

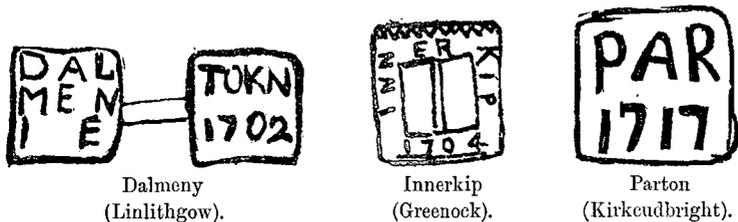
VI.

NOTICE, WITH ANALYSES, OF A SERIES OF CHURCH TOKENS OF VARIOUS PARISHES; OF THE COLLECTION PLATES BELONGING TO THE CHURCH OF DUDDINGSTON AND THE TRINITY COLLEGE CHURCH OF EDINBURGH; AND OF THE TRINITY COLLEGE CHURCH HOSPITAL BELL. BY W. IVISON MACADAM, F.C.S., &c., ANALYTICAL CHEMIST AND LECTURER ON CHEMISTRY, EDINBURGH.

During the study of the chemical composition of ancient metals and alloys, I have obtained a large number of results, some of which I now beg to lay before the Society.

I. *Church Tokens*.—The special subject to which this part of the paper refers is church communion tokens. These tokens are distributed to the congregation, and are handed by them to the elders of the church as a sign of membership. It is now becoming common, especially in large and populous parishes, to give cards instead of metal tokens, and on these cards the member writes his name and address, which enables the minister to make up at convenience the roll of communicants present at each celebration. Tokens are, therefore, rapidly becoming a thing of the past. A very considerable number of these old metal pieces have passed through my hands, including the large and fine collections belonging to the Society, and which are in the Museum.

The oldest form of token consists of a rough and often somewhat irregular square of metal, varying from half an inch to 1 inch in size. The following examples will illustrate this point:—



Dalmeny
(Linlithgow).

Innerkip
(Greenock).

Parton
(Kirkcudbright).

The square form seems to have been almost universally used until about

the year 1740, after which date the corners of the metal were often



Pencaitland
(Haddington).



Selkirk
(Selkirk).



Stevenston
(Irvine).

cut off, the token becoming octagonal or round in form. Besides these



Carmarnock
(Glasgow).



Rutherglen
(Glasgow).



Kilbarchan
(Paisley).

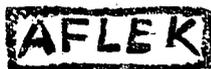


St Cuthbert's
(Edinburgh).



Sorbie
(Wigtown).

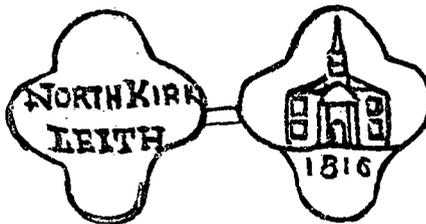
more commonly met with styles, other and more complex forms were used.



Affleck (Forfarshire).

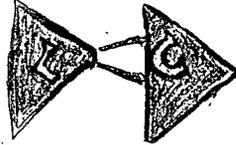


South Leith (Edinburgh).



North Leith (Edinburgh).

The lettering and ornamentation on these tokens is in rare instances stamped into the metal with a raised dye, but more usually the inscription



Old Kilpatrick (Dumbarton).

is raised. The metal is generally stamped with the name of the parish to which it belongs, and also the date on which it was issued.



Kilbride (Irvine).



Riccarton (Ayr).



Galston (Ayr).



Fenwick (Irvine).



Beith (Irvine).

Instead of the full name of the church, the initial letters are sometimes used.



Newbattle
(Dalkeith).



Kilpatrick-Durham
(Dumfries).



Duddingston
(Edinburgh).

In rare cases a monogram is inscribed, and occasionally a rebus is used.



Melrose.



Inveresk (Dalkeith).



Duddingston (Edinburgh).

The building to which the token belongs is now and then represented, as well as many other devices, such as the town arms, vines, communion



Biggar, 1769.



Tarbolton (Ayr), 1800.



cups, and texts. The minister of the parish frequently has his name or initials on the reverse side.

The metal of which the earlier tokens were made was lead, and from the year 1700 to 1745 this metal was almost exclusively employed, and until the year 1800 is commonly met with. In the west of Scotland more particularly tin was mixed along with the lead. The tokens made of the mixed metals are in a fair state of preservation, retaining most of the sharp lines. By means of this alloy a more durable and fast impression was obtained than could be hoped for from a soft metal such as lead, and at

the same time the colour is changed from a dull blue to a silver white. The amount of tin employed varied much, as will be seen from the following analyses :—

	Kinross (1747).	Leith, New Kirk (1776).	Kilbarchan (1783).	Edinburgh, Canongate (1813).	Leith, North Kirk (1816).	Kilmalcolm (1819).
Lead . . .	62·74	37·01	19·37	84·71	52·04	46·31
Tin . . .	37·26	62·99	80·63	15·29	47·96	53·69
	100·00	100·00	100·00	100·00	100·00	100·00

The metal tin is sometimes employed alone, but the tokens so obtained are never so sharp in the lines or so finely cut as when an admixture of lead has been worked with.

II. *Duddingston Church Collection Plates.*—The subjects of these plates are (1) Adam and Eve, and (2) the Spies. The first represents Eve giving Adam an apple from the Tree of Knowledge, which is placed in the centre of the device, Adam being on the left hand and Eve on the right. A serpent is twined round the trunk, with its head amongst the branches of the tree. A scroll border surrounds the device. The Spies are shown returning from the land of Canaan with an enormous bunch of grapes, which they carry slung on a stick across their shoulders. The border consists of entwined vines and grapes. Both plates are $13\frac{1}{2}$ inches across, the rim being $1\frac{1}{8}$ inch wide, and are in a good state of preservation, being still regularly employed for church purposes. They were given to the church about the year 1600, and are considered to be of Dutch manufacture, a supposition which is strengthened by the very marked physique of the figures.

The chemical composition of the alloy is as follows :—

Copper	72·62
Zinc	27·34
	99·96

These results agree with the more early and rude methods of preparing brass.

III. *Trinity College Church Plates.*—There are three plates belonging to this church, two being old and one recent. One of the first named bears the inscription, “DAVID GRANT, MERCHANT IN EDR., 1716.” It is a large plate, $19\frac{1}{4}$ inches across, the rim being $3\frac{1}{4}$ inches wide. The metal is richly engraved with floral and other devices, is yellow in colour, and has the following composition :—

Copper	78·62
Tin	0·94
Zinc	20·42
	<hr/>
	99·98

The second of the old plates is inscribed, “GIFTED BY JOHN BROUN MERCHANT IN EDR. TO THE COLLEDGE KIRK SESSION 1741,” but from its appearance must be of much older date than that stated. It is $19\frac{3}{4}$ inches across, with a rim 3 inches broad. The metal is dull red in colour. The centre is occupied by a coat of arms, having a shield, on which all markings are effaced, supported by rampant leopards, who uphold what appears to be a bishop’s mitre surmounted by a cross. The supporters appear to be those of Mary of Guelders who founded the church, but the mitre does not appear on her arms. A twined vine and grapes form a border, and in which four vignettes are introduced. These consist of a male head in the upper one, with female heads to the left and right. That on the right is double faced—one laughing and the other frowning. The rim bears devices partly engraved and partly beaten.

The composition of the alloy is as follows :—

Copper	82·05
Tin	1·81
Zinc	16·11
	<hr/>
	99·97

IV. *The Bell of the Hospital of the Trinity College Kirk.*—This bell, which for a long time after the demolition of the old church found an asylum alongside the gallows under the the North Bridge has been recently

returned to the kirk-session, and is now fixed in the belfry of the rebuilt church. It bears the following inscription :—

RO * HOG * FECIT FOR * THE * HOSPITAL *

* 1639 *

OF * THE * COLLEDG * KIRK * OF * EDINBRVGH *

The date given is that on which the bell was re-cast at Stirling by Robert Hog. The bell is of bronze, and has the follow composition :—

Copper	.	.	.	.	.	.	.	73·61
Tin	.	.	.	.	.	.	.	26·38
								99·99

MONDAY, *8th March* 1880.

THE MOST NOBLE THE MARQUIS OF LOTHIAN, President,
in the Chair.

A Ballot having been taken, the following Gentlemen were duly elected Fellows :—

JOHN L. HENDERSON, Esq., 3 Minard Terrace, Glasgow.

A. WILSON FAULDS, Esq., Knockbuckle House, Beith.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors :—

(1.) By the Trustees of the late DAVID LAING, LL.D., F.S.A. Scot.

Portrait in water-colour on ivory of the Earl of Moira, Commander-in-Chief of the Forces in Scotland.

Miniature Portraits of William Low, Portrait Painter, by John Kay ; of Lady Leslie, and of Nisbet of Dirleton, also on ivory.

The Minute Book of the Abbotsford Club.

(2.) By ARTHUR ANDERSON, M.D., C.B., F.S.A. Scot.

Socket-stone for the Spindle of an Upper Millstone, being a water-worn boulder of quartz $7\frac{1}{2}$ inches diameter, with three holes worn by the spindle in its upper surface, found at Tomchalan, Moulin, Perthshire.

(3.) By FRANCIS LIGHTBODY, Esq., C.E.

Celt of greenstone, polished, $10\frac{1}{2}$ inches in length, $3\frac{1}{2}$ inches in width and 2 inches in thickness at the widest and thickest part, tapering to a width of $1\frac{1}{2}$ inches at the butt, which is brought to a flattened form similar to the cutting end, but slightly expanded at the sides. The edges are ground flat. In shape it closely resembles the celts found at Drumour in Glenshee, Forfarshire, figured in the "Proceedings," vol. ix. p. 174. This fine specimen was found on the farm of Lagg, Dunure, Ayrshire.

(4.) By JAMES DALGARNO, Esq., Slains.

Polished Celt of felspathic stone, greatly weather-worn and decomposed on the surface, $6\frac{7}{8}$ inches in length, 3 inches in width at the widest part, oval in the cross section, and tapering to a point at the butt. It was found on the farm of Upper Brownhill, Slains.

Leaf-shaped Arrow-head of Reddish Flint, $1\frac{1}{2}$ inches in length, found on the same farm.

With reference to these implements, Mr Dalgarno says :—"The stone axe and flint arrow-head now presented to the Society were found by Mr William Sim, farmer, Upper Brownhill, Slains. These are only a sample of many that have been found from time to time in this locality. Several years ago a stone cist, containing burnt ashes, was laid open by quarry-workers on the farm adjoining Mr Sim's. A little to the west of the quarry there had been a camp of flint-workers, the site of which might measure in circumference about fifty yards. Many flakes and partially-formed arrows are still to be found after the plough. The farm of Upper Brownhill stands high, and is contiguous to the Moss of Lochlundie. In reclaiming part of the moss, layers of trees, which had evidently floated from the west, were cut through at a depth of 6 feet

in black moss. Horns of the stag and wild cattle have been found from time to time by parties cutting peat. A good specimen of the latter was found in July this season, and sent to Dr John Alexander Smith, for the Society."

(5.) By Rev. JAMES O. HALDANE, M.A., Minister of Kingoldrum.

Cylindrical Hammer of grey granite, $2\frac{1}{2}$ inches diameter and $2\frac{3}{4}$ inches in length, slightly constricted in the middle, and the rounded ends slightly convex. A hole $\frac{3}{4}$ inch in diameter has been begun to be bored through it from both sides. It was found in the parish of Glamis, Forfarshire.

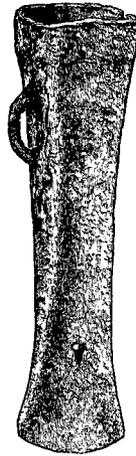
Irregularly circular Disc of Sandstone, 3 inches diameter, $\frac{1}{2}$ inch in thickness, having a hole $\frac{1}{4}$ inch wide pierced through the middle of the disc. It was found in the parish of Kingoldrum, Forfarshire.

Celt of felspathic stone, polished, 4 inches long, $2\frac{1}{4}$ inches wide and $\frac{3}{4}$ inch thick at the widest and thickest part, tapering to the butt, which is broken. The edges are only slightly flattened, so that the section is almost oval. It was found near the Loch of Kinnordy, Forfarshire.

Celt of black basaltic stone, polished, 5 inches in length, 3 inches wide and 1 inch thick at the widest and thickest part, tapering and thinning slightly to the butt, which is rounded and flattened. The edges are not flattened, so that the cross section is a long oval. Both the flat faces are polished by use as a rubbing-stone. It was found in the parish of Airlie, Forfarshire.

Celt of greenstone, polished, 5 inches long, 3 inches in width and $1\frac{1}{4}$ inch in thickness at its widest and thickest part, tapering and thinning slightly towards the butt, which is rounded and damaged. It was found in the parish of Airlie, Forfarshire.

Celt of bronze, socketed, $4\frac{7}{8}$ inches in length, $1\frac{1}{4}$ inch wide across the cutting face, and with a loop on one side $\frac{1}{2}$ inch long and $\frac{3}{4}$ inch below the rim of the socket. The socket, which is oval, has no bevel moulding



Socketed Celt
($4\frac{7}{8}$ inches long).

or ornament. It is oval in the opening, $1\frac{1}{2}$ inches long and $\frac{3}{4}$ inch wide. This long narrow form of socketed celt is uncommon in Scotland. The present specimen was found in the parish of Kingoldrum.

(6.) By Rev. JOHN FERGUSSON, M.A., Minister of Fearn, through
Rev. J. O. HALDANE, M.A.

Whetstone of micaceous sandstone, $3\frac{1}{4}$ inches in length and about $\frac{3}{4}$ inch of a side, having a hole for suspension through one end, and very much worn by use. It was found in a cist in Glenshee, Perthshire.

(7.) By JOHN SIBBALD, M.D., F.S.A. Scot.

Tyrolese Cattle Bell, purchased at Meran, in the Tyrol. The bell is of iron, brazed, $3\frac{1}{2}$ inches wide and $3\frac{1}{2}$ inches high, exclusive of the handle, which is $2\frac{1}{2}$ inches wide and 1 inch in height. The mouth of the bell is nearly rectangular, with rounded corners and slightly bulging sides. It measures $3\frac{1}{4}$ inches in length and 2 inches in width. The bell is formed by doubling an oblong piece of sheet iron in the middle, and overlapping and rivetting the two sides. The handle passes through the top of the bell, and forms the loop on which the iron clapper hangs. The size is that of a sheep or goat bell. A similar sheep bell, but larger, from Wiltshire, is in the Museum. All the domestic animals wear bells in the East, and camels, horses, donkeys, cows, sheep, and goats have each a different variety of bell, some of which are much larger and others much smaller than the present specimen.

Stone article, being a rough piece of slate, 6 inches by 4, and $\frac{1}{2}$ inch thick, one end rounded and slightly narrower than the other, the edges of the stone all round being smoothed and slightly rounded. The stone is constricted in the centre of its length and width, with marks as if for cords, having also a hole about 1 inch in length and $\frac{1}{2}$ inch in width cut through the narrower part by a sharp tool. On one side there are incised the letters I x G, below them a heart and a species of *fleur-de-lis* between the figures 17, below them 1683, and in the corner a square about $\frac{3}{4}$ inch of a side, diagonally divided into four triangles. On the other side a similar square similarly divided by a saltire, a laureated head,

below it a thistle crowned, but reversed, between the letters C R, and below them on the right side the figures 83, the space on the left side blank. Below all are the words "John Gibsone" in the ordinary script of the period, and underneath them some other writing now illegible. This curious object was found in Arran.

(8.) By JAMES S. ANDERSON, Esq., Warminster.

Digging Stone from Chili, being a flattened ovoid boulder of greenstone, $5\frac{1}{2}$ inches diameter, and about 3 inches thick, having a hole $2\frac{1}{2}$ inches wide at the surface, but narrowing to $1\frac{1}{4}$ inch in width at the centre, pierced through its thickness in the middle of its flat sides.

(9.) By JOHN SHAND, M.D., F.S.A. Scot.

Tinder-box, being a can-shaped box of sheet iron, 3 inches diameter, and $3\frac{1}{2}$ inches deep, riveted up the side, and bound round the bottom with a wooden hoop. The lid and the bottom are made out of cork-floats for nets. It was obtained as in use by a fisherman in Kirkcudbrightshire.

Steel, $4\frac{1}{2}$ inches in length, and flint used with the same, also from Kirkcudbrightshire.

Pocket Tinder-box, being a hinged box of sheet iron tinned, as commonly used for a tobacco box by the fishermen of the same locality.

(10.) By J. J. MILLIDGE, Esq., F.S.A. Scot.

Penny of Edward III., struck at Durham.

Penny of David II., reverse REX SCOTORVM.

(11.) By D. J. MACFIE, Esq. of Borthwick Hall.

Plan of Entrenchments at Borthwick Hall, by Mr W. Galloway, Architect. [See the subsequent communication by Mr Galloway.]

(12.) By the COUNCIL of the ROYAL IRISH ACADEMY.

Transactions of the Royal Irish Academy. Vol. xxvi., Parts 18-21, and Vol. xxvii., Parts 2 and 3.

Proceedings of the Royal Irish Academy. Vol. i., Series ii., Part 13.

(13.) By the ROYAL UNIVERSITY OF COPENHAGEN.

Kjöbenhavn's Universitets Retshistorie, 1479-1879.

J. C. Jacobsen's Description des Serres des Jardin Botanique de l'Université.

Medal in bronze, Fourth Centenary of the University.

There were also exhibited :—

1. By His Grace the DUKE OF BUCCLEUCH and QUEENSBERRY, K.G., &c., F.S.A. Scot.

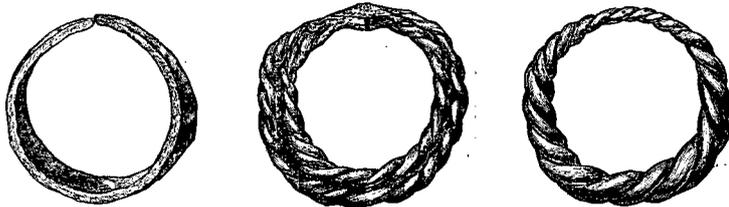
Gold Lunette, found at Auchentaggart, and massive Silver Chain found at Whitecleuch. [See the subsequent communication by J. Gilchrist Clark, Esq.]

2. By A. G. REID, Esq., Auchterarder.

Coffer of Black Oak, rectangular in the lower part, the lid with sloping sides and flat top, like a pavilion roof. The coffer measures 16 inches long, $7\frac{1}{2}$ inches wide, and 10 inches high, is ornamented with strips of brass fastened by copper nails, and is said to have been obtained from Cambuskenneth Abbey.

3. By STAIR AGNEW, Esq., Queen's and Lord Treasurer's Remembrancer.

Four Gold Rings, found at Stenness, Orkney. Two of the rings are formed of strands of gold wire, twisted together. The smallest is



Gold Rings found at Stenness (actual size).

similar to one found in Bute, with coins of David I. (Proceedings, vol. v., plate vi. fig. 2, and p. 373). It is 1 inch in diameter, and is

composed of three strands twisted together, thickest in the middle, and tapering to the extremities, which are welded together. The other more resembles a ring of plaited wires found in the island of Fladda Chuin, and now in the Museum. It measures 1 inch in diameter, and is composed of seven wires, four plated in double strands, and the three outermost making a triple plait, which is also interplaited with the two double strands. As in the former case, the wires decrease in thickness towards the ends, which are welded together to form a lozenge-shaped bezel. The other two rings are plain hoops, formed of a flat band of gold, about $\frac{3}{8}$ of an inch wide in the widest part, and tapering to the ends, which are unjoined. One of them is broken. The following account of the discovery of these objects was communicated by James M. Macbeath, Esq., F.S.A. Scot., in a letter to Mr Anderson:—

“KIRKWALL, 2nd Sep. 1879.

“I have much pleasure in acquainting you of a most interesting ‘find’ which was made last Friday, in a field near the shore of the loch of Stenness. The finder is a small farmer in the parish in which the find was made. I only heard of it to-day, and lost no time in calling on the person in whose hands the interesting relics have been placed for sale. They consist of four separate pieces of gold, which weigh about twenty-eight pennyweights of what the watchmaker here says is fine gold.

“There are first two rings, each about $1\frac{1}{8}$ inch diameter outside measurement. Both are curiously wrought, and are of different designs or patterns. Then there are two flat strips or bands of gold, by which the two rings were attached to each other when found. The bands are about No. 28 wire gauge in thickness. I have just learned that No. 2 was the same length as the other, but the farmer had a piece cut off, and took it to Stromness to have it tested.

“No. 1 ring consists of two gold wires about the size of No. 13 wire gauge, twisted together like a rope, and gradually getting smaller where the ends are neatly hammered into the coil. At the thickest part the ring is fully $\frac{3}{16}$ of an inch in diameter, at the smaller part is barely $\frac{1}{16}$ of an inch.

“No. 2 ring is much more elaborately wrought. It consists of a series of small wires, about No. 19 wire gauge, twisted together in the form of three

curb chains—one at each side of the ring, and the third in the centre, rising like a ridge above the two curbs on either side—and having a flat part, diamond-shape, at the small part, where the wires all terminate.

“For the style of both (but more so of No. 2), and general appearance, I refer you to Wilson's ‘Pre-Historic Annals of Scotland,’ edition 1851, p. 677.”

Hoard of Groats of Robert III., found at Fortrose. [See the subsequent papers by Mr Geddie and Mr Burns.]

Mass of Bronze, like a thick cake, irregularly circular, 9 inches diameter, and 3 inches thick, weighing about 36 lbs., ploughed up at Carleton, Glasserton, Wigtownshire.

The following Communications were read :—