date from the early days of the Abbey.

In the Roman Catholic Church at Lydiate, Lancashire, are four alabaster panels now built into a modern pulpit, depicting scenes in the martyrdom of St. Catherine, and also a figure of St. Cuthbert. These probably belonged to the Church of St. Catherine at Lydiate, built about 1485, and being discarded at the Reformation were long preserved at Lydiate Hall.

A description of them will be found in a paper in the *Archæological Journal*, for June, 1913, by Philip Nelson M.D., F.S.A., who says, "all these carvings which are of the fifteenth century, are characteristic of the work executed in Chellaston alabaster by sculptors of the Nottingham School."

When I was examining the magnificent effigies in St. Mary's Church, Warwick, four or five years ago, the guide informed me that the material of one of the finest came from "a place called Chellaston, near Derby."

No doubt there were, from time to time, one or two skilled carvers at Chellaston itself, but it would seem that most of the skilled work was done in Nottingham, to which place—about sixteen miles distant—the stone was conveyed either by boat or by cartage.

Mr. George Fellows in his admirable book on *Arms, Armour and Alabaster round Nottingham*, recently published, quotes a legal action in 1530 between William Walsh, and John Nicholson, a "stainer" (that is one who painted and gilded) in which the former sued for the carriage of a cart-load of Alabaster from Chellaston to Nottingham. Mr. Fellows also mentions Thomas Prentys and Robert Sutton "Kervers" of Chellaston in 1491, who made the splendid altar-tomb which bears the effigies of Ralph Green and his wife at Lowick, Northants, the

contract for which is still in existence. The tomb at Lowick cost 50 marks, equal to about £40, a no inconsiderable sum in those days.

As showing the wide range of the trade from Chellaston, reference may be made to a delightful article by Mr. William Stevenson, in the Thoroton Society's *Journal*, vol. xi., p. 89, the subject of which is a contract made in 1414, between the abbot and monks of Fécamp, and one "Gaultier Mjessim," or, in English, Walter Measham. The first-named on this document called a "Charter-party," were four Frenchmen, one of whom Maistre Alexandre de Berneval was a celebrated master-mason of Rouen, the others being recorded as servants of the Lord Abbot of Fécamp. The abbot had advanced 200 golden crowns for the purchase and expenditure. The party having set sail from Harfleur, in five days landed at Newcastle. Here, horses were purchased, and they rode to Nottingham where Mr. Thomas Prentys an alabaster-merchant joined them, and they proceeded to Chellaston. Eventually rough material for carving at home was purchased, and a contract was signed, binding Mr. Prentys to deliver the specified material alongside Walter Measham's ship "Friday" at Hull.

As already stated, for many years the art of sculpture, and the demand for alabaster declined. The pits, for this purpose were everywhere at a standstill. At Chellaston the overgrown, uneven mounds show how extensively the old quarries had been worked. Some few years ago, however, attention was again attracted to the quality of this stone, and a revival of the work at Chellaston, on ground previously untouched was commenced by the late Mr. Forman. Sir Gilbert Scott visited the quarries, and greatly encouraged the new undertaking. The reredos—designed by Sir Gilbert Scott, in Ely Cathedral is from this stone, and amongst other monuments may be mentioned those to Bishop Selwyn in Lichfield



Cathedral, to Bishop Wilberforce in Winchester Cathedral, Lady Augusta Stanley in Westminster Abbey, and Mr. Meynell-Ingram at Hoar Cross. The pupil in the nave of Worcester Cathedral is also from the same pit.

The blocks are sawn "in situ" by means of a long three-strand wire, worked by an oil engine, instead of the old-fashioned cross-cut saw. The wire is fed with sand and water, and cuts vertically through from six to nine inches an hour. From 25 to 50 feet of rock can be sawn at once.

A local name at Chellaston for alabaster is "Patrick," but I can give no reason for it being so called. There have not been any very important historic "finds" in this quarry, although a few mediæval mementoes from time to time have been unearthed.

In 1850, some wedge-shaped picks from 8 to 12 inches long were discovered, and the remains of an oaken ladder. This latter was about 16 feet below the level of the surface.

A number of fragments of pottery have been dug up occasionally, one of these, an old piece of baked pottery, the part of a handle, had three indented lines, evidently made by the drawing down of the thumb. On the inside also was a thumb-mark, no doubt caused by the placing of the thumb there to resist the pressure of the one manipulating on the outside.

On July 13th, 1913, I received a kind letter from the late Mr. Forman, telling me that they had unearthed a jug, and this I went over to see. It was found under the ledge of a piece of protruding rock, about 9 feet below the surface of the soil, in what is known as a "pot-hole" (about two feet in circumference) full of water-clay.

The jug is of rough red ware, quarter-of-an-inch thick, and very irregular, with the outside of the top half coated with a yellowish glaze. The handle bears thumb marks similar to those already described.

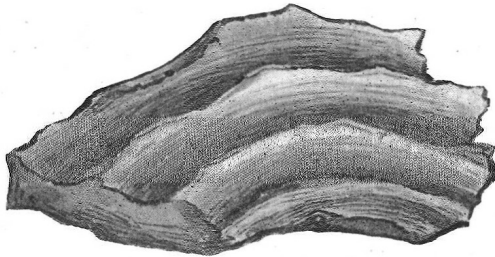
The measurements are as follows :—

Across the narrow part of neck	..	3 $\frac{1}{4}$	ins.
„ widest part	.. ..	7	ins.
„ the mouth	.. ..	3 $\frac{3}{4}$	ins.
Height	.. ..	7 $\frac{1}{4}$	ins.



JUG OF ROUGH RED WARE.

Other fragments of similar ware were turned up about the same time. One of these was the portion of the bottom of probably a very similar jug. The inside of this had



FRAGMENT OF POTTERY.

irregular indentures, or groves of quarter-of-an-inch deep, while the bottom was smooth.

It will not perhaps be difficult to fix *approximately* the date of this ware. In the Nottingham Museum are a few jugs of mediæval Nottinghamshire pottery, similar in description to that found at Chellaston. The yellowish glaze is the same, as well as the rough red material, and the rude mouldings.

Mr. I. Potter Briscoe, in *Chapters of Nottinghamshire History* (p. 29-31), writing on the discovery in 1874, of some old kilns at the corner of George Street, Nottingham, quotes the following from Mr. Arthur I. Sulley:—"in and near which (kilns) they found jars, jugs, and flat-bottomed pots of mediæval manufacture, varying from six to sixteen inches in height, and from 2 to 9 inches in diameter. They are all of a clay body, with the upper portion of the outside covered with green salt glaze. They afterwards found three other kilns and more pieces of the same description, . . . also a number of silver pennies of Edward I., II., III., a few Irish types of Edward I., and pennies of Alexander of Scotland."

The dates of the three Edwards would be from 1272 to 1377.

In 1897, another kiln was found when excavations were taking place for the Victoria Station at Nottingham, when pieces of pottery were discovered, consisting mostly of jugs for carrying water, ale, mead or wine, &c. "They are all made of coarse clay, reddish brown in colour and bear evidence of the use of the potter's wheel. They show no kind of ornamentation, except that the handles are indented or grooved the whole length at each side, and more deeply in the centre of the potter's thumb. . . . One peculiarity is that all the jugs are covered with a dark greenish glaze, with occasionally accidental splashes on the unglazed portions. One is lead to wonder why the external surface only is glazed, where the glaze

appears practically useless, as the unglazed portions are very rough and porous perhaps with age." <sup>1</sup>

Now we have seen that there was a very considerable trade carried on between Nottingham and the Chellaston quarries in mediæval times, and that the pottery found at Chellaston tallies with that manufactured at Nottingham. Possibly then, we may conjecture rightly, if we assume the jug found at Chellaston to be a memento of men working in this alabaster pit early in the fourteenth century, about the time of the contract made by the abbot of Fécamp.

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<sup>1</sup> See articles in *Derbyshire and Notts. Notes and Queries*, 1897-8, by Mr. James Shipman, F.G.S.