

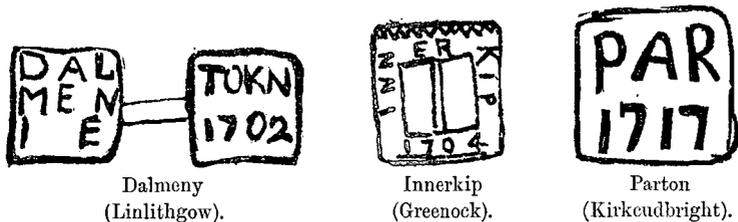
## VI.

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:—



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).

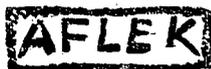


St Cuthbert's  
(Edinburgh).



Sorbie  
(Wigtown).

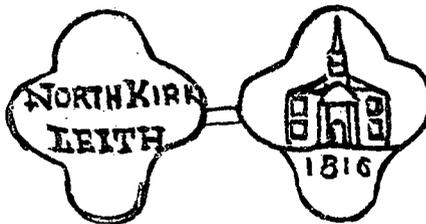
more commonly met with styles, other and more complex forms were used.



Affleck (Forfarshire).

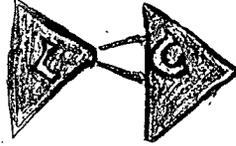


South Leith (Edinburgh).



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<br>(1747). | Leith,<br>New Kirk<br>(1776). | Kilbarchan<br>(1783). | Edinburgh,<br>Canongate<br>(1813). | Leith,<br>North Kirk<br>(1816). | Kilmalcolm<br>(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

