

St. Stephens Church, St. Albans

Repairs to the Mediaeval Roof, and Discovery of an Early Window

BY H. O. CAVALIER, M.A.

ONE of the main tie-beams of the roof of St. Stephens Church was in danger of collapsing, through the ravages of the death-watch beetle; it had to be supported temporarily by baulks of timber, and scaffolding was erected for the examination and repair of the whole roof. It was thus possible to view this interesting roof at close quarters; it had been restored in a few details, probably by Sir Gilbert Scott in 1860, but the greater part of the structure proves to be the original work erected some four centuries earlier, according to Professor A. E. Richardson, under whose skilful supervision the whole roof has now been restored and treated with preservatives. The roof of the nave is in five bays; the front tie-beam is above the wooden chancel-arch and has a central hook, evidently for the support of the rood; the last tie-beam forms part of the construction of the wooden belfry. The tie-beams run right across the nave; their ends rest on the wall-plates: it was at this junction that the beetle had caused most trouble; one of the beams had to be strengthened by side-plates of iron for its full length, an operation rendered difficult by the fact that the beams are not level but curve upwards in the middle, to the point where they support the upright king-post which rises to the ridge of the roof. This leaves a triangular opening on each side of the king-post, between the sloping timbers and the tie-beam; these openings are filled with oak panels cut with a charming pattern of open tracery; by employing a white background at either end of the roof, Professor Richardson has brought this feature of the roof into view, while the iron supports of the beams have been so skilfully placed that they are not noticeable.

CARPENTERS' MARKS.

All the timbers of the framework had been marked with number-signs by the carpenters; evidently the frame

was put together on the ground, and then marked so that each piece could be replaced correctly when it was mounted on the walls of the church. In the figure (No. 1) a photograph of the fourth tie-beam (south side of west face), it will be seen that the craftsmen were quite indifferent as to whether the mark was IV or VI, and whether it stood on its side or upside-down; one of these marks is seen near the middle of the part of the principal shown in the figure; below it, slightly to the left, there is one on the upper edge of the traceried panel. A much larger mark is cut on the left-hand edge of the panel, between the upper curve and the white peg; and immediately to the left of the peg, on the king-post, \lessgtr can be seen. Through the openings of the panel there is a perspective view of the similar panel mounted on the opposite face of the tie-beam. If our photograph had been taken to show the corresponding panels on the left (north) of the king-post, we should see an additional cut in the V of the sign, thus: $\lvert\mathbf{V}$.

These marks were found on the tie-beams, king-posts, principals, purlins, wall-plates, and on the traceried panels; on some of these last the carpenters' marks extended across the cutting of the tracery, showing that the panels must have been fitted into position and marked while the framework was first put together: then the panels were taken out and carved. A complete set of rubbings of these carpenters' marks has been made. The marks used by mediæval craftsmen were regulated by the guilds and companies. It was fortunate that repairs were undertaken in time to preserve this fine roof.

THE BELFRY.

A century ago the belfry had six small bells in a wooden tower surmounted with a very diminutive "Hertfordshire spike." The bell-frame was supported by four tall upright timbers, which rested on the wooden floor of the belfry. In 1860 Sir Gilbert Scott mounted a wooden spire on the top of the old tower; and a further addition to the burden carried by the timbers was made when a heavy tenor bell was inserted in place of the little treble, by Lord Grimthorpe's advice; when the bells were rung, the tower swayed dangerously in the direction of the

church, where it had only timber supports. This was remedied to some extent by means of steel girders.

While the scaffolding was in position, we were able to test the strain on the old timbers while the bells were ringing, and found that it was excessive. The spire had several loose timbers, and was badly supported; this was remedied without difficulty. But the swinging of the bells, at the top of four long legs of timber, set up a rocking which was dangerous for a wooden framework which has served for some five centuries and is carrying a much heavier load than that for which it was designed. After some experiments, we hit upon a satisfactory solution in the shape of a large triangular truss which is supported on the side-walls and reaches right up to the bell-frame. By this means we have given a new lease of life, we hope, to one of the very few mediæval bell-cotes which still retains its original timbers intact; the whole of the woodwork was scraped and treated with preservatives.

THE WINDOW.

Figure 2, from a photograph taken before the window was discovered, shows part of the north wall of the nave; an arch of late Norman work (about 1115), probably opened into a porch; perhaps a century later, the porch was extended westwards to form a short north aisle: one of the filled-in arches shows on the right of the figure. In 1930 we traced the foundations of the outer wall (north) of this aisle, and found that they extended for the full length of the nave; if we may judge from the existing south aisle, there was an eastward extension in the fourteenth century. We could not find any foundations of a party-wall which we had expected to come across, slightly to the left of the Norman arch, where the upper part of a quoin of Roman brick showed clearly against the white flints of the wall. Mr. J. C. Rogers suggested that this was not a quoin but the side of a window; on a close examination I saw that the bricks were not cut square at the edge, for where the mortar had worn away I could see a sharp angle projecting; a knife blade slid in quite easily at this angle, between the bricks and the mortar; later, with kind help from Mr. Rogers, I found that this "splay" went nearly through

ST. STEPHENS CHURCH, ST. ALBANS.

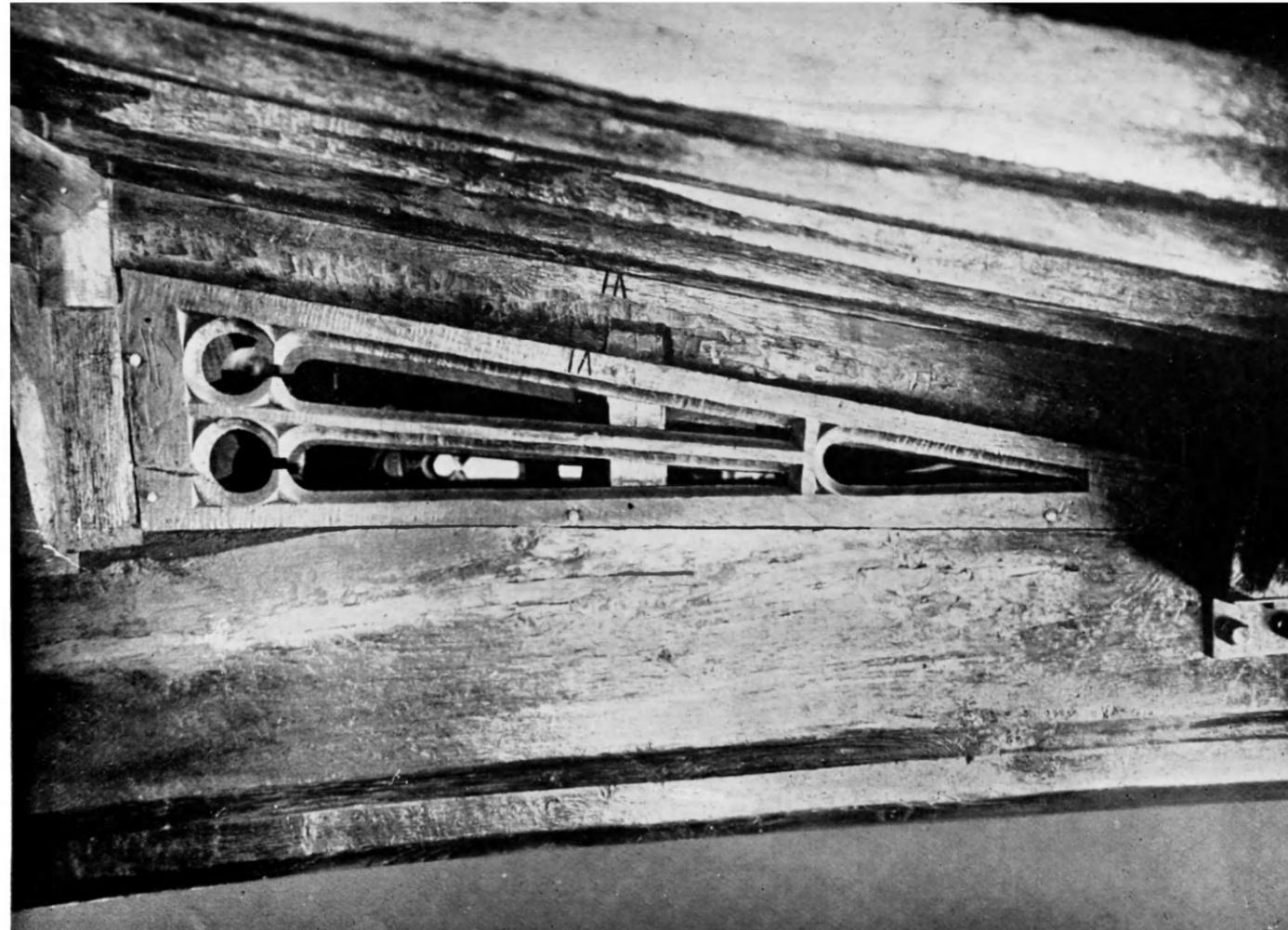


FIG. 1. TRACERIED PANEL ABOVE TIE-BEAM IV.



ST. STEPHENS CHURCH, ST. ALBANS.



FIG. 2. NORTH WALL OF NAVE.
The line of Roman brick is 2½ inches from the left margin.
Norman arch with doorway of c. 1460 in the filling; arch of c. 1220 on right.



ST. STEPHENS CHURCH, ST. ALBANS.

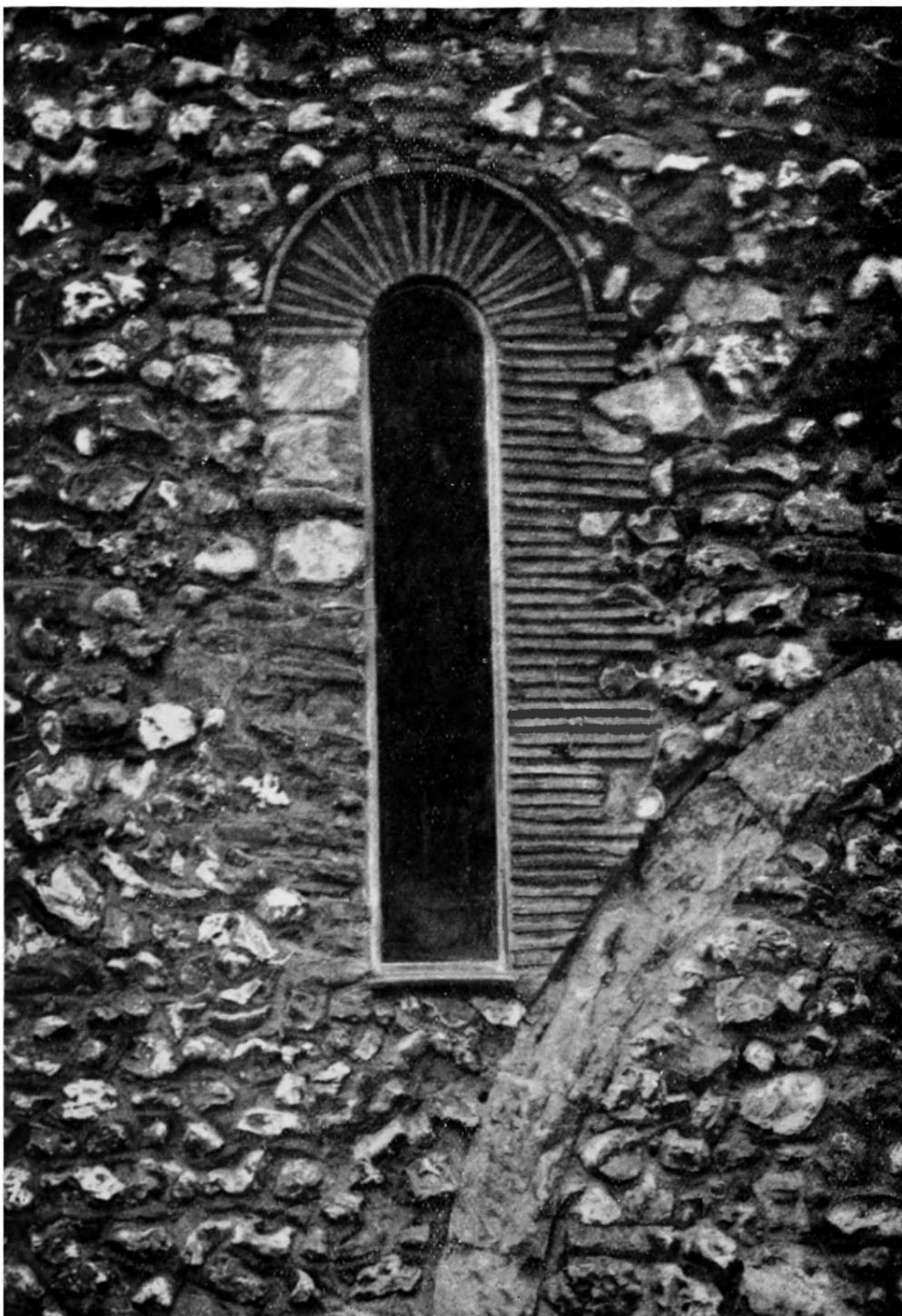


FIG. 3. THE WINDOW AS RESTORED.
Part of the Norman arch is seen below.



the wall without encountering any obstacle. As we were faced with a heavy bill of repairs for the roof, I hesitated to incur any further expense, but the indefatigable Secretary of this Society arrived on the scene and urged me to continue the investigation; we are very grateful to him for his encouragement and to the Society for their kind grant of the cost of opening out the window: for such it proved to be. The Norman builders had found it an obstacle when constructing their arch; they had cut away one lower corner, and had filled in the remainder with rubble. When the plaster of the inner side was removed, it was difficult to persuade the rubble to come away gently, as it seemed anxious to form an avalanche.

This revealed the window shown in Figure 3; the original edge of Roman brick is seen on the left; in its upper part there are three pieces of clunch, which are cut to the same angle; these may be original or may be repairs made at some time before the Norman arch was built. The additional bricks to the left suggest the Saxon "long and short" work. The rest of the opening has been carefully framed in modern tile, set so as to illustrate the method of stitching into the flint, with a tile projecting slightly above the original sill; a gun-metal frame has been inserted near the orifice. The window is four feet high, and eight inches wide.

On the inside the window opens to a wide-angled splay; the opening on the inner face of the wall is eight feet high. The greater part of the original plaster remains intact in the mid thickness of the wall; it was thus possible to reconstruct the exact dimensions of the window. The inner sill was made up with modern tile. It was not possible to open out the splay to its full extent because the Norman arch cuts into it; Professor Richardson surmounted the curve of this arch, where we had exposed it, with a relieving arch of tile, carried up to support the damaged side of the splay.

The most interesting feature of the splay, however, is seen in its curved summit; it is clear that the builders had a wooden framework, made to the size of the splayed opening, which they kept in position as they built up the wall; this wooden framework would have a summit like a fan bent over in a curve. The edges of the wooden flanges have left their impression on the plaster, only

disturbed at a spot where a bird had built a nest in the wall, long ago. The rough centreing of the arched summit is a decidedly primitive feature.

If I have been somewhat prolix in telling how this window was found, it was but to help the reader to realize that the splay of this window runs directly through the wall to its extreme outer edge. In the little Norman windows of our west wall, there is no such sharp edge, but about two inches of square-cut masonry with a rebate for the glass (the rebate now visible may perhaps be of later date). In our early window there was no vestige of any attachment for glass or horn. Hence it seems probable that the wooden framework was left in position and was closed with a wooden shutter on the outside.

DATE.

There are some unusual features which require the judgment of experts before the date of this window can be settled, but I may venture to indicate some of the data of a very interesting problem. In the first year of the excavations at Verulamium, I was cleaning the edge of a very muddy wall, when I came across a curiously bevelled brick; under Dr. Wheeler's careful supervision, this was proved to be the edge of the splay of that Roman cellar-window which most members of this Society will remember: it was splayed from both sides, so that the narrowest part—the opening for the glass—came in the middle of the thickness of the wall. The early Saxon builders followed the example of the Romans and set their horn-lights in the middle of the wall, with a splay on both the outside and the inside; and this is accepted as the Saxon method. The Romanesque style, however, which was adopted by the Normans, has windows of a type probably developed from the loopholes of fortifications; the narrow aperture was placed at the outside of the wall, with the glass set near the outer surface; there was only one splay, on the inner side. The small windows were often tall and narrow; the Saxon windows were usually shorter and wider. The Normans liked a thick, strong wall; the Saxons preferred a thin wall, as a rule. If we follow these details, our window would seem to be early Norman, and this is the period to which

most authorities assign the windows of our sister church, St. Michael's, which are strikingly similar.

In the account of St. Michael's in the *Victoria County History*, however, the learned writer hesitates to give so late a date to these windows, on account of their crude masonry; but the thick walls, evidently of the same date as those of St. Stephens, finally prevail upon him to decide in favour of the later date. The photographs of our window hardly do justice to the primitive character of the masonry, with the bricks clumsily set in a wide spread of mortar. Windows of similar outline are found in the Norman turrets of St. Albans Abbey, but the masonry is vastly superior. We have to bear in mind that Westminster Abbey was built by Edward the Confessor, a Saxon king, in the Romanesque style which had been prevalent in Normandy for two centuries before the Conquest. St. Albans was a resort of pilgrims from the continent: and it seemed possible that in this window we see the efforts of local masons to follow prevalent ideas; for there can be little doubt that the Romanesque style made its way to London at an early date.

St. Stephens is fortunate in having two approximate dates in the *Gesta Abbatum*; the Norman arch is probably contemporaneous with the re-consecration by Bishop Gilbert of Limerick, about 1115; and the earlier date, the founding of the church by Abbot Ulsinus, should probably be placed near the year 950, for the statesmanlike work of this Abbot in founding the market and town of St. Albans and building a church for it, and also two churches on Watling Street, probably for pilgrims, gives us an impression of the kindly interest which was such a feature of the English monastic houses before St. Dunstan enforced the foreign Benedictine rule in 960. If we look through the Acts of the Abbots following Ulsinus, we find them displaying great activity in despoiling Verulamium of brick, but none had the power to start building until a Norman Abbot came, although a new Abbey Church was urgently needed. Hence, if we must select a date for these windows at St. Michael's and St. Stephens, the records would point to the time when the two churches were founded simultaneously by Abbot Ulsinus.

The Saxon period lasted longer than the interval which separates our own times from the Reformation; it would be strange if one stereotyped style dominated the whole of this immense period. The ruins of Verulamium have shown us what various expedients the Roman builders adopted when faced with our stubborn flints; they have left us sad evidence that the local Saxons coveted Roman brick for their buildings; and even to-day our neighbourhood is continuing its tradition of architectural experiments.

And here, gentle reader, I would have left you to digest the problem in peace, had not kindly fortune carried me to the church of Avebury in Wiltshire. Originally it must have been a Saxon church, for it was enlarged in early Norman times. The Saxon walls were thick—quite as thick as those of St. Stephens; in these walls there are two Saxon windows, each of which had been blocked because it obstructed a Norman arch, exactly as at St. Stephens; they have now been opened out, and although the splay is not so wide-angled, yet it has the same feature of passing directly through the wall from surface to surface; they stand at about the same height from the ground, and have about the same height as our window, but they are wider. One of them shows clearly the marks where the hinges of a shutter were attached on the outer surface. They are framed in stone, rather clumsily cut. We could hardly imagine a closer parallel, but the same church adds yet another detail; high up in the walls there are some small round windows, also Saxon, with the infilling line near the outer surface and a wide conical splay opening inwards; the outer opening is monolithic, cut from a single block of chalk, but on the inner side each of these is pierced with a circle of little sockets in which men placed the ends of sticks and thus formed a conical basket-work of wattle to support the plaster for the splay; an ingenious method which would not be needed in our lands, then thickly clad with forest, but almost as thickly populated with the outlaws and footpads for whom the shutters may have been needed.

We have, then, at St. Stephens a west wall built of large flints, loosely mortared; quoins of Roman brick

mark its original width; in it there are two small Norman windows inserted, not quite flush with the wall, set in smaller flints, and faced with stone dressings. A similar wall is continued for part of the north wall of the nave, and in this we have found a window of more primitive masonry than our Norman windows and strikingly similar in construction to the Saxon windows at Avebury. It is for the experts to settle whether the work at St. Michael's and St. Stephens should be attributed to Norman builders or to the time of Abbot Ulsinus, the original founder, if we may so call him, for probably there had been earlier buildings of timber on both sites.