

the shafts. The transfer of a silver coin, however, temporarily appeases her.

The hot weather continued very late, and the Tyropœon Valley became more and more unendurable till the rains set in. Both Mr. Dickie and myself were obliged to leave Jerusalem for a short time, but fortunately our periods of indisposition did not coincide, and the work was uninterrupted. Even during several days of rain the work of filling up tunnels went on.

A pleasant incident of the season was the fiftieth anniversary of Herr Schick's life and labours in Jerusalem. In honour of the event the University of Tübingen conferred upon him the degree of Doctor of Philosophy, *honoris causâ*. The German community met at his house, and a service was held and addresses given. Other friends called afterwards, and all were rejoiced to congratulate Dr. Schick and his wife, not only on their excellent health, but on the wonderful work this able archæologist has accomplished in the Holy City.

JERUSALEM, December 15th, 1896.

ARCHITECTURAL NOTES ON REMAINS OF ANCIENT CHURCH AT POOL OF SILOAM.

By ARCHIBALD C. DICKIE, A.R.I.B.A.

THOSE interested in the history and development of early Christian church architecture will find this example to be worthy of special study. Early architects seem to have been so generally favoured with a comparatively "free hand" in their work, that it is of rare occurrence to find their ingenuity taxed to surmount the many difficulties involved in dealing with a contracted site. Here we have a site bounded on the south by the Pool of Siloam, on the west by a scarp and probable wall, on the north by an unlimited but rapidly rising surface, and on the east by the position of the conduit which conveyed the water to the pool.

The then existing north wall and arcade of the pool supplied a ready bearing for the nave, arcade, and south wall of the church, the desire evidently being to place as much of it as possible over the pool. As the healing waters of the pool were the sacred element in connection with this church, the high altar—which in usual cases was placed over the remains of the departed saint to whom the church was dedicated—in this instance stood over the point from which the holy waters flowed unpolluted into the open pool. Thus the eastern limit of the church was defined, and this so awkwardly that the scarp and probable wall to the west completely shut off the western access, the necessity for including the steps in order to reach them from the church—as the only available descent to the pool—forcing the architect to draw the west wall to within a few feet of the

scarp. Consequently, the only practicable point of access was from the north, and although the rapid rise of the ground rendered this difficult, necessity demanded it, hence the unique arrangement of the church accessories, which were so essentially a part of the design. An enclosure resembling an atrium was placed at the extreme north, the entrances to which have, however, not been recovered. Against the piers between the three doors in the south wall, low stone-built benches occur, which were in all probability used as seats for those whose initiation had been incomplete and who were consequently prohibited from entering further into the sacred precincts. In front of the middle door to the narthex are two pillars, the remains of some central feature added to give prominence to this entrance. The compartment marked narthex on plan might in this instance more properly be called an inner portico introduced to meet the exigencies of the rapidly falling ground to the south, more for the purpose of a staircase than for any other motive. The stairway which extends almost the whole length of the church, descends to the north aisle through an arcade of seven arches carried on square piers, quite a unique arrangement. A glance at the plan will show that the original internal form of the church has been destroyed by a later alteration, the parts of which are shown by "hatching," in distinction from the blackened parts. The slightly raised step on a stone foundation, seen for the whole length of the arcade, and continuing unbroken under the later walls and piers, is satisfactory indication of the original nave (terminating in a stepped apse) and two aisles, and although the later alteration has removed all traces of the nave arcade, the columns must have rested on this foundation. Thus on the stepped apse (now in the east end), the atrium, and the narthex all the characteristic features of the early Christian adaptation of the Basilican plan are retained in a more or less modified form. The history of the stepped apse illustrates an interesting instance of an adaptation—to an early Christian form of service—evolved from pagan sources. When—under Constantine—Christians were free to worship openly, the Great Judgment Halls of the Romans were at once seized upon as the most suitable buildings in which to worship, and were accordingly taken as the type of the first Christian church. The apse was used by the Romans as a tribunal, and the seats arranged in tiers around the semi-circle, the presiding judge having his seat in the centre at a higher elevation than the side seats, which were occupied by the minor members of the tribune. This arrangement was particularly suitable for the Christian form of service of the time, and was consequently adopted, the seat of the presiding judge becoming the throne of the bishop, and the seats of the minor judges becoming those of the minor clergy. The altar, which in Roman times was placed in front of the chief judge and was used for taking the oath, retained its position in the Christian Church in front of the bishop. In this church, however, the steps of the apse are so exceedingly narrow and low (10-inch risers and 10-inch heads) that it is doubtful whether they were ever used as seats, and are suspiciously suggestive of the architectural retention of a

feature the original meaning of which had either been forgotten or ignored.

Unfortunately the bases of the nave arcade columns have all been removed, and their positions so completely lost that it is impossible to give the exact reconstruction, but there is little doubt that they took the form of the ordinary Basilican arcading, viz., an arcade carried on circular columns supporting a gallery and higher arcade, the whole breadth of nave and aisles being covered with a simple sloping wooden roof. However, considering the unusual peculiarities of the general planning, and knowing that the raised bearing of the colonnade did not butt against the west wall, it is possible that the aisle may have continued round the west end, the absence of an entrance in the west wall allowing of, and, in fact, suggesting, such a deviation from precedent. The interior western termination of both periods can only, however, be conjectured, as the excavation of that part has disclosed no clue.

I now come to the later alteration, viz., the choir and the four great piers in the nave. The fact that a lower and earlier floor of the choir exists, and that the step and pavement extend under the walls and piers, is sufficient proof that these latter constructions have been set on the original floor at a later date. Besides, this arrangement is entirely out of date with the Basilican plan and plainly shows a later feature introduced incongruously into a distinct type of earlier church. The large proportion of the piers (4 feet 3 inches square), the width of the intercolumnar spaces (20 feet), and the position of the piers in the angles of a perfect square, make it quite evident that they supported a dome. This style of dome construction, viz., four piers in the angles of a square supporting four connecting arches which carry a circular dome with pendentives, dates from the time of Justinian. It is the invention of the Byzantines, and is the leading characteristic of their architecture, and might well have been seen by Antoninus Martyr—560 to 570 A.D.—when he visited Jerusalem. Structural provision to resist the immense thrust of these large supporting arches can be seen in the enlarged piers at the angles of the choir enclosure, and the later addition to the westernmost isolated pier of the stair arcade. The position of the choir extending well into the nave also indicates a later development.

North of the apse is a small cell marked chapel. Its floor is raised 9 inches above the aisle floor, and in the sill is cut a 3 inches wide by 3 inches deep groove, which also continues for 15 inches up the side piers, and in the south pier a fragment of a polished redstone slab is inserted into the groove. Here were also found the remains of stone standards, one of which was entire and measures $8\frac{1}{2}$ inches square and 3 feet high, having a shallow moulding worked on one face, and in one side a sunk groove similar to that found in the step and piers; the head of this standard is finished by a rudely worked ball ornament. These apparently are the remains of a low enclosure, railing the cell off from the aisle, the redstone slabs being let into the standards on either side of the central entrance. The quantity of the remains seems to indicate that a coping

similar in design to the standards ran along the top of the redstone slab.

It is impossible to give an adequate idea of the character of the mouldings and other carving without detailed drawings, but these will be furnished later. The mouldings found—*in situ*—belonging to the earlier church are :—The cap of the antæ pier of the stair colonnade (see section CD), and the base mould of the south pier of the chapel entrance which extends behind the later pier, added at that point as shown on plan. Both of these examples are similar in character, shallow unstudied copies of classic work, as rude in execution as they are weak in design. The column bases—*in situ*—at the entrance to the choir and in the atrium are equally rude and class with the general bad workmanship of the whole building. Three large column bases and one curved cap were found within the body of the church—not *in situ*. The base moulds are of a much finer class than those I have just described, they are well worked and are late imitations of the attic base so commonly used in this country even in the time of the Crusaders. The cap is of the same character and is a debased imitation of a Roman Corinthian cap possibly stolen from some earlier structure. None of these mouldings and carvings, except the large column bases, are such as might be expected from an erection by Justinian.

JERUSALEM, December 15th, 1896.

KHAN EZ ZEIT.

By Dr. CONRAD SCHICK.

THE Calvary question demands a great part of the time I can give to such matters. The many visitors who come to me, asking information or to see my models, generally bring also the Calvary question forward. When for an hour, or even more, I have been explaining the models, they say at the end: "Please, now only one more question: What do you think of the new Calvary?" which opens a new field, with many things to be said *pro* and *contra* as to both Calvaries, that is the *new* one and the *old* one, or the Church of the Holy Sepulchre. So in order to simplify matters, I resolved to make a model of the site of the said church; as it had been in ancient times, and for the tourist is no more visible, viz., that there was a large rocky eminence, or platform, as I have pointed out already on some former occasions (see *Quarterly Statement*, 1890, p. 20, and 1897, p. 154, *et seq.*). So when shown this rocky height in a model they would get a better idea of the locality, and save me much explanation. In order to do this well, I examined once more the whole neighbourhood of the church, and also the *Khan ez Zeit* situated east of it. I had known for a long time that there are pillars there, but thought