

## II.

NOTICE OF AN ANCIENT CELTIC ECCLESIASTICAL BELL, NOW PRESERVED IN THE MUSEUM, KELSO. BY JOHN ALEXANDER SMITH, M.D., SEC. SOC. ANT. SCOT., &C.

Through the courtesy of the officials of "The Tweedside Physical and Antiquarian Society" and Dr. Charles Douglas of Kelso, I have now the pleasure of exhibiting from their Museum, at Kelso, this ancient ecclesiastical bell. Many years ago I had seen the bell in the Museum, and intended from time to time to try to get it for exhibition to the Society; as it seemed to me never to have attracted the attention that it really deserved, and it may be said, that it has never been described until now.

The bell has been formed of a plate of iron about 25 inches in length by 14 inches in breadth at its extremities, and  $\frac{3}{16}$ ths of an inch in thickness, which has been bent or folded on itself in the middle, a semicircular or rounded portion being cut on opposite sides of the plate, where it is folded; so as to allow its edges to be turned inwards and overlap each other, and thus form a somewhat square-sided figure, becoming gradually wider towards its open extremity. The over-lapping sides of the bell have then been joined together on each side by three large flat-headed nails, well riveted inside the bell. A rounded handle of thinner iron plate, with its edges curved upwards so as to form a deep groove above, and bent into a flat curved outline, had then been strongly fixed in the line of the greatest diameter of the top of the bell; its extremities piercing to the inside, where they have been strongly riveted, and still project considerably inside the top of the bell. The bell had then apparently been dipped into melted bronze so as to cover its whole surface, as portions of the bronze coating still remain on most parts of the bell, both outside and inside; and traces of it are seen also on the flat tops of the large headed nails on its sides. Nothing now remains to show how the tongue or

clapper of the bell had been originally fixed ; probably it may have been fastened in some way to the ends of the handle projecting inside the top of the bell.

The bell measures 11 inches in height, not including the handle. It is  $6\frac{1}{4}$  inches in length along the top by 3 inches in breadth across, and



Ancient Celtic Ecclesiastical Bell now in the Museum, Kelso  
(13 inches in height).

gradually widens to 8 inches in the greater diameter of its open mouth ; by  $6\frac{1}{2}$  inches across, or in breadth. The handle is 2 inches in height from the top of the bell, and  $4\frac{3}{4}$  inches in length by 1 inch across in breadth, and the bell now weighs 13 lbs. 8 ounces avoirdupois. The whole bell is in a wonderfully perfect state of preservation, being broken a little, only at the corner of the plate at one of its sides ; although it has

now lost the greater part of its original bronze coating, at least, on the outer surface. The bell is well shown in the annexed careful drawing. When the bell is struck it still gives forth a very musical sound, more so than one would expect from its appearance.

With the permission of the officials of the Museum, and at my request, Mr. W. Ivison Macadam has been good enough to make the following careful analysis, both of the iron plate and the bronze coating of the bell:—

ANALYTICAL LABORATORY, SURGEONS' HALL,  
EDINBURGH, 14th April 1882.

Analysis of an old Square-sided Bell, received from Dr. John Alexander Smith, Edinburgh.

	Bronze taken from outside of Bell.	Bronze taken from inside of Bell.	Bronze forming Handle of Bell.
Copper, . . . . .	82·719	82·675	82·771
Tin, . . . . .	16·001	16·047	16·036
Ferric oxide, . . . . .	0·764	0·850	0·717
Insoluble siliceous matter, . . . . .	0·516	0·428	0·476
	100·000	100·000	100·000

The ferric oxide is most probably derived from the inner framework of the bell.

The bell consists of an iron plate bent into shape, and riveted with iron bolts. The surface of this framework has afterwards been coated with bronze of the above composition.

I have made a series of experiments, and find that iron plates may very readily be coated with bronze. The iron plate is first cleaned, thoroughly dried, slightly heated, care being taken to prevent the oxidation of the iron by overheating, and then dipped into the molten bronze. By this means the surface of the iron is covered with a coating of metal and protected from the weather.

In the case of this Bell the molten bronze has been poured into the inside of the bell, and the rapid cooling of the alloy due to the absorption

of heat by the cold iron has caused the work to be done in a most irregular and crude fashion. The handle of the bell has been fixed on after the bronzing process was completed, the rivet ends being free from bronze.

A small portion of the iron framework of the bell was also analysed, and gave the following percentage results :—

Iron, . . . . .	98·846
Copper, . . . . .	0·412
Tin, . . . . .	0·079
Insoluble siliceous matter, . . . . .	0·663
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	100·000

The copper and tin are due to small portions of the protecting surface too minute to be separated.

W. IVISON MACADAM, F.C.S., F.I.C.  
*Lecturer on Chemistry, and  
 Analytical Chemist.*

Dr. Charles Douglas, at my request, most kindly made a search among the records of the Museum, to try and learn something of the history of this bell. He tells me there is an entry about it in an old MS. book belonging to the Museum, as follows :—“ Old Metal Instrument, use unknown, from James Douglas, Esq., Banker, Kelso, Secretary to Society,” and over this entry there has been subsequently written in pencil “ a bell.” Mr. James Douglas is long since dead, and there is no date given ; but the handwriting, Dr. Douglas says, he believes to be that of another brother of his, who has now been some thirty years in Australia. Dr. Douglas, in making inquiries for me in various quarters, learned, however, from Mr. J. B. Kerr, of the Commercial Bank, Kelso, now the Secretary of the Tweedside Society, that the bell did not belong originally to Kelso, but was really brought from the neighbouring parish of Ednam, in Berwickshire. Mr. Kerr, when a boy, had been educated there under the tuition of Mr. John Gibson Smith, the parish schoolmaster, with whom he was boarded, now upwards of thirty years ago. He remembers the bell being in Mr. Smith’s possession at Ednam, and believes that it was brought to Mr. Smith as a curiosity, of unknown use, by one of the schoolboys, it having probably been found at that time, somewhere in the

immediate neighbourhood. He has no remembrance, however, of the exact locality from which it came, and as Mr. Smith, the teacher, emigrated to New Zealand many years ago, and it is now doubtful if he is still alive, no more detailed information can apparently be got at present about the discovery of the bell. From Mr. Smith, however, through Mr. James Douglas, the bell was fortunately presented to the Museum at Kelso, where it is still carefully preserved.

It belongs to the class of bells carried and rung by the hand, and from its character and shape, to the earliest type of these—the quadrangular-shaped bells in use by the early Celtic Church, previous at all events to the twelfth century—as from that time of Papal progress in Scotland until the present day church bells have all been made, or rather cast, in a circular form. Professor Daniel Wilson, LL.D. (on December 25, 1851), brought before the Society a paper on “Primitive Scottish Bells,” giving notes of the Bell of Strowan and other Ecclesiastical Bells of Scotland. He there simply includes in his enumeration the name of the Kelso Bell, if I mistake not, on my authority, as being preserved in the local Museum of that town (*Proc. Soc. Antiq. Scot.*, vol. i. p. 18), and in his *Prehistoric Annals of Scotland* (1851), describes various Scottish Ecclesiastical Bells. Dr. Joseph Anderson has also recently given a most interesting and detailed account of all the other square-sided bells of the early Celtic Church known in Scotland, in his valuable work, *Scotland in Early Christian Times*, vol. i. (Edinburgh, 1881) of his Rhind Lecture Series.

It is of the greatest interest to discover that this old Celtic bell had been found in the parish of Ednam, which Mr. Cosmo Innes cites as the example, to show the rise or creation of a Scottish parish, in his interesting volume of *Sketches of Early Scotch History* (Edinburgh, 1861). Mr. Innes afterwards refers in detail to this parish of Ednam, as “marking the very birth of our Parochial institutions,” in his introduction to Part I. of the *Facsimiles of National Manuscripts of Scotland*, published by the Government where indeed copies of “Thor the Long’s Charter of Ednam,” &c., are given in facsimile, and fully detailed.

From the interest attached to the still earlier Scottish or Celtic Church; to which I believe this bell really belonged, I may be pardoned quoting some explanatory sentences from Mr. W. F. Skene's important work, *Celtic Scotland* (Edinburgh, 1877), vol. ii.

Mr. Skene says: "It is to the Columban church, established in Northumbria by King Oswald in 635, that we must look for the permanent conversion of the Angles who occupied the eastern districts between the Tweed and the Forth, and for the foundation of churches, or rather Columban monasteries among them" (p. 199).

Aidan was the first of the Columban bishops, and founded the monastery of Old Melrose on the Tweed, and Saint Cuthbert became a monk of this monastery shortly after the death of Aidan, in 651.

"In the year 664 the Columban church in Northumbria was brought to an end by the adverse decision of the Council of Whitby, and Bishop Colman left the country with those of his Scottish clerics who would not conform to Rome. Eata, the abbot, however, and his provost, Cudbercht (Cuthbert), gave in their adhesion to the Roman party, and, at Bishop Colman's suggestion, the monastery of Lindisfarne was placed under Eata's charge, who thus became abbot both of Mailros and Lindisfarne. To the latter monastery Eata transferred Cudbercht, 'there to teach the rules of monastic perfection, with the authority of a superior, and to illustrate it by becoming an example of virtue' (p. 209).

"The causes which combined to bring the old Celtic church to an end may be classed under two heads—internal decay and external change. Under the first head the chief cause was the encroachment of the secular element upon the ecclesiastic, and the gradual absorption of the latter by the former." "The external change produced in the church was the result of the policy adopted towards it by the kings of the race of Queen Margaret." "It mainly consisted, first, in placing the church on a territorial in place of a tribal basis, and substituting the parochial system and a diocesan episcopacy for the old tribal churches with their monastic jurisdiction and functional episcopacy; secondly, of introducing the religious orders of the Church of Rome, and founding great monasteries

as centres of counter-influence to the native church; and, thirdly, in absorbing the Culdees, now the only clerical element left in the Celtic Church, into the Roman system, by converting them from secular into regular canons, and merging them in the latter order" (p. 366).

"Edgar, the eldest son of Queen Margaret, had no sooner made good his right to the throne<sup>1</sup> by English assistance, than we find him refounding the monastery of Coldingham, which had been destroyed by the Danes." "We find in another charter the establishment of a parish church clearly presented to us, as well as the process by which it was accomplished. In this document Thor informs his lord, Earl David, that King Edgar had given him Ednaham, now Ednam, in Berwickshire, waste; that he had inhabited it, and built from the foundation the church which King Edgar caused to be dedicated to St. Cuthbert, and had endowed it with one plough, and he prays his son to confirm the donation he had made of the church to St. Cuthbert and the monks of Durham.<sup>2</sup> Here we have, in fact, the formation of a manor with its parish church, and in a subsequent document it is termed the mother church of Ednam. Edgar appears to have made no attempt to introduce a parochial church north of the Forth, or even to fill up the vacancy in the see of St. Andrews; but on his death, when the territory which formed his kingdom, with its heterogeneous population, was divided between his two brothers,—the districts north of the Forth and Clyde, with Lothian as far as the Lammermoors, falling under his will, to Alexander, as king, and the districts of the Cumbrian Britons, with the rest of Lothian, to David, as earl,—the policy which had been inaugurated by their Saxon mother, Queen Margaret, of assimilating the native church to that of England, was at once resumed by both" (p. 368).

These extracts will help to show us how tendency to change originated in the old Scottish church, and this characteristic, square-sided, Celtic bell, would seem, therefore, in the absence of old ecclesiastical remains of any other kind in the immediate district round Ednam, to be the only relic now existing, to take us back, not only to the days of Thor the Long,

<sup>1</sup> 1097-1107 A.D.

<sup>2</sup> National MSS., part i. p. 8.

but to the older time, when an early Celtic church existed there, founded long before, it may have been, by St. Cuthbert himself, in this his own missionary district of the Tweed and its tributary streams.

This Celtic bell is also especially interesting as being apparently the only example of its kind and class now known to exist in all the southern districts of Scotland, and therefore all that now-a-days seems to remain of any of these ancient ecclesiastical establishments.