

I.

SOME RECENT DISCOVERIES IN ST ANDREWS. BY D. HAY
FLEMING, LL.D., F.S.A.Scot.¹

Of the discoveries which I am now to bring under the notice of the Society, one was made last month and two last autumn. Several of the others were made so long ago as the summer of 1910, but it is well that they should be recorded in our *Proceedings*.

In one of their invaluable works, Messrs MacGibbon and Ross, describing St Andrews Cathedral, say:—

“There is a very puzzling feature in connection with this west front which has never been satisfactorily explained. On each side of the doorway there rises a vaulting shaft, a few feet higher than the level of the capitals of the doorway. A similar shaft will be observed at the angle of the west front and the south wall. Rising from these shafts are incomplete ragglets, indicating the form of vaults against the west façade, thus suggesting that there was a western porch. But such a feature is quite incompatible with the design of the west end, for had there been such a porch, it would have cut the arcade above the doorway in two, which is a most unlikely idea. The vaulting shafts and arches springing from them are a part of the original design and construction. The arcade also seems at first sight to be so, hence the difficulty of reconciling these features with the existence of a western porch. The marks of the arch rise to the apex in the south aisle, and the arch head might have been completed without interfering with the arcade. Over the central door the marks of the arch are carried up only as far as the string course beneath the first arcade. This fact, together with the later character of the upper part of the building, would seem to indicate that there has been a change in the design, and that the original intention of having a wide porch extending along the whole of the west end has been departed from after the first story was built up to the level of the above string course, all above that point being of later design and execution. The style of the architecture confirms this view. . . . The lower story of the west end, which is in the First Pointed style, would thus appear to be all that remains of the façade erected by Bishop Wishart; while the upper portion above the first string course was rebuilt at a later date.”²

This puzzle was solved in June 1910, when the west front was being pointed. It was then discovered that the wall-passage, which appeared to have run behind the blind arcade, had not been filled up with stone and lime as had been usually supposed, but that the passage had never run behind that arcade; and that, in fact, the central part of this end wall had been taken down bodily to the bed of the string course on the west

¹ Since this paper was read other interesting discoveries have been made in St Andrews. Notices of these have been added (September 1915), and are distinguished by being enclosed within square brackets.

² *The Ecclesiastical Architecture of Scotland*, ii. 16.

face, that is, to 3 feet below the floor of the wall-passage; and, on its east face, to the bed of the sixth course below the sills of the two large windows. This part of the wall had then been built up solid, plain on the east face, and with the blind arcade on its west face.

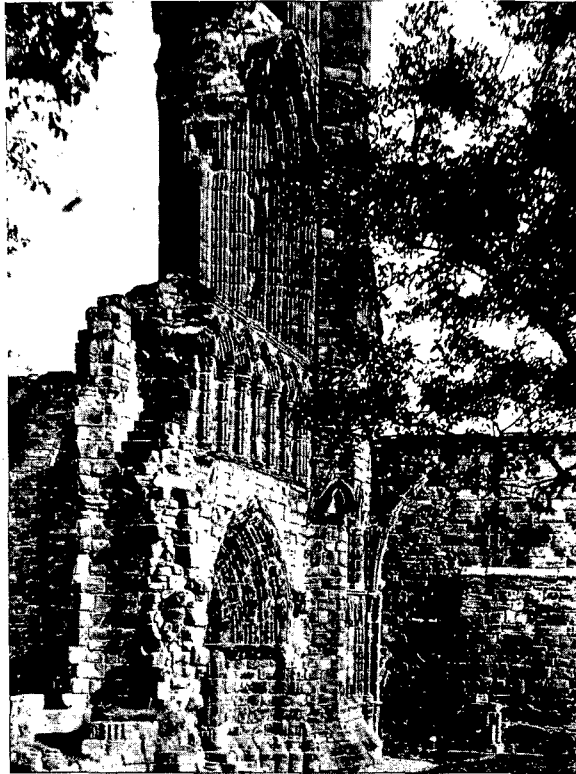


Fig. 1. West front of St Andrews Cathedral.¹

[From photo by Mr J. S. Boyd.]

Evidence was also found that when the wall-passage did exist, there had been an open arcade between it and the interior of the church. Part of an Early English jamb was found, *in situ*, near the north end of the passage, and has been exposed. There is part of a similar jamb near the other end of the passage, but it might not be safe to clear away any of the surrounding masonry. From the well of the staircase six steps had led up to the north end of the floor of the passage. These steps are now exposed (fig. 1). The lower five are complete; only half of the sixth

¹ The blocks used for figs. 1, 2, and 10 have been kindly lent by the Editor of the *Stone Trades Journal*.

remains. From their appearance it may be inferred that they had not been much used. One of the stones which was built over them belonged to the Early English jamps, and was therefore placed on the one at the north end of the passage. The position of this jamb is shown on



Fig. 2. West front of St Andrews Cathedral.

[From photo by Mr J. S. Boyd.]

fig. 2. The two windows which stood side by side, separated by a massive pier, cannot have been the original ones, and an examination of the remaining one shows that it had been "slapped" into the southern turret, as had also the window immediately above it, and the triangular window on the other side of that turret. The masonry on the east side of that triangular window, serving as a buttress, only dates from 1840.

The wall of the south aisle of the nave is continued beyond the west front; and it has long been noticed that the respond beyond that front is the same as the westmost one in the south aisle, and that its

distance from it is exactly double the distance between two in that aisle. This and some other details¹ led to the belief that at one time the Cathedral had been longer by at least two bays than it is now. In the summer of 1910 this was pointed out to the foreman mason. He afterwards took some measurements, and was satisfied that, if there was a respond hidden by the present west front, it could not be very far in. He therefore (on the 24th of August) took out a badly weathered stone with the intention of replacing it by a better one if nothing were found. To his delight he saw the long-lost respond only 8 inches from the east face of the wall (fig. 3). Needless to say, the stone he took out has not been replaced.

In the corresponding angle of the north aisle of the nave, the wall is barely 6 feet high. The late Mr David Henry, architect, now suggested that the turf on the top of it should be lifted, which was done, and there sure enough was the corresponding respond.² Shortly afterwards, its base was exposed by extracting a stone from the wall (fig. 4). This respond had projected about 6 inches beyond the inner face of the west front, and that projection had been hewn off. Incidentally, this shows that, in laying off the aisles of the nave, an error of about 14 inches had been made, unless, perhaps, the discrepancy should be regarded as an architectural refinement!

In the wall of the south aisle there are ten windows, four with semi-circular and six with pointed tops. Above the round-headed ones, and above the solid wall, the lime is the same; but over the pointed ones it is of a different colour. It is not unreasonable to suppose that originally all those ten windows were the same, and that at a later period six of them were altered. Mr John Cole, foreman mason in 1910, a very shrewd and observant man, was of opinion that the alteration had been made after the roof was on.

It may be noted that the external base-course on the north and south sides of the Cathedral, and also on its east end, has been the same throughout. If the facts and features to which I have previously referred do not absolutely prove that the Cathedral was at one time

¹ From the level of the ground up to a height of 18 feet the wall of the south aisle is not bonded into the west front. In 1889 it was found that the foundations of the wall of the north aisle extended about 30 feet beyond the west front, and that the foundations of the wall of the south aisle could be traced quite as far. The projecting boulders, which are now so prominent to the westward of the west front, are the foundations of a much later wall, built when the surface of the ground was temporarily much higher than it is at present and than it had been at an earlier period. The stones immediately below these boulders are merely underpinning inserted when the level of the ground was again lowered. The foundations of the continuation of the wall of the south aisle are on a still lower level.

² These two recently discovered responds, as well as the one to the west of the west front, have a narrow flat fillet on each of their three shafts. Of the responds in the wall of the south aisle only the westmost one has the fillets.

longer than it is now, they at least prove that it was intended to be longer; and that, with the object of carrying out that intention;

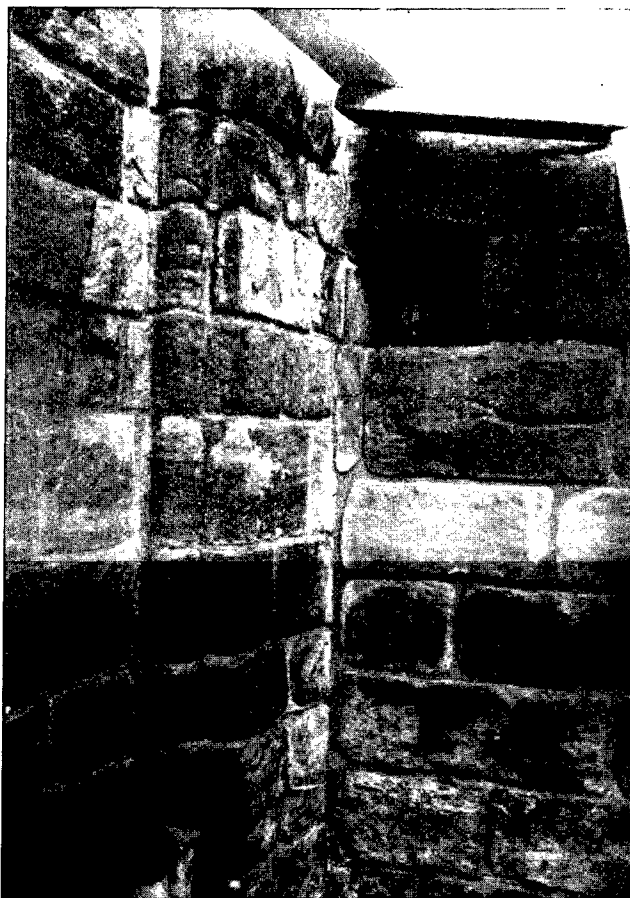


Fig. 3. Respond enclosed in south end of west gable of Cathedral.

[From photo by Mr Wilson Paterson.]

the north and south walls of the nave extended beyond the site of the present west front, and did so before the present west front was built.

There can be little if any doubt that before the upper portion of the central part of the west front was reconstructed there must have been a galilee or narthex resting against it, and that the "incomplete raggllets" (or more properly, perhaps, the hewn-off wall-ribs) belonged

to it.¹ Four pits were dug on its site. In two of them some rough masonry was found, which may have been the remains of foundations,



Fig. 4. Respond enclosed in north end of west gable of Cathedral.

[From photo by Mr Wilson Paterson.]

but whether of pillars of a galilee or not would be very difficult to determine.

Wyntoun credits Bishop Wishart (1273-1279) with having built nearly

¹ In fig. 1 remains of the vaulting of the galilee, or narthex, will be observed in its south-east angle, and also the base and lower part of the respond. About the middle of last century, a number of new stones were inserted in the west front, and on some of these the obliterated line of the wall-ribs was made continuous by a shallow incision.

all the nave, and also the west gable.¹ On the other hand, Walter Bower, who was a contemporary of Wyntoun's, says that Wishart sumptuously re-edified the west part of the church, which had been thrown down by a violent tempest.² It might be interesting, and not unprofitable, to attempt to reconcile these two statements; but, meantime at least, I must resist the temptation.

Before passing from the Cathedral, two or three minor discoveries may be briefly referred to. In June 1911 an iron cramp was found in the west wall of the south transept. It was immediately under one of the capitals of the arcading, and had been used to retain the shaft in its place. Three similar cramps were found in 1913 in the angles of the spire on the south-east corner of the east-end wall of the Cathedral. And in July 1914 a lead cramp was found in the north-west angle of the same wall, about 40 feet above the level of the ground. Two much heavier lead cramps have also been found in the walls. On the west face of the east gable, above the base course, there are marks of arcading. The size and position of the capitals can be determined by the lime still adhering to the wall. And now, since the wall has been re-pointed, the stumps of several lead cramps can be detected immediately under the marks of the caps. The iron cramps had been bent at right angles. One leg was bedded horizontally in the wall, and the other sunk perpendicularly in the top of the shaft. The idea was very simple; but the expansive force of the rust had certainly burst several of the shafts.

About the beginning of last month, the encroaching turf was removed from all that remains of two of the steps near the east end of the choir of the Cathedral. So far the only remarkable discovery at this point is what can perhaps be best described as a built socket-hole. It is nearly square, being $6\frac{1}{2}$ inches by $5\frac{1}{2}$, and is 16 inches in depth. There is a flag in the bottom; and the whole has probably been covered by a flat stone with an aperture on the top. The upper stones on the east, north, and south sides of this socket-hole are portions of Norman capitals; the one on the east, which is almost as fresh as the day on which it was hewn, has probably formed part of an arcade. The upper stone on the west side may have been either part of a base or of a capital (fig. 5).

[Other two of these built socket-holes have been since discovered in close proximity to the first, which I hereafter refer to as No. 1. The largest of the three, which I designate No. 2, is due east of No. 1; and the distance from the centre of the aperture of the one to the centre of the other is 2 feet $9\frac{1}{4}$ inches. The aperture of No. 2 is 9 inches square, and its depth is 2 feet $\frac{1}{2}$ inch. Four stones form a bottom to this socket-

¹ Laing's *Wyntoun*, ii. 258.

² *Scotichronicon cum Continuatione Walteri Boweri*, i. 361.

hole. A moulded stone built into its north side probably dates from the thirteenth century, and may have done service for a considerable period in another building before it was utilised in this structure. The top-stone is 1 foot 10½ inches by 2 feet 1¼ inches, and is 7½ inches thick. It is badly shattered. The upper surface is 1½ inches below the level of the second step. If these two socket-holes were intended to be in the centre of the church, a slight mistake of 2½ inches was made, which throws them 5 inches nearer to the south wall than to the north. No. 3 is much more rudely built than either of the others, and is smaller, the aperture



Fig. 5. Socket-hole, No. 1.

[From photo by Mr Wilson Paterson.]

measuring 4½ inches by 6½. The centre of No. 3 is 2 feet 7 inches further south than the centre of No. 2, and 1 foot 3 inches further west (fig. 6). No. 1 is on the line of the lowest step, and the aperture of No. 2 is immediately behind the line of the second step. Comparatively little of the steps remains, and it may be doubted whether that little is original. There must, however, have been steps there or thereabout. The height of the first step is 7 inches, of the second 6, and of the third 4. This last is on the level of and forms part of the paved floor long supposed to mark the site of the high altar. The floor is formed of freestone slabs. Of those uncovered the smallest has been 13¾ inches by 7, and the largest 18½ by 17. Some of the slabs have been badly smashed and sunk considerably below their original level. This was probably done by the fall of the vaulted roof. The socket-holes and

the portion of the paved floor which was temporarily uncovered in August have again been covered by soil and turf. The distance from the east side of the aperture of socket-hole No. 2 to the inner face of the east gable is 59 feet 8 inches. When No. 1 was discovered it was supposed to be a socket-hole for the standard of a lectern; but the discovery of the other two has discounted that theory, unless, of course, they were not in use at the same time. Mr Alexander Hutcheson



Fig. 6. Socket-holes, Nos. 1, 2, and 3.

[From photo by Mr Wilson Paterson.]

has suggested that they may have been designed for the safekeeping of relics.¹ The massive top-stone of No. 2 seems rather to favour the idea of a socket-hole for some piece of church furniture. It has also been suggested that the hearts of eminent persons may have been deposited in them. Bishop Fraser died in France in 1297, and was buried in the church of the Preaching Friars in Paris; but Bower states that his heart was brought to Scotland, and deposited by Bishop Lambertson "in pariete ecclesie S. Andreae, juxta tumbam Episcopi Gamelini."² Bower had previously said that Gameline was buried "in nova ecclesia, juxta magnum altare."³ Wyntoun, who is more specific, says that Fraser's

¹ In support of this suggestion, Mr Hutcheson cites Bloxam's *Principles of Gothic Ecclesiastical Architecture*, eleventh edition, ii. 146, 147; and Shipley's *Glossary of Ecclesiastical Terms*, 1872, sub "Confessio."

² *Scotichronicon*, i. 361.

³ *Ibid.*, i. 360.

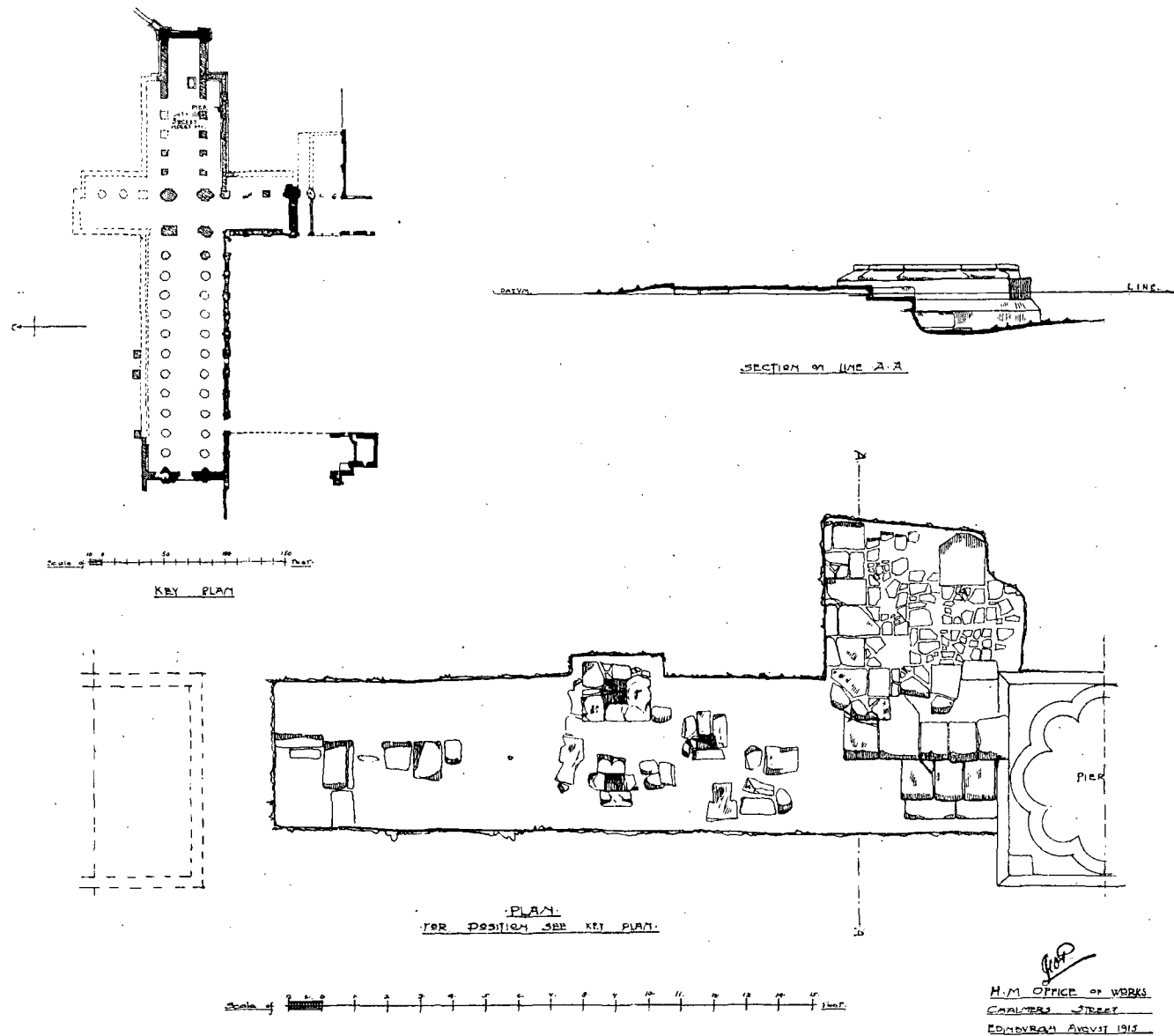
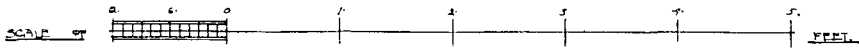
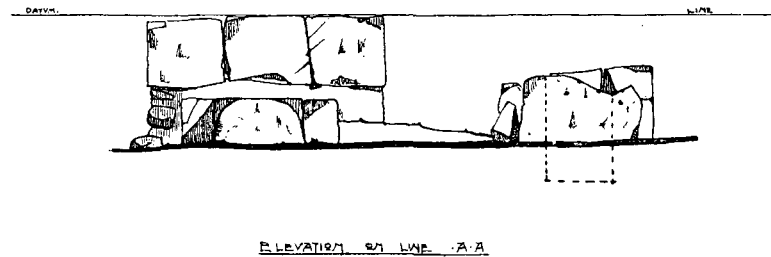
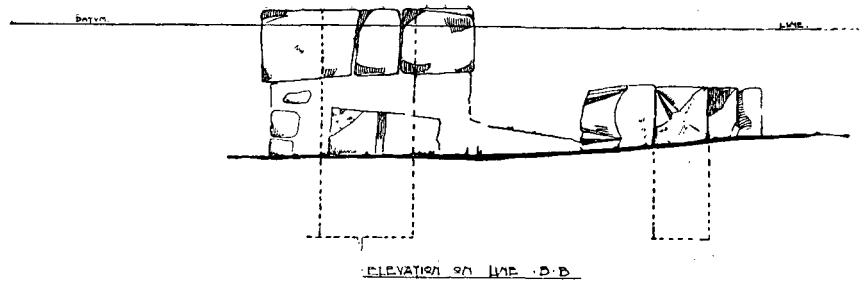
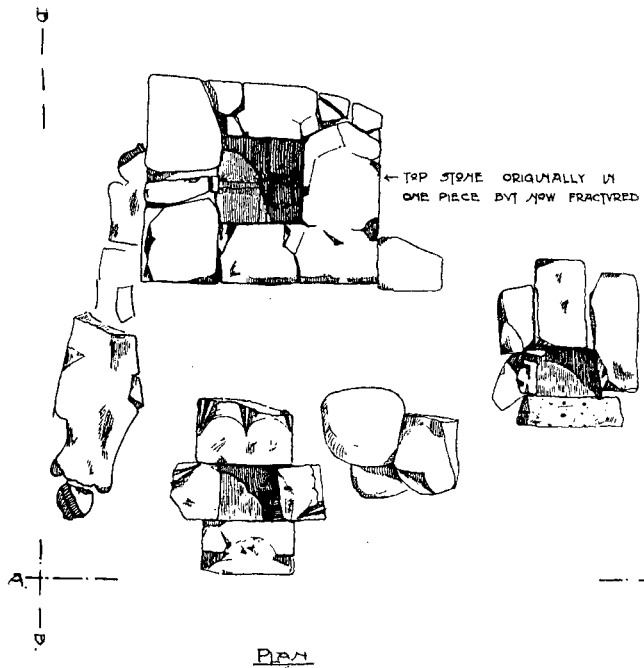


Fig. 7. St Andrews Cathedral, showing socket-holes, etc., as uncovered August 1915.



J. B. P.
 A. M. OFFICE OF WORKS
 CALMERS STREET
 EDINBURGH, AUGUST 1915

Fig. 7A. St Andrews Cathedral—detail drawing showing socket-holes as uncovered August 1915.

heart was laid within the wall, and points to the spot as being between Gameline's tomb and Lamberton's. In another passage he states that the tombs of Gameline, Lamberton, and Walter Trail were in "the north half" of the Cathedral.¹ Of Bishop Trail, Bower says that he was buried "juxta magnum altare ecclesiæ Sancti Andreae, ad aquilonem intra pulpitum."² Assuming that the steps now uncovered were the steps leading up to the high altar, these references would prove that Fraser's heart was deposited near the socket-holes, but not in any of the three. Bishop Wardlaw, who died in 1440, was buried "in pariete medio chori et capellæ nostræ Dominæ."³ The late Lord Bute held that this statement makes it evident that the Lady Chapel was on "the north side of

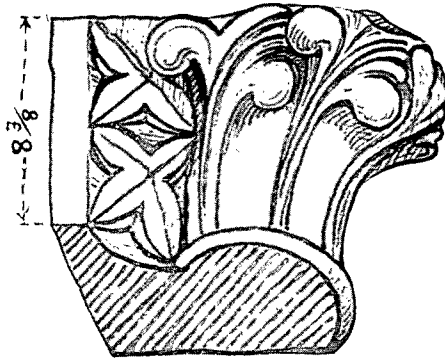


Fig. 8. Fragment of Capital found in the Cathedral.

[From a drawing by Professor Gourlay.]

the choir."⁴ It has now been suggested that the socket-holes may be post-Reformation. Their position and details are shown on figs. 7 and 7A.]

[The wall of the north aisle of the nave of the Cathedral must have shown signs of weakness, as massive buttresses had been built against it. Of these buttresses little remains above the ground. In order to re-point the one opposite the fifth pillar from the west end, the turf was removed, and this exposed five Early English moulded stones which had been used instead of common rubble. One had been previously visible under a block on the south side. In the beginning of July a fragment of a beautiful Early English capital (fig. 8) was discovered under another block on the same side. These blocks have not been moved. The six moulded stones and the carved fragment found in this foundation were only a few inches above the level of the ground. The heart of the

¹ Laing's *Wyntoun*, ii. 345, 346, 375.

² *Scotichronicon*, i. 365.

³ *Ibid.*, i. 366.

⁴ MacGibbon and Ross's *Ecclesiastical Architecture of Scotland*, ii. p. xv.

base of the fifth pillar is occupied by a section of a clustered column of the same size and design as the stumps still standing in the choir. A more perfect one occupies the heart of the base of the sixth pillar.]

In July 1911 a rather uncommon feature was observed in the south wall of the Chapter-house. This was a damp-proof course of red clay about a foot above the present level of the ground. There is a little sand mixed with the clay. It may not be irrelevant to state that, in the autumn of 1904, it was found that the foundation-stones of the east wall of the Chapter-house are bedded in and jointed with red clay.

The stone effigy of a stonemason was found on the 19th of last September in the north-east tower of the Abbey Wall. The carved side of the stone was turned towards the heart of the wall, and the back of the plain slab on which the effigy rests was exposed to the outside. The mason is dressed in gown and hood, a hammer is on his right side, a square on his left, his feet rest on a mason's "mell," or mallet, and his head on two cushions, the one lying diagonally above the other, and having a tassel at each corner. The tapered slab on which the figure lies is $5\frac{1}{2}$ inches thick, 1 foot $6\frac{1}{4}$ inches broad at the top, and 1 foot $3\frac{1}{4}$ inches at the foot. The sides are not quite the same length, the one being 3 feet 1 inch, and the other $\frac{3}{4}$ of an inch more. The head of the figure is $6\frac{1}{4}$ inches in relief, and the "mell" $3\frac{1}{2}$ inches. The slab, therefore, has been practically a foot thick.

The general appearance of the effigy and the cushions in particular obviously indicate that it was intended to be recumbent; but on the back there are two dook holes, and the lower part of the dress does not sag in the centre. Cutts gives an illustration of a tapered slab at Bottesford, Notts., on which the head of the figure rests on two cushions, the one placed diagonally above the other, but these cushions have no tassels.¹ The upper cushion supporting the head of Philippa, Duchess of York, who died in 1433, has a tassel at each corner.² In Balmerino churchyard there is an incised slab showing a cross on a calvary of four steps, with a square, trowel, and two hammers, but no "mell."³

The St Andrews effigy apparently commemorates not a boy, but a man, though not an aged man, and certainly not a dwarf. A row of buttons, beginning at the neck of the gown, ends at the bottom of the skirt; and round the waist a cord is tied. The shoes are pointed (fig. 9). The dress does not necessarily indicate that the subject of the effigy was a monkish mason. This is evident from an indenture between the Abbot of Arbroath on the one part, and "William Plumer of Tweddale,

¹ Cutts' *Manual for the Study of Sepulchral Slabs and Crosses*, 1849, pl. 70.

² Stothard's *Monumental Effigies of Great Britain*, 1876, pl. 117.

³ Campbell's *Balmerino and its Abbey*, 1899, p. 598.

burghes of the cite of Andirstoun," on the other part. This indenture is dated 16th February 1394-5. William Plumer undertook to "theke the mekil quer . . . wyth lede, and guttir yt al about sufficiandly with lede." One of the stipulations was that, when the work was finished, he was to receive "a gown with a hude."¹ The stone effigy probably belongs to that period; and, if so, cannot commemorate the



Fig. 9. Effigy of a Stonemason.

[From photo by Mr Wilson Paterson.]

John Morow who had charge of the mason-work of St Andrews Cathedral, and also of Glasgow, Melrose, and Paisley.

Most of the Abbey Wall was erected by Prior John Hepburn, in the first quarter of the sixteenth century, and was completed by his nephew, Prior Patrick, afterwards Bishop of Moray. Prior John was a great builder, but not over scrupulous as to the materials he used. Within the last few years, from this wall a complete Celtic cross-slab, and a large fragment of another have been recovered. And there are

¹ *Liber S. Thome de Aberbrothoc*, ii. 42, 43.

still in the wall many mullions of windows, and other moulded stones, from earlier buildings. Although this effigy is now in two pieces, it may have been quite whole when it was seized for building material. Had it been lying about in broken condition, it does not seem likely that the two pieces would have been carried to the same tower, and fitted together in the wall. That part of the tower from which it was taken is only a few feet above the present level of the ground; but formerly the ground at that point was much lower, as the heuch (known as the Kirk Heuch) led down there to the harbour. The slab may have been broken purposely for ease in handling, or it may have been accidentally broken when it was being put into the wall. Where it is broken through, there is a fault in the stone.

In the tower immediately to the west of this one, a built-up doorway has been opened. This doorway gave access by an inside stair to the top of the wall. The stair, or part of it rather, still remains. It led upwards from a chamber in the tower. Access to that chamber was almost certainly obtained by an outside stair (as in the neighbouring tower, known as the Haunted Tower); and below this chamber was another one with shot-holes.

We turn now to the Castle. Looking at the fore-tower, either externally (fig. 10) or internally, no one can help noticing that it has been subjected to considerable alterations. Hitherto there have been differences of opinion as to what these alterations portended. Some insisted, Messrs MacGibbon and Ross for example, that at one time the entrance passed through this tower;¹ and, on the other hand, that opinion has been stoutly contested. The matter is now settled. There has been an entrance through this tower. Viewed from the interior, there has long been visible what appeared to be the upper part of the east jamb of this entrance, with the springer of an arch, and part of a relieving arch above it. Still more to the point, there is a broad sloping groove, or chase, higher up in the wall, in which one of the counterpoises of the drawbridge was believed to have worked. The flooring-flags in the southern end of this apartment were lifted last autumn and the packing underneath cleared out (fig. 11). The east jamb of the earlier entrance is now visible from top to bottom, and the west one from the recent floor-level to the bottom. The blocking of the entrance is rubble, while the jambs and adjoining walls are ashlar.² Looked at either from the interior or exterior, it is apparent that the centre of the larger windows in that tower is not in line with the centre of the

¹ *Castellated and Domestic Architecture of Scotland*, iii. 331.

² Fig. 11 shows part of the east jamb, the springer of the arch, part of the relieving arch, and the lower end of the slot or chase for the counterpoise of the drawbridge. Three of the stones of the relieving arch have been recently inserted to sustain the superincumbent masonry.

old entrance. Looked at from the interior, the entrance is very far from being in the centre of the apartment, but the window which cuts through the upper part of the entrance is in the centre of the apartment. Looking upwards, however, it is noticed that the centre of the old entrance is in the same line as the apex of the gable. It is also obvious

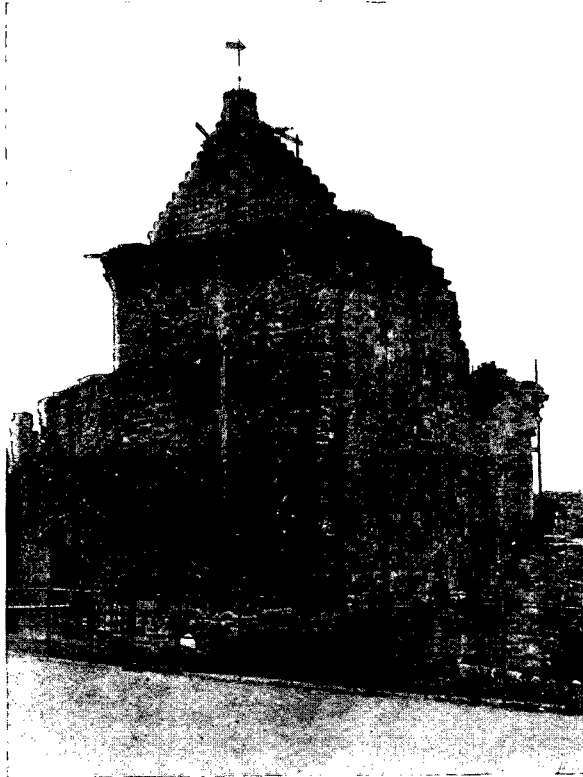


Fig. 10. Fore Tower of St Andrews Castle.

[From photo by Mr J. S. Boyd.

that the east wall has been thickened by about 3 feet on the inner side. Cardinal Beaton had begun nearly three years before his assassination to strengthen the Castle; and, at the time of the assassination (29th May 1546), "Babylon," to borrow Knox's expression, "was almost finished."¹ Kirkcaldy of Grange and his fellow-conspirators got access when the gates were opened and the drawbridge lowered to admit a fresh supply of stone and lime. A contemporary writer says that when

¹ Laing's *Knox*, i. 174.

the French captured the Castle in 1547 they "take down the hous."¹ According to Knox, "the Castell . . . was rased to the ground, the block houssis thair of cast doune, and the walles round about demolished."²



Fig. 11. Interior of Fore Tower of St Andrews Castle.

[From photo by Mr Wilson Paterson.]

This is not literally accurate. Hamilton had rebuilt the Castle before Knox returned to St Andrews, and he may have been unable to recognise any of its former features. If the badly weathered arms over the window are Archbishop Hamilton's,³ the entrance may have been altered by

¹ *Diurnal of Occurrents*, p. 44.

² Laing's *Knox*, i. 208.

³ Writing seventy-seven years ago, when the arms were much less weathered than they are now, the Rev. C. J. Lyon said that they were Hamilton's, and that his initials were there also (Lyon's *History of St Andrews*, 1838, p. 203).

him; but, if the arms are the Cardinal's, then the alteration was probably, almost certainly, his.

On the inside face of the front wall the old entrance has been 10 feet wide. The height of the east jamb, from the bottom of the rybats to the spring of the arch, is 11 feet 7 inches; and from the floor-line a foot less. On the outer face of the wall the entrance seemed to have been 11 feet 6 inches in width; but last Thursday (4th March), when some defective joints were being raked out, it was found that there is a small chamfer and a check on the east side. The chamfer is about 2 inches broad and the check 12 inches. Assuming that there is the same on the west side, this would reduce the width of the doorway externally to 9 feet 2 inches.

[A few days after this paper was read the springers of the external arch were found. This arch had been a pointed one, and the upper part of it had been removed, as it would have interfered with the bay of the lower window. The 12-inch check is $6\frac{1}{2}$ inches from the external face of the wall; and, 14 inches further back, the check for the portcullis was found on both sides. This portcullis check is $5\frac{1}{2}$ inches wide and about the same in depth. It is now pretty obvious that the external sill of the gateway projected beyond the face of the wall, and had been broken at both extremities where the iron crooks or hinges for the drawbridge were batted into the stone. The sill was entirely hid by the mass of sloping masonry, or pitching, by which the base of the tower had been strengthened. The chase for the counterpoise beam of the drawbridge has now been followed up to a considerable height, and has been found to taper gradually from $16\frac{1}{2}$ inches in breadth at the bottom to 9 inches at the highest point laid bare—that is, at a distance of 18 feet measuring on the angle. The extra width at the bottom was no doubt intended to allow the inner end of the beam to be more easily loaded with a sufficient quantity of lead. The bonding of the stones in the upper part of the chase has been very skilfully done. The front wall is from 5 feet 9 inches to 5 feet $10\frac{1}{2}$ inches in thickness, and the pivot on which the beam worked has been 3 feet 11 inches from the outer face. From the pivot-point, both outwards and inwards, the wall had been slightly rounded so that the beam would work freely and not rub on it. Part of the sill remains on which the beam rested when in a horizontal position. Unlike the drawbridge at Bothwell Castle, which was worked by a central beam, this one at St Andrews had been worked by two, one at either side; but of the one on the west side no trace has been discovered.]

The apartment behind the gateway had been about 20 feet 6 inches in length by about 19 feet in breadth. In the west wall of this apartment a shot-hole, long covered up, has now been revealed. It had been

in use while the entrance was through this tower, and before the present front wall to the westward had been built. That front wall completely hides the outer opening of the shot-hole. The opening into

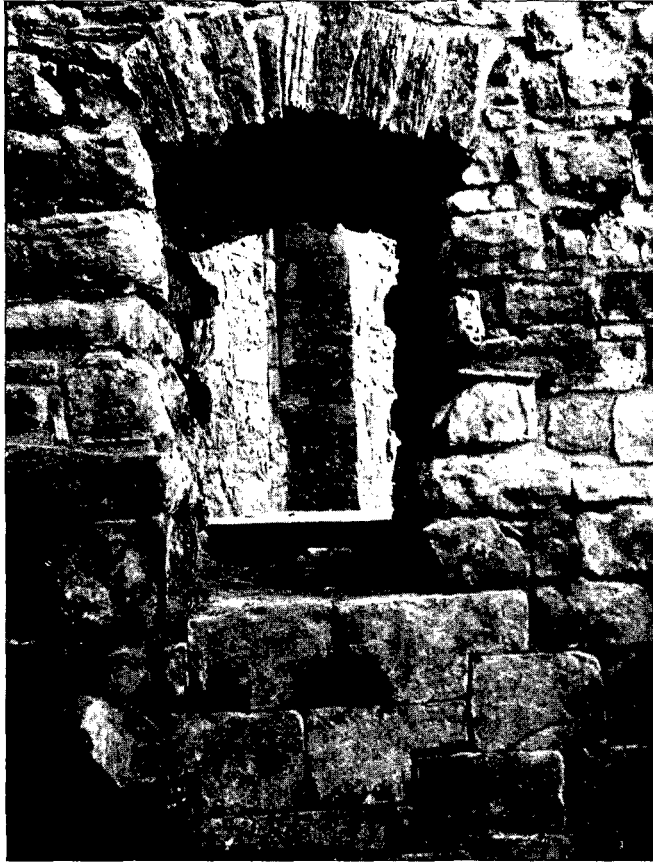


Fig. 12. Temporary Opening in the Castle, now re-opened.

[From photo by Mr Wilson Paterson.]

the courtyard, through the back wall of the tower, was 9 feet in breadth. [The line of the jamb on either side, as it emerges into the courtyard, has now been made clear by picking the lime out of the joints.]

In the same wall as the shot-hole, but higher up, an old arched opening has been re-opened. It is 5 feet 2 inches in height. The width varies from about 2 feet 10 inches to 3 feet 7 inches, the sides being rough, and some of the stones projecting beyond the others (fig. 12).

This was probably a temporary opening through which material was carried when the Castle was being built or extensively altered. Here the wall is 5 feet 11 inches thick. Access to the interior of the tower will, in future, be through this opening; and henceforth the long-buried inner face of the lower part of the tower will be exposed to view. The interior of the old entrance had been filled up with stones, not built in with lime, but laid in uneven courses with layers of sand between the courses. Of these stones, some were squared, some moulded, most were rough rubble. Below the old floor level several courses are built with lime. The elevation, plan, and sections of the fore tower, which Mr. J. Wilson Paterson, of H.M. Office of Works, has had prepared to illustrate these discoveries in the Castle, do so admirably (fig. 13). The Castle, it may be mentioned, was used as a State prison so late as 1646. The Town Council minutes show that ten years later the slates and timber were sold in order to repair the harbour. And Dr Skene's accounts, preserved in the Register House, show that, some thirty years later still, "ane hundred cart load of stones" were "digged out of the Castle walls," and that a number of men "wrought severall dayes in digging stones out of the spur before the Castle, and in carrying them to the top of the hill." This material was taken to repair St Salvator's College.

At the Black Friars chapel a base plinth was found, and, by lowering the surrounding ground, it has been permanently exposed, thus adding to the stateliness of the building. A fragment of glazed paving tile with a check pattern was found in the floor of this chapel *in situ*. It is now in the Cathedral Museum. The fragments of tiles found in the Cathedral at various times are of many different colours, but none of them has a pattern.

[On the 21st of April, many fragments of a Celtic cross-slab were found in the heart of the south wall of the choir of the Cathedral, near the east end, and about the level of the base course. These fragments had been utilised as mere packing. The largest only measures $14\frac{1}{2}$ inches by $5\frac{1}{2}$, and is $3\frac{1}{2}$ thick; but it shows the head of the cross, which is decorated with interlaced work. The other sixteen fragments are very small, and seven of them bear no trace whatever of ornament. On the 20th of May, when a grave was being dug a few yards beyond the east gable of the Cathedral, the end of a recumbent cross-slab was found lying 4 feet 3 inches below the present surface of the ground. It was apparently *in situ*, but only 1 foot of the narrow end was in the grave which was being opened. Mr Mackie, however, with praiseworthy zeal, was determined to get it all out if possible; and by tunnelling horizontally into the next grave he succeeded, although with great

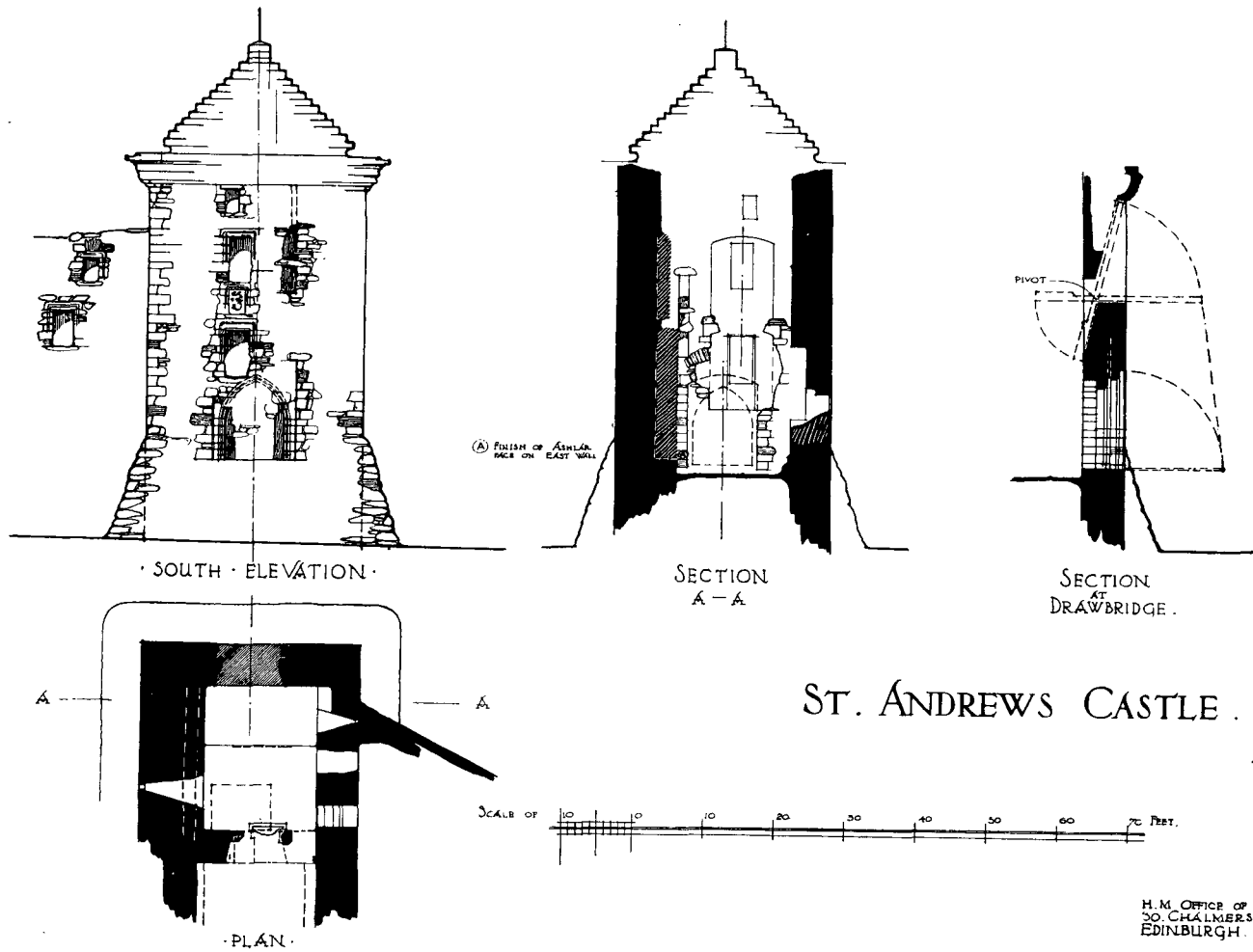


Fig. 13. Elevation, plan, and sections of Fore Tower of St Andrews Castle.

H. M. OFFICE OF WORKS,
 30, CHALMERS ST.,
 EDINBURGH. 1913.

difficulty.¹ At some previous time the stone had unfortunately been broken into six pieces, but it is quite complete, and is of a different type from any of the other St Andrews specimens. It seems, indeed, to be unique. On the upper surface there are three crosses, each having a nimbus or circle divided into quadrants. The one² at the narrow end of the slab is not a true circle, being fully an inch more across the stone

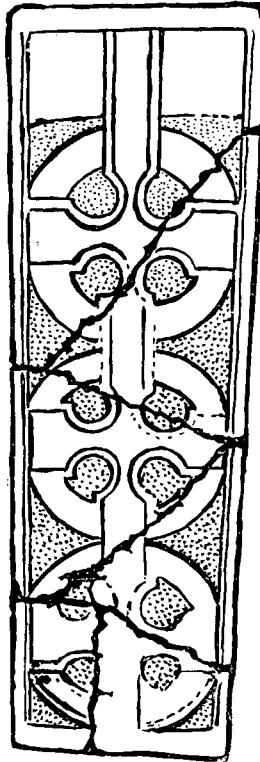


Fig. 14. Celtic Cross-slab.²

[From sketch by Mr D. Hardie.

than longways. The crosses, circles, and background are undecorated. There is no trace of interlaced or fret or spiral ornamentation. The slab is 4 feet 11 inches long, 19 inches broad at the head, and 15 at the foot. The thickness varies from 4 to 6 inches. The back is rough and unequal, the broad end looks as if it had been finished by a pick, the narrow end is not so rough, and the sides are smoother. Tapering as it does, the slab

¹ Mr Mackie has at various times dug up five complete Celtic slabs, and portions of eleven others.

² The block for this illustration was kindly lent by the Editor of *The St Andrews Citizen*.

in shape is more akin to the medieval than to the ordinary Celtic slabs, and this may perhaps indicate that it is somewhat late in date (fig. 14). The only other Celtic cross-slab known to me which has had more than one cross on one of its surfaces is in Dunning Church.¹ It has had two crosses, each with a nimbus; but apparently not more than two. In the churchyard of Aylesford, Kent, there is a fourteenth-century tapered slab, with three floriated crosses graduated in size to suit the shape of the slab.²

Last year the harbour gates were reconstructed. In the course of the operations two large stones were found with massive Norman



Fig. 15. Stones from the Harbour Gates.

[From photo by Professor Gourlay.]

mouldings. They may have belonged to an earlier building than the Cathedral, perhaps to the first parish church, which stood in close proximity to the Cathedral. The larger stone is 2 feet 6½ inches by 16 inches by 10 inches (fig. 15).

The earlier discoveries to which I have referred were made while the conservation of the ruins was under the supreme direction of Mr Oldrieve, and the later ones while under that of Mr Peers, both of whom have taken the keenest interest in these matters. Mr Peers and Mr Wilson Paterson were present when the effigy of the stonemason was being taken out of the Abbey Wall.

¹ Romilly Allen's *Early Christian Monuments of Scotland*, pp. 319, 320.

² K. E. Styan's *Short History of Sepulchral Cross-slabs*, 1902, pl. 30.

Before closing, it may not be out of place to mention that Mr James Martin, while in charge of the work at St Andrews, experimented on the old lime. He took three samples, and, after pounding them down, mixed them with water. One of the samples set again in a kind of a way, another set fairly well, and the third set quite hard. That last sample was five hundred years old. It must have been magnificent stuff to begin with. The masons who have been working on St Rule's, the Cathedral, the Castle, and the Blackfriars have come to the conclusion that the stone of all these buildings is local. Mr Alexander Thoms has dealt with the stone of St Rule's.¹ On the 4th of February 1434-5, Walter Monypenny of Kinkell agreed to allow the prior and convent of St Andrews "to brek stanys" for nine years "in the huch of Kynkell," and to "away leid" them through his lands.² Kinkell is about two miles from St Andrews. A few years later the Bishop of Argyle gave the Prior of St Andrews liberty to dig stones out of his quarry at Balcomie near Crail.³

For the illustrations I am chiefly indebted to Mr J. Wilson Paterson, of H.M. Office of Works, to Professor Gourlay of the Royal Technical College, Glasgow, and to Mr James S. Boyd of the same College, who has kindly lent three of his blocks. Messrs Innes of Cupar have lent one block. Mr Alexander Hutcheson has made many suggestions; and Mr R. B. Strachan has been very helpful with measurements and otherwise.

¹ *Proceedings of the Society of Antiquaries of Scotland*, xlvi. 426-428.

² *Liber Cartarum Prioratus Sancti Andree*, pp. 423, 424.

³ Keith's *Historical Catalogue*, 1824, p. 288.