IV.

ANCIENT SUNDIALS OF SCOTLAND (WITH ILLUSTRATIONS).

By THOMAS ROSS, Architect.

There are numerous works treating of the scientific construction of sundials, in which definite rules are laid down for the guidance of the workmen, so as to insure their producing a work which will accurately note the passing hours. But it is not a little surprising that there should be no well-illustrated book regarding sundials as works of architectural design and skill, showing how they changed in appearance as different styles of art prevailed, and how the types of one country affected those of another.

This essay is an attempt to treat of sundials, so far as Scotland is concerned, from the historical and architectural point of view; but the full elucidation of the subject would require the co-operation of others in foreign countries in collecting sketches, photographs, and other information.[1]

When engaged collecting materials for the *Castellated and Domestic Architecture of Scotland*, many ancient sundials were seen and sketched, and it was suggested by Mr David Douglas that these might form the subject of a useful paper to this Society. In the course of correspondence with Miss Gatty still further accessions were made, and the number of illustrations collected is now sufficient to give a clear idea of the art of dial-making as practised in Scotland from the sixteenth to the eighteenth century.

The Book of Sundials, by H. K. F. Gatty and Eleanor Lloyd (London: Bell & Sons), is a work of great research and labour, which no one interested in the subject can ignore, and it is the only guide we have to the whereabouts of sundials throughout the world. As a treatise which reviews them "chiefly from their moral and poetical aspect," it is never likely to be superseded. In it are treasured up the wise saws relating to the flight of time, collected from many generations and many lands.

[1] I gratefully acknowledge my indebtedness to many correspondents for bringing various sundials under my notice, and for sketches and photographs; these I have acknowledged in their respective places. I have especially to thank Mr J. Fowler Hislop, F.S.A. Scot., Prestonpans, for much assistance, and many other gentlemen, for permission to sketch their sundials.

Sundials may be divided into two great classes—the attached and the detached. The attached dials are those displayed on the walls of a building; the detached those standing alone. The former are subsidiary works, the latter are often of a very monumental character. Although detached dials exist in hundreds, there are only four independent types of them in this country. And as it is convenient and necessary to have some descriptive name by which the dials of each type should be known, they will be referred to as—(1) the obelisk dials; (2) the lectern dials; (3) the facet-headed dials; (4) the horizontal dials. These names are suggested by the appearance of the dials themselves. Of the attached dials almost every town and village contains examples, and they occur in all imaginable positions—in wall panels, on the apex and eaves of gables, on the corners of houses, over archways and doorways, and every other "coygn of vantage." These dials will be arranged according to their position and design, as being more convenient than following their chronological order.

The following description commences with the simplest form of sundials, and then proceeds to those of a more complicated design.

I. ATTACHED DIALS.

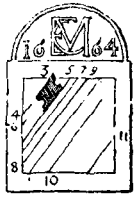
These consist of—

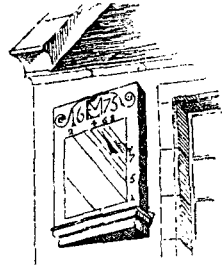
1. Single-faced dials.
2. Dials with two faces on angles of houses.
3. Dials with two or more faces projected on corbels.
4. Terminal dials.
5. Dials on market and other crosses.
6. Horizontal attached dials.

1. Single-Faced Dials.

King's College, Aberdeen.—This dial is about 3 feet square, and is set on the face of one of the buttresses of the chapel at a height of about 30 feet from the ground. It appears to be an original part of the structure, which was founded in 1494, and in that case it is the earliest example of a sundial known in Scotland.

Hatton House, Mid-Lothian.—There are five dials at Hatton. Three of these belong to the class now under consideration. Two are placed on the south-east tower. The lower one is perfectly plain, and faces south. The upper one (fig. 1) faces the east; it is rounded on the top and contains the date 1664, and the monogram of Elizabeth (Lauder), wife of Charles Maitland, Earl of Lauderdale, and proprietor and builder of the greater part of Hatton House. Another dial (fig. 2) is on the west





Figs. 1, 2. Hatton House.

wall of the building; its face does not coincide with the face of the wall, being slightly canted northwards. It rests on a moulded bracket, and is finished square on the top, having an incised scroll line enclosing the same monogram as the last dial, with the date 1675.

Hatton House Gateway.—The fourth of the dials at Hatton (fig. 3, next page) is placed over an arched gateway leading from the public road to the grounds. Over the keystone of the arch, on the face opposite the dial, is the inscription "ANNO . DOM 1692," and alongside in modern figures the date 1829. The latter date probably refers to a re-erection of the gateway in its present position, and to the building of two inferior side-archways for foot passengers. At least it may be inferred that the dial is not in its original position, as it now faces the north.

Balcomie Castle, Fifeshire.—This is a very modest dial, hardly seen beside the rich heraldic carving which fills the three adjoining panels. Like the dial last considered, it is over the entrance gateway. The initials are for John Learmonth of Balcomie, and his wife Elizabeth Myreton of Randerston, and their arms occupy the panels. On the frieze above the panels is the inscription (EXCEPT) "THE . LORD . BVLD THE .

HOUSE . THEY . LABOVR . IN . VAINE . THAT . BUILD . IT." The date of the gateway, which faces the south, is 1660.[1]

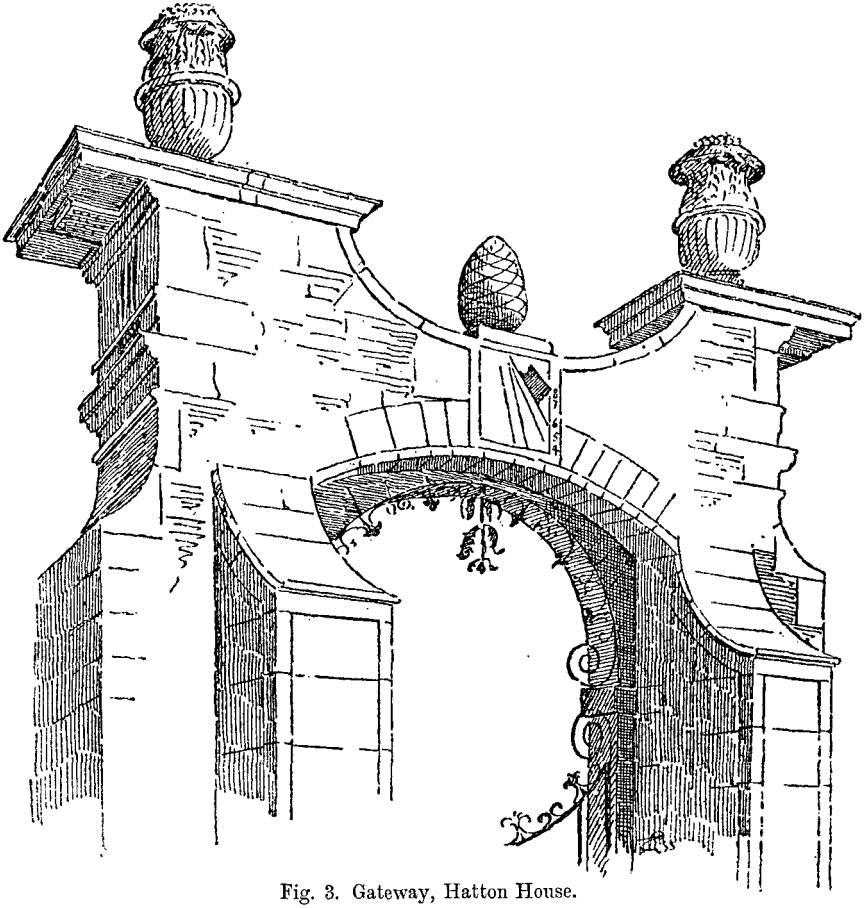


Fig. 3. Gateway, Hatton House.

Aberdour Castle, Fifeshire.—This quaint dial (fig. 4) is placed in a kind of niche formed on a projecting corner of the castle; it cuts

[1] For a view of this dial and the gateway, see *The Castellated and Domestic Architecture of Scotland*, vol. ii. p. 358.

diagonally across the corner, and faces in a south-west direction. Over one of the windows in this part of the castle are the initials of William, Earl of Morton, who built it between the years 1606 and 1648, the year of his death.

Since making the sketch of this dial, the Rev. Patrick Borrowman, Aberdour, has pointed out that on the upper corners it contains the initials of William, Earl of Morton, and Anne, Countess of Morton, with the date beneath—1635; these are all faintly cut, and escaped my observation.

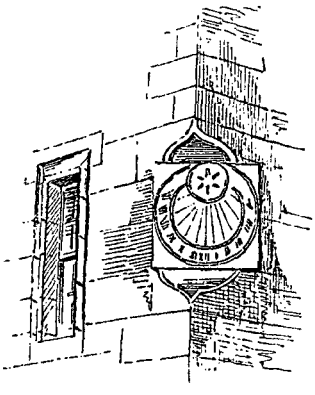


Fig. 4. Aberdour Castle.

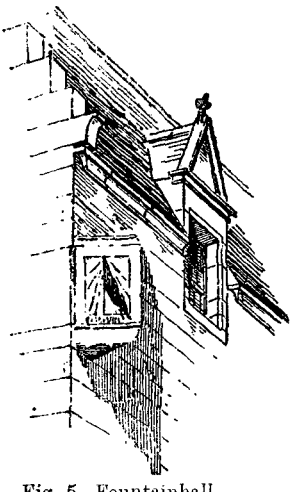


Fig. 5. Fountainhall.

Fountainhall, Midlothian.—This charming old mansion has a dial (fig. 5) on the south-west corner treated in a manner similar to dial (fig. 2) on Hatton House.

Fountainhall is a seventeenth-century building, and the supporting stone seems to be part of the original structure, but the dial itself is evidently of later workmanship; and the present tenant of the house, Mr Patrick Robertson, informs me that he believes it was put up by Sir Andrew Lauder about the end of last century; the dial faces due south, and is accurate as a timekeeper.

Dunnikier House, Fifeshire.—The dial on this house is almost similar

to the one just described. The house faces the road, on the top of the hill at the east end of Kirkcaldy, and is dated 1692.

Yarrow Kirk.—The sketch of this dial (fig. 6) is taken from the *Reminiscences of Yarrow*, p. 166.[1] It contains the motto "WATCH AND PRAY, TYME IS SHORT," with the initials $\frac{\text{M}}{\text{IFM}\cdot}{}_{1640}$ The maker's name is concealed in the monogram "RM. FECIT."

Fig. 6. Yarrow Kirk.

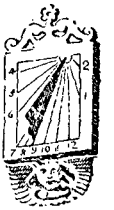


Fig. 7. Peffermills.

Peffermills House.—There are three dials on this house, all of the same design (fig. 7). They have a considerable resemblance to those of Heriot's Hospital, to be hereafter described; and as the house was contemporaneous with Heriot's, being dated 1636, and only two miles apart, the dials may be the work of the same designer.

Monkhall, near Inveresk.—There is a plain dial on the west wall of this house, which probably dates from about the beginning of last century.

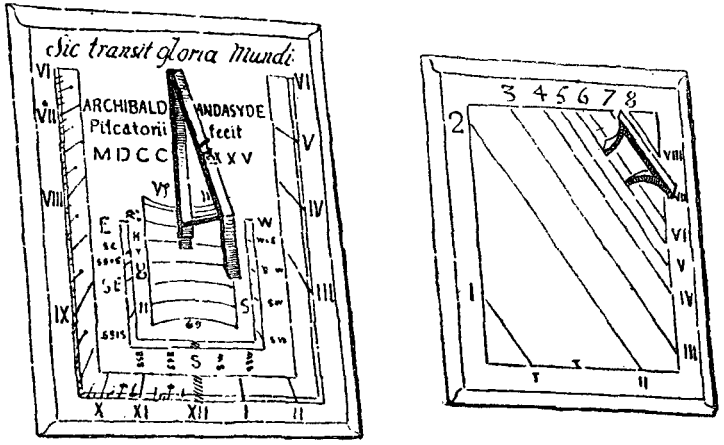
Northfield, Preston, East Lothian.—This dial is lying on a rock-work in the garden at Northfield; it has a rounded top, with the date 1647, and the initials G. M—M. B; these connect it with Northfield, which was built by proprietors called Marjoribanks.

Pinkie House.—There are three dials here; the one now referred to is a plain example; it is placed over the ground-floor windows of the beautiful oriel on the south side of the house, and dates from early in the seventeenth century.

Inveresk House.—A plain weather-worn dial is built in the east front of this house, which was formerly the parsonage of Inveresk. Over the doorway, in a carved tympanum, is the monogram composed of the

[1] Messrs William Blackwood & Sons, publishers (to whom I am indebted for permission to copy it here).

letters "O . C . M . R," with the date 1643, and the motto, "NEMO . NISI . VERITATIS . ET . PACIS . STUDIOSVS . INTRABIT" ("Let none enter who is not studious of Peace and Truth"). On another part of the house are the arms of the Coult family—a stag's head erased, impaled with the arms, a chevron with what seem to be two mullets in chief, and a cross crosslet in base, and the date 1682. Inveresk House is supposed to have been built by Oliver Coult, to whom and to other members of the family there is a monument in the neighbouring churchyard, from which we find that he was minister of the parish from 1651 to 1679. Oliver and his predecessor, Adam Coult, were buried within the grounds of this house.



Figs. 8, 9. Inveresk Churchyard.

Inveresk Churchyard.—There are two dials here lying loosely against the walls of the church. One of them (fig. 8) is of very great interest, as it bears the inscription "ARCHIBALDI HANDASYDE Piscatorii fecit MDCCXXXV," with the motto "Sic transit gloria Mundi." Piscatorii is a classical form for the name of the neighbouring village of Fisherrow, where Handasyde lived at this time. He was fond of classical names, and, as we shall see further on, he invented the name of "Conchi Polensis" for the town of Musselburgh when he lived there. Handasyde was evidently a regular dial-maker, and without doubt he made the plain

dial lying alongside (fig. 9), and also the dial at Cramond House, one of the finest and most elaborate we possess, as well as a horizontal dial at Portobello, to be afterwards described; and his influence, if not his handiwork, is visible on the fine dial at Cadder. The chief dial at Inveresk has a rounded moulding on the edge, and is, scientifically speaking, of complicated construction; the gnomon is open, and made of hammered iron, with a slight artistic touch in the centre. The companion dial has a similar moulding round its sides, and has also a wrought iron open gnomon.

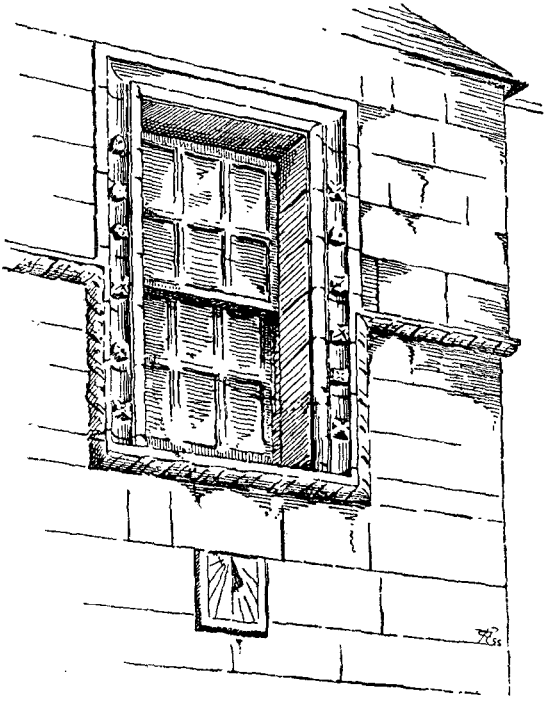


Fig. 10. Preston Lodge, Cupar.

Preston Lodge, Cupar-Fife.—There are three plain dials on this most interesting mansion-house (fig. 10), the residence of Mr Arthur Russell,

situated in the Bonnygate. A stone built into the walls contains the motto "SAT . CITO . SI . SAT . BENE," along with a merchant's mark, and the date 1623.

Melrose Abbey.—On the face of the buttress of the south transept, at the west side of the doorway, the lines and figures of a dial have been cut, with the date 1661 (fig. 11). This dial was merely carved on the face of an existing stone.

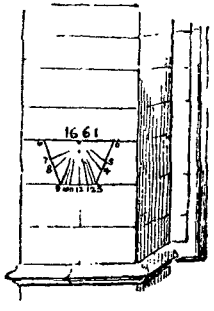


Fig. 11. Melrose.

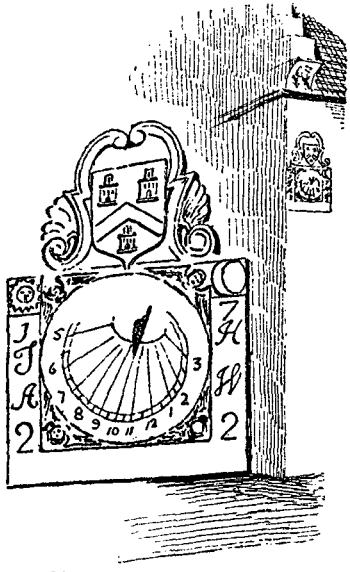


Fig. 12. Prestonpans.

Linlithgow Church.—A dial similar to the foregoing has been cut on the south porch of this church, on the west side of the doorway. It has no date, but it is doubtless of the seventeenth century.

Prestonpans.—There are a number of dials in this village, and several which once existed have been lost or destroyed. Many of the houses on which they appear belonged to masons. The westmost dial in the village is on a house which belonged to one Petticrew a mason; and the next dial, going eastwards, is likewise on a mason's house. The dial (fig. 12 —which shows its position on the corner of the house, as well as an

enlarged sketch of the dial) is a circular one inscribed on a square stone. In the upper corners there is a representation of the sun and the moon, with the initials of John Howison and of his wife Agnes Wood, with the date 1729.[1] Round the top there is an ornamental scroll containing the masons' arms, a chevron between three castles. Immediately above the dial, on the skew-stone of the gable, there is sculptured a right hand holding a mallet, and striking a chisel held in the left hand.

West Kirk, Edinburgh.—This finely-cut dial (fig. 13) is placed on the west face of the steeple, and in design is not unlike those in Inveresk churchyard. It has a bead and hollow moulding round its four sides, and has an open iron gnomon; above is the motto "VIVITE FUGIO," with the date 1774. The dial and its frame appear to be made of stones from different quarries. The builder and supposed designer of the church was a Mr Weir. The upper part of the tower and spire was added in 1787, and is the work of Mr Stein.

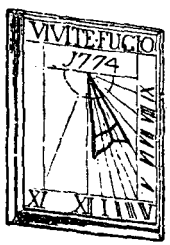


Fig. 13. West Kirk, Edinburgh.

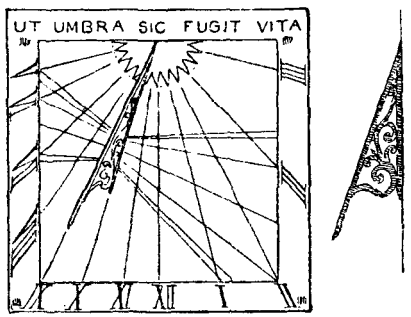


Fig. 14. Aberdeen Town-House.

Lugton, Dalkeith.—There is a dial here placed over one of the second-floor windows of a house overlooking the Esk, near Dalkeith. It is a bronze plate, and contains the initials "W. B.," and the date 1745. The panel with the pediment enclosing the plate are of stone, and date from early in this century.

Aberdeen Town-House.—The town-house of Aberdeen was erected in 1730, and on the front of it there was a plain metal dial (fig. 14) which

[1] The last figure was mistaken for a 2, when making the sketch.

was transferred to the new building when the old one was taken down about twenty years ago. The gilt gnomon issues from a radiant sun, and is of wrought iron ornamented as shown on sketch. Along the top of the dial is the motto "UT . UMBRA . SIC . FUGIT . VITA." I am indebted for a sketch and photograph of this dial to Mr John Morgan, of Rubislaw House.

Canongate Tolbooth.—There is a very weather-worn dial on the south front of the tower of this building. The date of the Tolbooth is 1591, but the dial has the appearance of having been inserted at some later time.

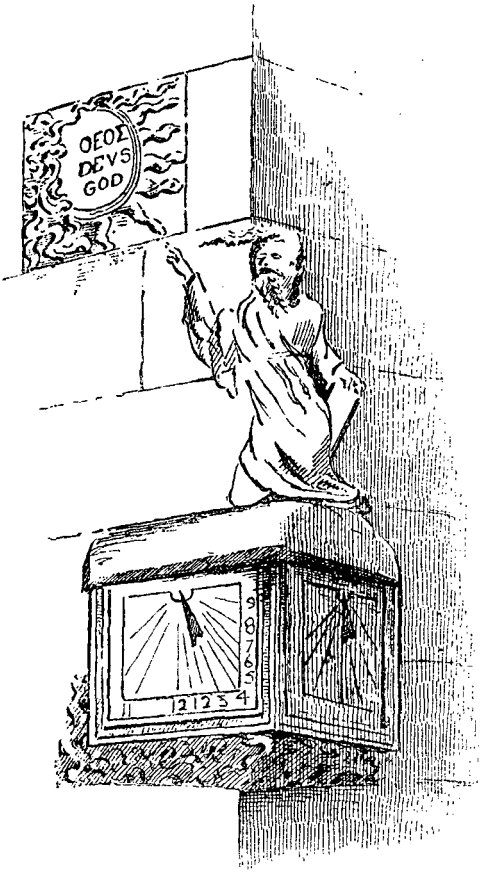


Fig. 15. John Knox's House.

2. Dials with Two Faces, on Angles of Houses.

John Knox's House.—On the south-west projecting corner of this house there is a remarkable piece of sculpture (fig. 15), the real meaning of which does not appear to have been recognised. It contains a figure, most skilfully twisted round the corner of the house, representing Moses kneeling on the top of a mount pointing with his right hand to a figure overhead of the sun in glory, on which is carved in Greek, Latin, and

English the name of God. The sun's rays are represented as flames of fire. The left arm of Moses is bent backwards, and the hand rests on one of the tables of the law. Beneath there are two square empty panels supported on a bracket, representing flames of fire. These two empty panels were intended for dials facing south and west, as shown in the illustration. Beside the dial occur the arms[1] shown in fig. 16, with the initials "I. M., M. A."

The figure of Moses is popularly believed to be an effigy of the Reformer, while the panels for the dials have been mistaken for the sides of his pulpit. To carry out this idea of a pulpit, a wooden canopy supported on pillars was placed over the figure, and I incline to the belief that about forty years ago the whole of the sculptured stonework (shown in fig. 15) was covered with a caricature representation in wood of the Reformer preaching from a pulpit.

Fig. 16. Arms on John Knox's House.

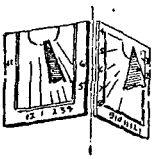


Fig. 17. Philipstoun House.

Philipstoun House, Linlithgowshire.—There are six angle dials on this house. These, simple as they are (fig. 17), give a life and character to the building. The date 1676 is carved over one of the windows, and on another part are the initials "I. D. F. D." The Dundases of Philipstoun are a branch of the neighbouring house of Dundas.

Lethington Castle, Haddingtonshire.—On the south-east corner of the latest part of the castle may be seen the dial shown in fig. 18. The date 1644 shows that this portion of the building was erected after Lethington passed from the Maitlands into the possession of the ancestors of the present proprietor, Lord Blantyre.

[1] These have hitherto been a puzzle, but recently Mr R. C. Walker, Newport, has interpreted them as the "Mossman Arms, James Mossman and his wife Mariota Arres." Mr Walker gives various references to them; and in the Register of the Great Seal, under 1573 (No. 2135), there is a grant to John Carmichael y^r^ of that Ilk of certain properties which had belonged to James Mossman, who had been forfeited, including "Tenementum apud lie Nether-bow dicti burgi."

Prestonpans.—Eastwards from Howison's cottage, already noticed, there is a house called Galla Bank, which has four sundials, two on the south-east corner and two on the south-west corner. Fig. 19 shows those on the south-west corner. One of the two at the south-east corner, viz., the one facing the east, is peculiar; the face is sunk, and the gnomon or stile is formed by a portion of the stone being left. Such an arrangement is of common occurrence on detached dials, but is rare on attached dials. Examples, however, will be noted at Makerstoun, Newstead, Elie, and East Calder. Neither the date nor the builder's name of this house have been ascertained. Still going eastwards, at the head of "Low's Wynd," another south-west corner contains two dials; and within living memory a dial stood on the battlements at the foot of the wynd overlooking the sea.

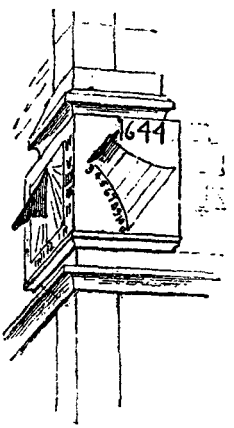


Fig. 18. Lethington Castle.

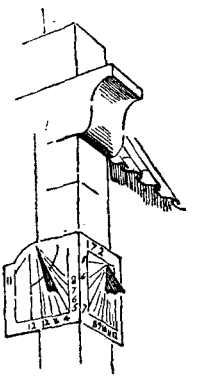


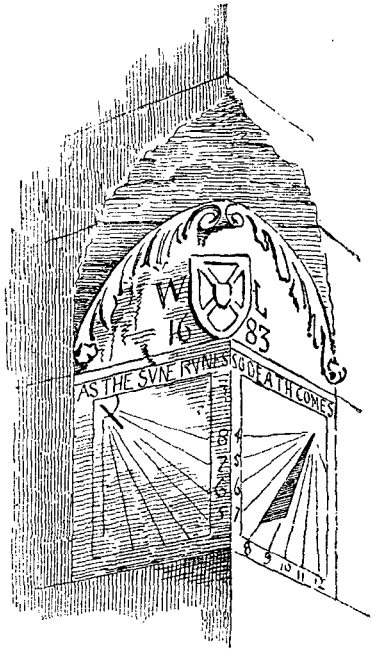
Fig. 19. Prestonpans.

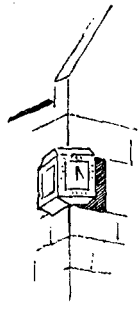
Ormiston.—Two dials, almost similar in design to those at Galla Bank, are on the south-east corner of a house near the west end of the village.

Liberton House, Mid-Lothian.—On the south-west corner of this house, the ancient mansion of the Littles of Liberton and Craigmillar, there is a fine angle dial (*fig.* 20), round the top of which is the motto

"AS . THE . SVNE . RVNS . SO . DEATH . COMES." Above the dial the corner is rounded and enclosed with a carved scroll containing the arms of Little—a saltire with an inescutcheon betwixt the initials of William Little and the date 1683.

Prestonpans Church.—On the south-west corner of one of the south aisles of this picturesque church there is a projecting angle dial (fig. 21). The *Old Statistical Account* says that this church, with the exception of the steeple, which is much older, was rebuilt in 1774, and it is believed that the south aisle is perhaps even later.





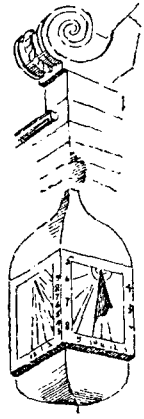


Fig. 20. Liberton House. Fig. 21. Prestonpans Church. Fig. 22. Silvermills.

Silvermills, Edinburgh.—On the south-west corner of a quaint old house in the lane behind St Stephen's Church, an angle dial projects on a rounded corbel (fig. 22); the dial finishes above with an ogee moulding reaching up nearly to the ornamental skew-stone. A similar skew-stone on the opposite front bears the date 1714.

Cockburn House, Mid-Lothian.—A plain dial of this type exists on the north-east corner of the mansion-house of Cockburn, near

Balerno. The date on the house is 1672, which fixes the date of the dial.

Glencorse Church, Mid-Lothian.—On the south-west corner of this abandoned church there is a very simple dial of this type. The date on the Woodhouslee aisle of the church is 1699.

3. Dials with Two or more Faces projected on Corbels.

Heriot's Hospital.—Perhaps the finest specimens of attached dials in Scotland are to be seen on this building. There are eleven of them, eight being on the outside walls and three facing the courtyard. They are all of the same general form. Figs. 23, 24, 25, and 26 represent those of the courtyard. Those on the outside fronts differ from each other only in their supporting brackets. One has this feature rounded, as shown by fig. 26. Others have brackets, consisting of cupids' heads with wings, similar to figs. 23 and 25, and to the dials at Peffermills. Others have demons' heads, with wings similarly disposed; and one on the east side rests on an elephant's head.

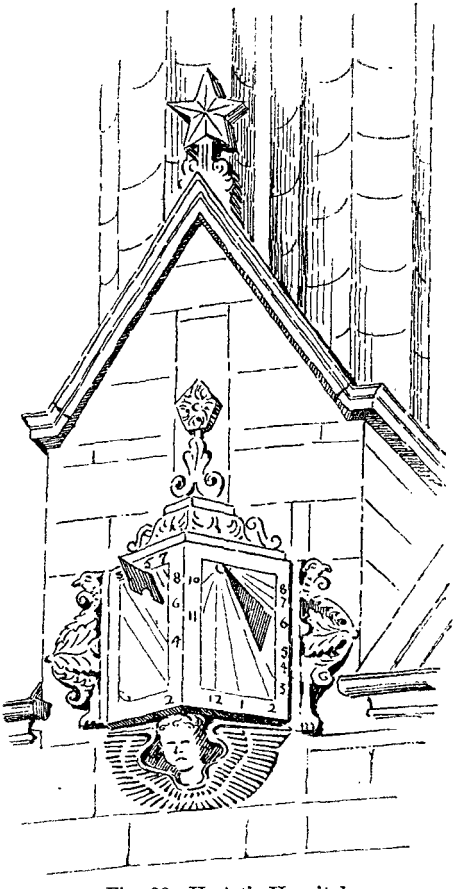


Fig. 23. Heriot's Hospital.

These dials appear to have been made by William Aytoune, who succeeded William Wallace as architect and superintendent of the

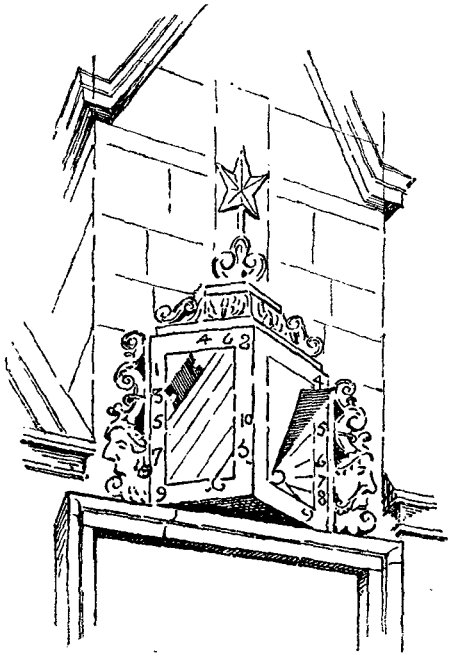


Fig. 24. Heriot's Hospital.

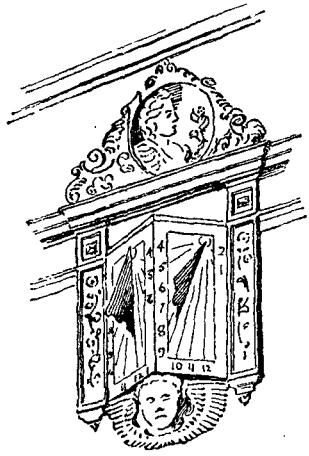


Fig. 25. Heriot's Hospital.

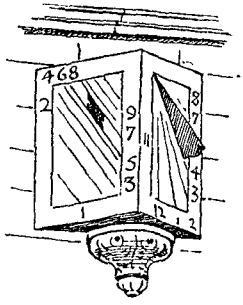


Fig. 26. Heriot's Hospital.

Hospital buildings in 1631–32. In the contract between Heriot's Trustees and Aytoune,[1] the latter was bound "to mak and carve his Majesties portratt or any other portratt he beis requyrit to mak in that wark; and to mak all sort of dyallis as sal be fund fitting for samyn."

[1] See *Life of George Heriot*, p. 68.

There ought to be another dial at Heriot's Hospital, but it seems to have disappeared. In 1679, "Mr Alexander Burton, laitly ane of the doctors of the High School, had gifted freely to the Hospital a dial for the Hospital garden, which he is to put up at his own expense."[1]

Dials are very liable to get broken, and during repairs and alterations they are apt to disappear; and coveting and taking away your neighbour's dial is not an unknown offence. As we find from Scott's *History of Berwick*, p. 306, that "John Orde the younger," was charged "for taking away the dyall that was at the Newgate, which is now standing in his garden. As also the same hath taken away the sone dyall that Thomas Smith sett up on the Church wall which was a benefit to all persons that came that way."

While on this subject I may mention that the dial on Glasgow Cathedral, referred to by Miss Gatty, is not there now.

Innes House, Morayshire.—There are numerous dials on this house, which is one of great interest, as it is known, from an account of the building kept by the laird, to have been designed by "William Aytoun, maister maissoun at Heriott his work." And, as might be expected, the dials resemble those on Heriot's Hospital.

Alloa.[2]—This very fine dial (fig. 27) occurs on the front wall of a house in the Kirkgate, Alloa. The supporting bracket is quite different from those at Heriot's, and so is the ornament along the top. A shield beneath surrounded with a nicely carved wreath bears the date 1695, with the initals $\frac{\text{T.B.}}{\text{M.L.}}$ This (as I find from *Northern Notes and Queries*, June 1889) was Tobias Baak; his wife's name is not mentioned. He was a mason in Alloa, and built this very handsome house, on which the dial occurs, for himself.

In 1680 extensive repairs, almost amounting to rebuilding of the old kirk and steeple at Alloa, were carried out by order of the Archbishop of St Andrews. "Sworn Craftsmen" reported on the condition of the building, and undertook the work that was needed. A

[1] *Life of George Heriot*, p. 101.

[2] I am indebted for a large photograph of the dial to Mr Adam Frame, architect, Alloa.

note of the materials required as to the stonework "conform to the measson's report" is signed "T. Buchanan, Tobias Baak."

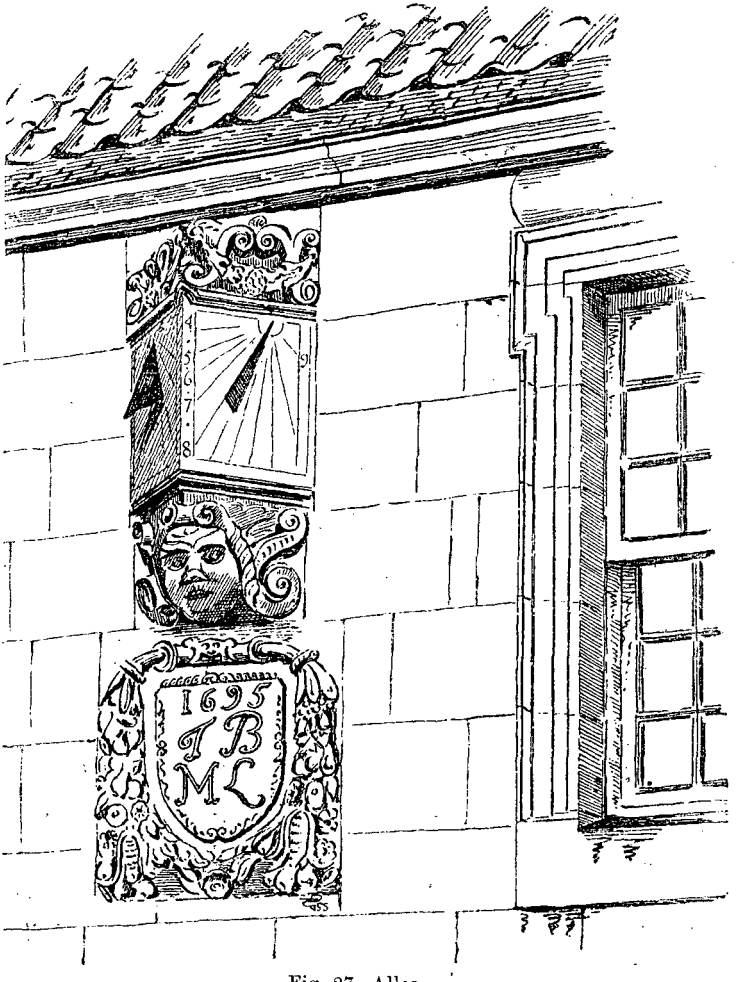


Fig. 27. Alloa.

The Kirkgate was at one time the principal street in Alloa, being in

the direct route between Stirling and Dunfermline, and doubtless this dial was of considerable importance to travellers two centuries ago.

Jedburgh.—This is a peculiar dial (fig. 28); it is wedge-shaped in the lower part so as to form a double dial like those of Heriot's Hospital, and above this there are two cup-shaped dials on a surface parallel with the wall of the house on which it stands. The dial is in rather a dilapidated

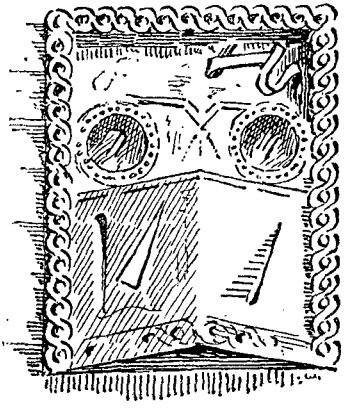


Fig. 28. Jedburgh.

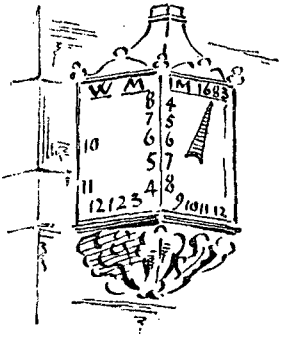


Fig. 29. Newstead.

condition, it is undated, but has the remains of an inscription "Fumit Cunctus Novanthus."

Canonmills, Edinburgh.—This dial is projected on a rough corbel from the south wall of one of the old mills.

Newstead, near Melrose.—There are numerous dials in this village, which is accounted for from the circumstance of Newstead having been the home of many first-class working masons who had the taste to set up dials on their own houses.[1] Dial fig. 29 is supported on a vigorously carved bracket; it is dated 1683, and has initials W.M. and L.M., standing for the surname of Mein. Figs. 30 and 31 are dated 1751 and 1754 respectively. The latter contains the initials J.B., signifying J. Bunyan—Mein and Bunyan are both old mason-names in Newstead.

[1] I am indebted for drawings of these dials to Mr William Anderson, architect, Galashiels.

Figs. 32 and 33 have each three faces, the former is dated 1777, and the latter without a date, is a remarkable dial (as will be seen from the sketch it has on one side—a sloping semi-cylindrical dial). This is the

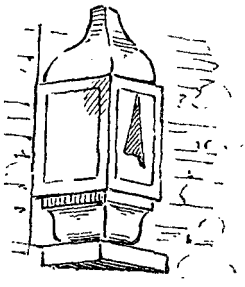


Fig. 30. Newstead.

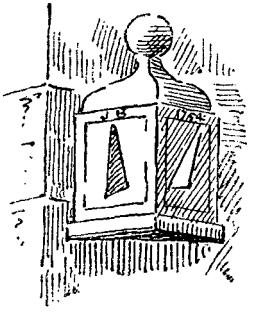


Fig. 31. Newstead.

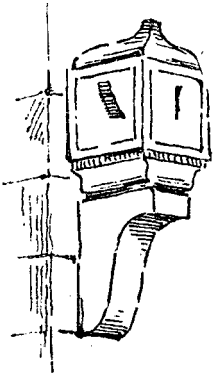


Fig. 32. Newstead.

simplest form we have seen of this feature, which, as we shall afterwards see, is a most conspicuous one on certain of the detached dials.

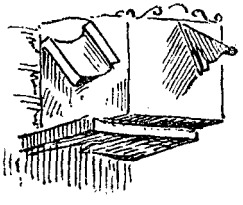


Fig. 33. Newstead.

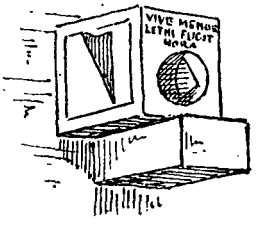


Fig. 34. Makerston.

Makerston, near Kelso.—This is the dial (fig. 34) referred already to in the description of the dial at Prestonpans (fig. 19). It is peculiar in having a hollow cup on one face, the other two faces being of the ordinary kind. The following motto is on the cup-faced side: "VIVE . MEMOR . LETHI . FUGIT . HORA." Makerston House was destroyed by Hert-

ford in 1545, and it is believed to have been rebuilt, says Jeffrey in his *History of Roxburghshire*, in 1590, but the dial is probably of a later age.

In connection with the two foregoing dials of Newstead and Makerston, this is perhaps the proper place to bring forward the two very remarkable dials which are to be found on the churches of Cockburnspath and Oldhamstocks, situated about 2 miles apart (figs. 35, 36.)

Cockburnspath and Oldhamstocks.—They are, in technical language, "inclining dials," and so far as my observation goes they are unique amongst attached dials, which are all upright; and as these two dials probably date from early in the sixteenth century, they may be regarded as the forerunners of the "lectern" dials to be considered under a separate head.

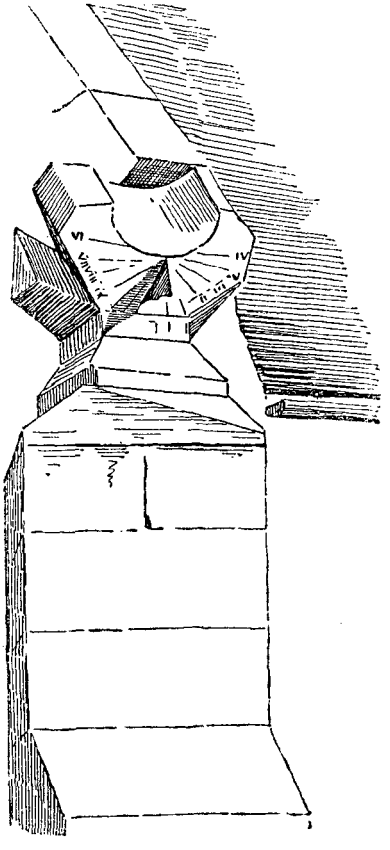


Fig. 35. Cockburnspath.

The dial at Cockburnspath (fig. 35) forms the terminal of the angle buttress at the south-west corner of the church, its face leans forward, and the sides are splayed away; the upper surface slopes backwards to the skew of the gable, and is hollowed like a half cylinder. A singular piece of stone sticks out like the stump of an amputated arm from the west side. Whether this was meant to tell the time by its shadow on the gable cannot be determined as the wall is "harled" over. The west end of this church, including the buttress and the singular round tower, as well

as the east end, probably date from about the beginning of the sixteenth century, and without doubt the dial is a part of the original structure.

The Oldhamstocks dial (fig. 36) is placed on the south wall of the church at the west corner; it leans forward, and has the top hollowed

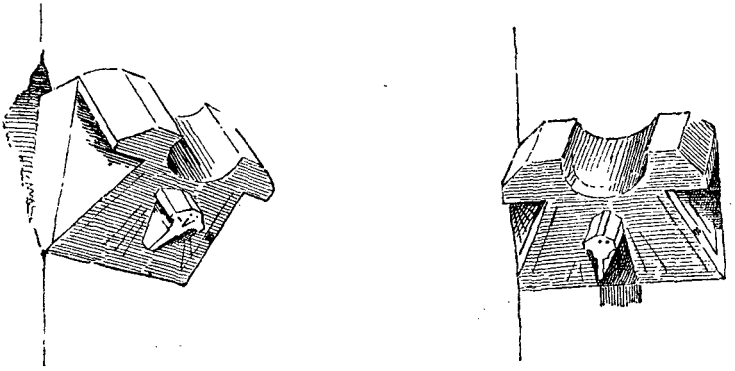


Fig. 36. Oldhamstocks.

like a cylinder, its inclining face having been cut out of a square stone. Sufficient material has been left to form a gnomon, which is moulded like a Gothic rib. The face of the gnomon has itself formed a dial. Stone gnomons are of frequent occurrence on unattached dials, but are rare in those of this class. We have already noted one at Prestonpans (page 173).

The stone is splayed away on each side, and has dials on the splays. Above each splay a portion of the stone is left square like horns at each side of the dial face; these horns act as gnomons in the same manner as the similar horns on the unattached dial at Woodhouslee (fig. 73) These two churches seem to be of the same date.

Oldhamstocks has a square projecting tower-like belfry in the centre of the west end, the position occupied by the round tower at Cockburnspath. It has a chancel with an east window filled with rude flowing tracery. Alongside this window there is an *inserted* stone with arms, and the date 1581, "probably," writes the Rev. Mr Hutton, "the date of the death of Margaret Sinclair, wife of Thomas Hepburn, Incumbent of

Oldhamstocks." Without doubt the chancel is earlier than this date, and it is almost equally certain that the west gable is also earlier.

The body of the church was partly rebuilt and repaired in 1701, that date being over the doorway in the south wall. Now, this is too late a date for the angle buttress at Cockburnspath, where buttress and dial are part of the original structure, and as there can be no doubt but that both dials are contemporaneous, the date 1701 is out of court altogether, and we have to fall back on some date previous to 1581 as the period of these dials. They measure horizontally about 20 inches in breadth.

The clergymen of both churches, the Rev. Mr Hunter and the Rev. Mr Hutton, write that no similar dials are on any of the churches of the locality so far as they know.

4. Terminal Dials.

Dials are frequently used as strictly architectural features, altogether irrespective of their use in noting the hours, and this is especially the case with those which come under this head. They frequently occur on the apex of gables, as at the Water of Leith (fig. 37), where the dial crowns a building belonging to the bakers' craft, whose arms and insignia shown on the sketch are carved on the building. Fig. 38 is

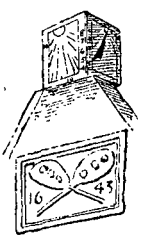


Fig. 37. Water of Leith.

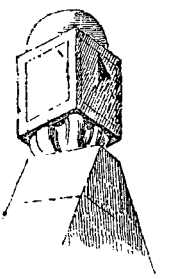


Fig. 38. Belmont.

a handsome specimen from the apex of a gable at Belmont, near Corstorphine.

[Similar examples of dials were shown from Haddington and Bredisholme, near Glasgow.]

Corstorphine Church.—There are seven dials on Corstorphine Church, all similar to the one shown in fig. 39. They form the terminals of the buttresses, but they are not coeval with the buttresses and church, which was founded in 1429.

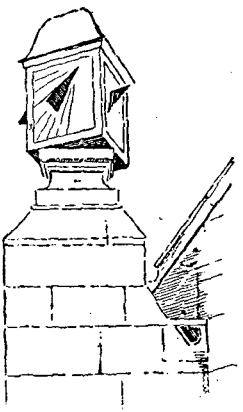


Fig. 39. Corstorphine.

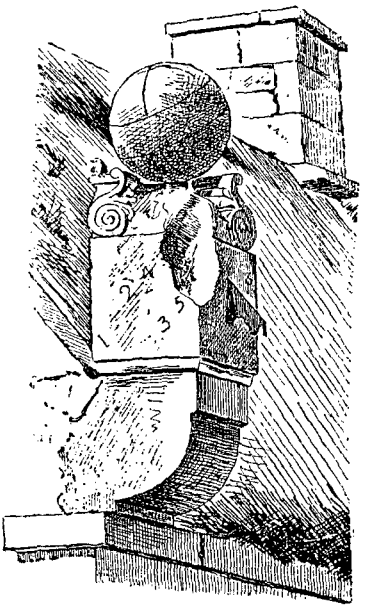


Fig. 40. West Linton.

West Linton.—Dials forming a termination at the eaves or lower end of gables are of common occurrence, and a good example is shown from a one-storied cottage at West Linton (fig. 40.)[1]

Grange Pans, Bo'ness.—On this fine old mansion-house (of which a sketch was exhibited), there are two dials occupying a similar position to the one last mentioned. The date on the house is 1564, but the dials are later. The place they occupy has not been specially prepared for them, and they do not properly fit their position.

[1] The drawing is copied from a sketch by Mr C. S. S. Johnstone, architect, Edinburgh.

Prestonpans (fig. 41).—This is the dial already referred to as belonging to one Petticrew, a mason. The date of its erection has not been ascertained.

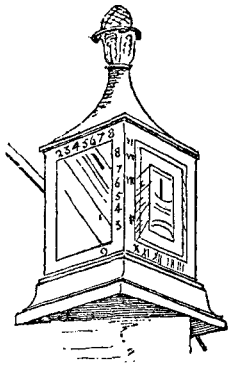


Fig. 41. Prestonpans.

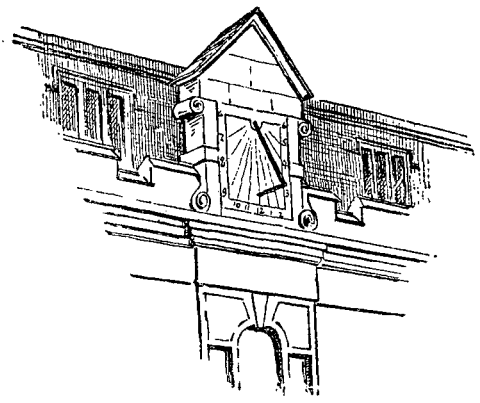


Fig. 42. Berwick.

Church, Berwick-on-Tweed.[1]—This fine dial (fig. 42) forms the termination of the south aisle wall of the nave immediately over the compartment of the third window from the west end. The face of the dial is of a white stone, and measures about 4 feet 8 inches square; the width across, including the frame, is about 5 feet 10 inches; and the height to the apex of the gablet is about 8 feet 2 inches. The gnomon is of iron, and projects 2 feet 4 inches. The church was erected in 1652, and Mr James Stevenson, jun., architect, Berwick, to whom I am indebted for drawings of the dial, is of opinion that they are of the same date.

East Calder.—This dial (fig. 43) has been already referred to (page 173) as being peculiar in having a cup hollow.

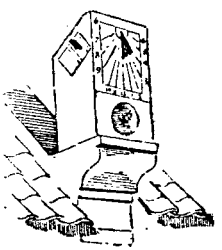


Fig. 43. East Calder.

[1] I am indebted to Mr W. D. Purves, Berwick, for procuring drawings of this and another dial on the Bridge of Berwick.

Chirnside Church.—The dial here (fig. 44) is not unlike the one just referred to at Prestonpans (fig. 41), both in design and position; it bears the motto "Hoc age dum Lumen adest," and the date 1816; but the dial itself appears to be older than the lettering. The church dates from the Norman period, and some work of that time is still left, but it has undergone many transformations and repairs, and on the north gable there is a stone inscribed, "Repaired 1705,"—this is a much likelier date than 1816.

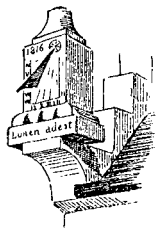


Fig. 44. Chirnside.

Dr Stuart, Chirnside, writes to say that there are several old dials in the village, and that a man named Dunbar was in old times in the habit of making them.

Ayton Church.—In Carr's *History of Coldingham Priory*, p. 128, there is a view of Ayton Church, on which a dial is shown, occupying the same position as the one at Chirnside.

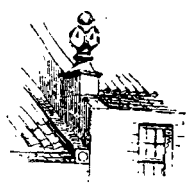


Fig. 45. Earlsferry.

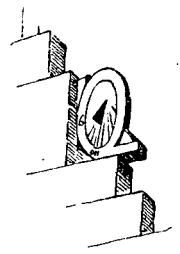


Fig. 46. Clackmannan.

Earlsferry, Fifeshire.—This is a dial with several faces, occupying the eaves of an old house in the village (fig 45).

Clackmannan.—A very quaint round dial (fig. 46), is placed on one of the crow-steps of an old house in Clackmannan, it is neatly fitted for its position with a square base and properly prepared side.

Longside, Aberdeenshire.—Over the Lichgate leading to the old church and churchyard of Longside there is a dial (of which a sketch was exhibited) placed at one end of the cornice, and there was probably another at the other end. A finial over the centre of the gateway bears the date 1705, but the gateway appears to be earlier. The church itself was built in 1620.

Hawick.—On the 25th December 1888, a sundial was found built into one of the grates in the house of Mr Francis Scott, 26 High Street, Hawick (who kindly sent me a sketch of the dial). It is a square block of stone with two face dials; the third side contains indistinct lettering, and on the fourth side there is the date, in clear large letters, 1683. On the upper and lower surfaces there is a hole as if for a dowel. In the newspaper report of its discovery considerable importance is attached to the dial, as it was apparently used by the inhabitants—a clock not having been introduced till eleven years later, when the Tolbooth was erected.

Peebles.—In Chambers's *History of Peeblesshire* there is a woodcut showing a dial on the top of a wall over an arched gateway.

Kelly Castle, Fifeshire.—A sketch was exhibited of a square dial at Kelly Castle, with an ogee top, which serves to mark one of the corners of the garden wall.

Pitfirrane, Fifeshire.—A sketch of a well-formed dial of this century was shown; it forms the termination of a gate-pillar adjoining the public road at Pitfirrane.

House of Muir, Haddingtonshire.—On the quaint old House of Muir, near Ormiston, now used as a roadside inn, there is a square block dial, of which a sketch was shown; it is placed diagonally on the gable skew, in a position similar to the dial at Clackmannan.

Fountainhall, Mid-Lothian.—This singular juxtaposition of a dial and jougs is to be found on a pigeon-house at Fountainhall (fig. 47). The old mansion-house was the residence of Lord Fountainhall (Sir John Lauder), and the tradition that he held occasional public courts of justice here is not lessened by the presence of the jougs on one of his pigeon-houses. Only one gnomon of the dial remains entire, the stone faces having scaled off, and it is altogether in a neglected

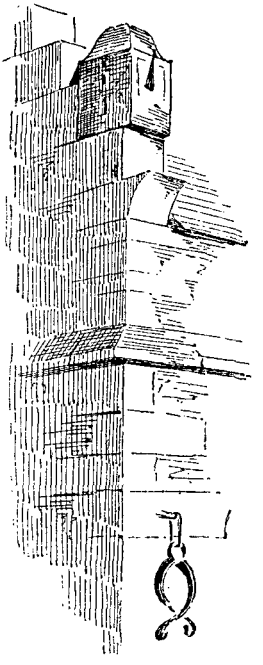


Fig. 47. Fountainhall.

state, while the pigeon-house itself has been allowed to fall into total ruin.

This and another pigeon-house stand about 50 yards south of the mansion-house, the ancient approach to which passed through between them, so that the jougs and dials were in full view of all visitors.

Elie.—The "Muckle Yett" was a fine old Scotch house in Elie, and which, as it projected some 10 or 12 feet into the street, had to be taken down about thirty years ago so as to facilitate the traffic. On the projecting part there was an elaborate doorway which contained a curious

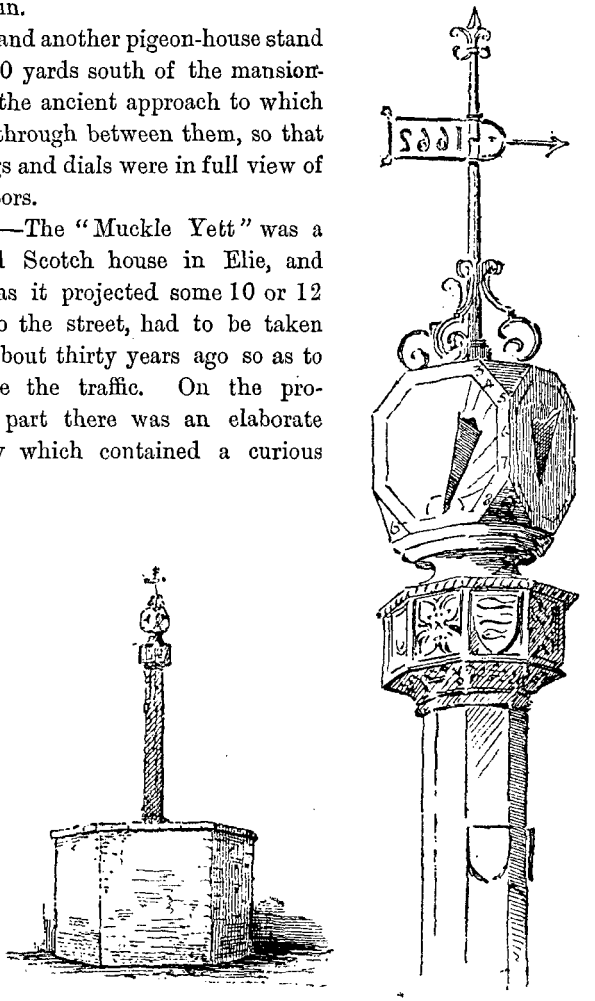


Fig. 48. Peebles.

terminal dial, of which a drawing was shown. The dial and doorway

have still been preserved. The former unites some of the peculiarities of the unattached dials with those of its own class, such as declining and hollow-cup dials with upright ones. On the doorway is the date 1682, and the initials of Alexander Gillespie and his wife Christian Small.

5. Dials on Market and other Crosses.

We are not surprised to find that many of the market-crosses erected during the seventeenth century have been adorned with dials; the sentiment peculiar to a dial is well fitted for such a symbolic structure. At Peebles, Inverkeithing, Doune, Nairn, Leven, Lochgoilhead, Elgin, and other places, they are conspicuous on these crosses.

Peebles.—The Peebles cross is an octagonal shaft about 12 feet high, and is dated 1699 (fig. 48). It has an iron vane on the top, with open figures of date 1662. The shaft rose from the top of an octagonal building about 10 feet high and 12 feet across, in which Dr Chambers, in his *History of Peeblesshire*, says there was an inside stair which led up to the platform. But in a paper read before the Society in February 1861, Mr James Drummond asserts that there was no stair leading to the platform. This cross was taken down so as not to obstruct the *traffic* (!) on the street of Peebles, and is now in the Chambers Museum.

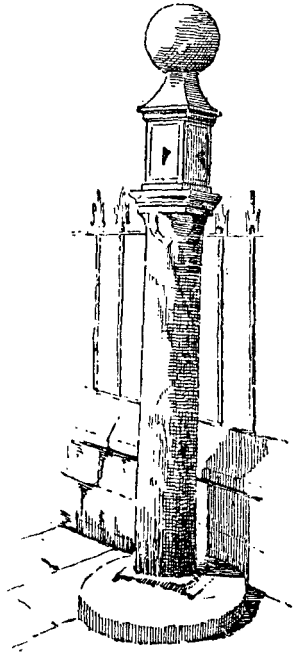


Fig. 49. Nairn.

Nairn.—The dial-cross at Nairn is in a very dilapidated condition, and is entirely given over to the use of the billsticker, behind whose handiwork it can hardly be recognised. The top ball is broken away,

and the dials and capital are very much defaced. The height of the whole structure is about 7 feet 6 inches (fig. 49). I am indebted to Mr Wm. Fowler, architect, Liberton, for bringing this dial under my notice.

Inverkeithing.—This beautiful market-cross (fig. 50) was illustrated by Mr James Drummond in the paper just referred to, and from the heraldry of the shields on the capital ("The Royal and Drummond Arms Impaled —and of the Earl of Douglas") he connected the cross with Anabella Drummond, queen of Robert III., and says, "May not this cross have been a gift of the queen on the occasion of the marriage of her son, the Duke of Rothesay,

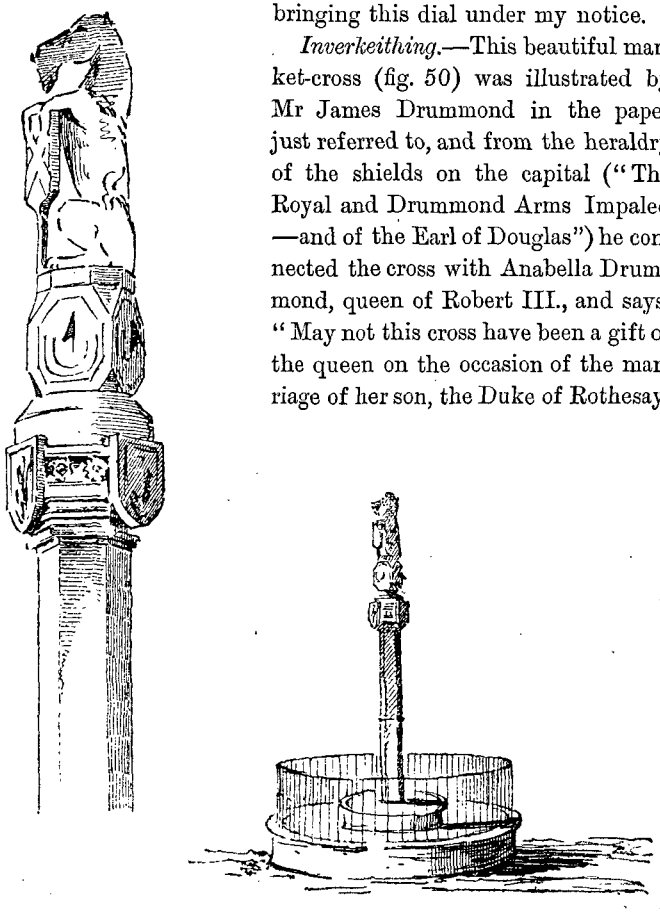


Fig. 50. Inverkeithing.

with the daughter of the Earl of Douglas, in 1398, as the heraldry suggests."

There is no reason for doubting Mr Drummond's conclusion, and his suggestion is extremely probable, so far as regards the cross proper, with the unicorn on top, but in this case the dial is without doubt an addition of the seventeenth century. The height from the base of the pillar to the top of the unicorn is 14 feet 6 inches.

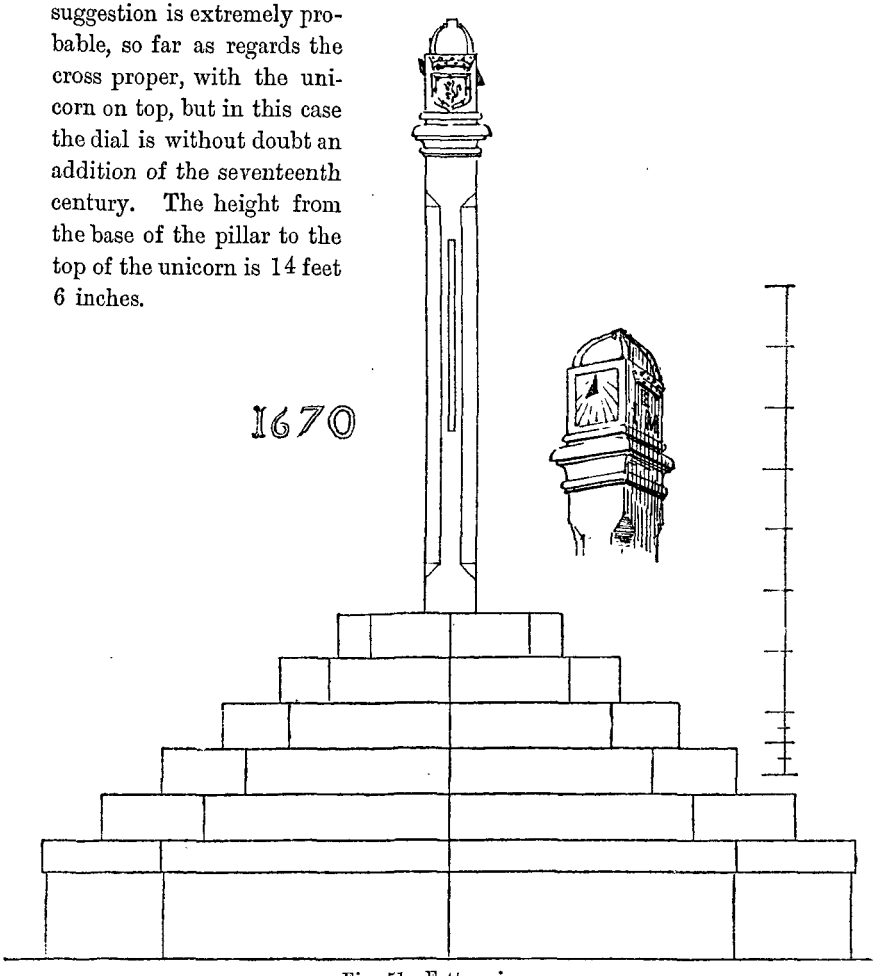


Fig. 51. Fettercairn.

Fettercairn.[1]—This market-cross (fig. 51) is an octagonal shaft

[1] I am indebted to Mr J. Crabb Watt for procuring a drawing of this cross and dial.

surmounted with a capital having a sundial on its southern face. It bears the coroneted initials of John, first Earl of Middleton, and his arms, *coupé*, a lion rampant within a double tressure flowered and counter flowered with fleurs de luce, all countercharged, and on the north side is the date 1670. This cross stood originally in the now decayed village of Kincardine, which lost its prestige by the courts being removed to Stonehaven in the year 1600. It is probable that the shaft only was brought from Kincardine, and that the earl had the present capital made for it then. On the shaft, as will be seen by the sketch, there is a representation on one side only of the standard Scotch ell, 3 feet 1½ inches long. This cross was noticed by the Queen in the *Leaves from the Journal of Our Life in the Highlands.*

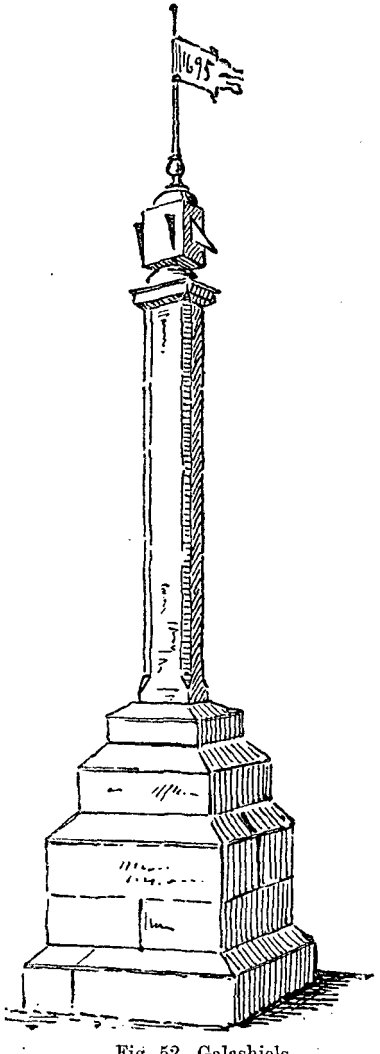


Fig. 52. Galashiels.

Galashiels.—Mr Anderson, architect, Galashiels, to whom I am indebted for bringing the dial under my notice, informs me that a few years ago the upper part of this market-cross was brought to the ground by the foolish freak of a young man who climbed to the top and overbalanced the vane and sundial. They were it appears little damaged, and the youth escaped with a broken leg. When the

cross was restored afterwards it is supposed that the dial was renewed after the original pattern. The date on the vane is 1695.

6. Horizontal Attached Dials.

There are few dials of this kind to be met with in Scotland, while on the other hand horizontal detached dials occur with great frequency.

Crichton, Mid-Lothian.—At this seventeenth-century mansion there is a dial in a very peculiar position on the sill of one of the first-floor windows (fig. 53), it is the only example known of a dial so placed. It could only be used, of course, by those inside the house.

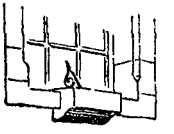


Fig. 53. Crichton.

Ayr.—On the parapet of the famous "Auld Brigg" of Ayr there is a horizontal dial (fig. 54). The bridge is an ancient structure, and the lower bracket-stone of the dial is likewise of an early date; but the upper stone, with the metal plate and gnomon, belongs to a later period, and they probably replace older ones. The face of the dial is very much broken.

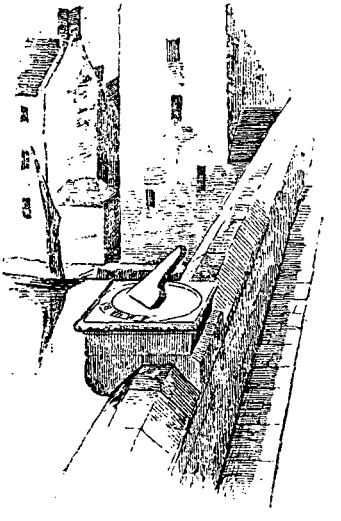


Fig. 54. Ayr.

Berwick Bridge.—The dial here, shown by a plan and elevation (fig. 55), is similar to the one just described at Ayr. It is placed on the down-stream parapet, in a recess over the first pier from the Berwick side. The bridge dates from 1624, but the dial it is believed was put up about the beginning of this century, but whether it replaced an older one or was then quite new does not appear to be known.

II. DETACHED DIALS.

The dials to be considered under this head are among the most important class of monumental objects bequeathed to this country by the

seventeenth century, and it is only when we come to know how numerous they are, and that many of them are fine works of artistic and scientific

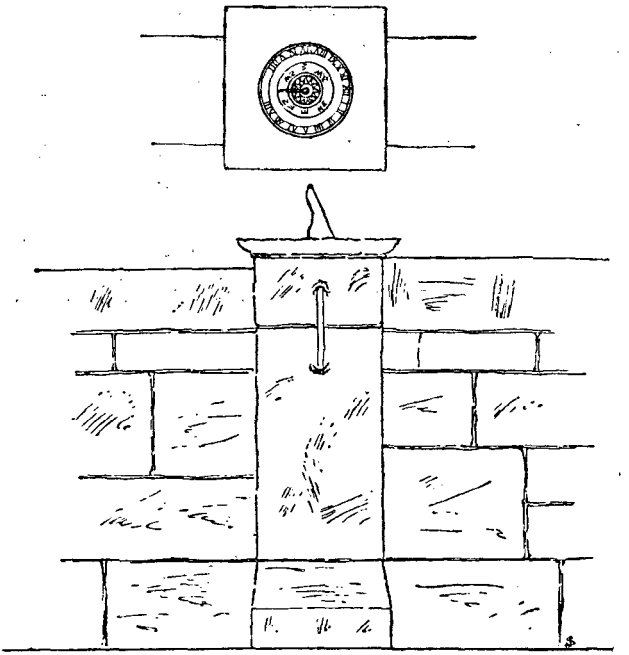


Fig. 55. Plan and View of Dial on Berwick Bridge.

skill, that we perceive how widespread must have been the appreciation of the sculptor's art as combined with that of the landscape gardener.

As already mentioned, the detached dials are reducible to four groups, viz.:—

1. Obelisk Dials.
2. Lectern-Shaped Dials.
3. Facet-Headed Dials.
4. Horizontal Dials.

A brief description of the characteristics of these will be given under their respective headings, and as might be expected in a subject such as

this, where the examples are so numerous, a hard and fast line cannot always be drawn so as to completely separate the specimens of one class from those of another class. And we are not surprised to find that certain examples are found which do not fit in with the classification which naturally suggests itself in connection with the subject, so that a separate chapter is given to dials of exceptional design.

1. The Obelisk-Shaped Dials.

This name, while it fairly describes the appearance of the dials of this class, has a further fitness from the circumstance that the Egyptian obelisks are believed, amongst other purposes, to have acted as gnomons.

The constant parts of these dials are—the square shaft, the bulged capital, and the tapering finial. Where the dial is of the normal type and unaltered, the shaft is divided into five horizontal spaces by incised lines, thus presenting twenty faces. These faces are filled with cup-shaped, heart-shaped, and diagonal sinkings. These sinkings are generally lineated, and were without doubt always meant to be so. The sharp edge of the figure casts the shadow, which is especially distinct in the angular shapes and at the top of the heart sinkings, where there is often a certain amount of undercutting. Stone gnomons of various shapes are frequently left in the cup-hollows, and metal ones are to be found in all the dials. Occasionally some of the spaces are left blank, and on the north side initials, dates, and arms sometimes occur.

The capital is always octagonal, and contains four reclining dials and four declining dials—the former being those dials whose faces slope towards the sky, and the latter those whose faces slope towards the ground. The eight triangular pieces formed by the meeting of the square and octagon are cut out, and most effective shadows, from an artistic point of view, result from this arrangement, giving an air of dignity to the capital, which is wanting in the one instance at Drummond Gardens where this arrangement is departed from. The upright spaces of the octagonal part have heart-shaped and cup-shaped sinkings, as in the shaft, but the declining and reclining parts seldom have sinkings. Nor has the tapering finial ever any sinkings; like the shaft, this part

is divided by incised lines, the number of spaces, for which there appears to have been no rule, varying according to its height.

These dials are generally set on some kind of base, consisting either of steps or pedestals—the former frequently alternate, being set square and diagonally as they ascend. The pedestals have a general resemblance to each other, being frequently ornamented with representations of the sun and the moon in almost identical lines—as at Kelburn and Meggatland (figs. 63, 64, and 58).

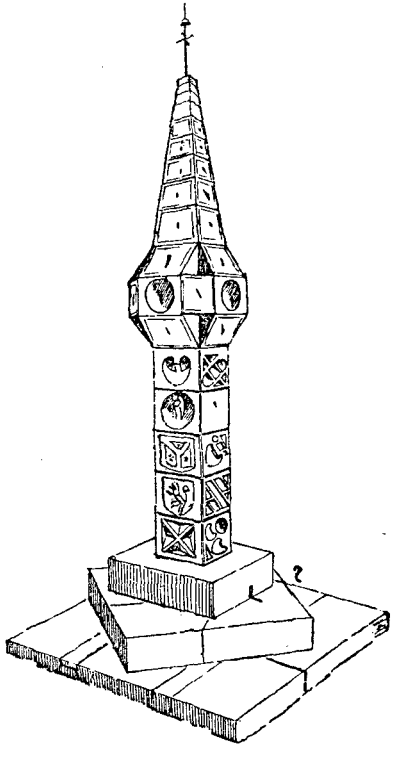


Fig. 57. Bonnington.

With this general description of the obelisk dials, we will now proceed to the consideration of individual examples.

Barnton House, near Edinburgh.—This dial (fig. 56) stands on the east side of Barnton House, and like another dial at this place, to be hereafter described, it stands on four steps placed alternately at an angle of 45° with each other, or as it may briefly be described, as anglewise. The upper or tapering finial part nearly equals the shaft in height, their dimensions being 3 feet 9 inches and 4 feet respectively; the height of the dial is 9 feet $4\frac{1}{2}$ inches, and including the steps it measures 11 feet 10 inches; the shaft is 10 inches square. It is dated 1692.

[As to the probability of this dial not being in its original position see page 261.]

Bonnington House, near Ratho.—This dial is situated in the garden of Bonnington House, it stands on three steps placed anglewise (fig. 57).

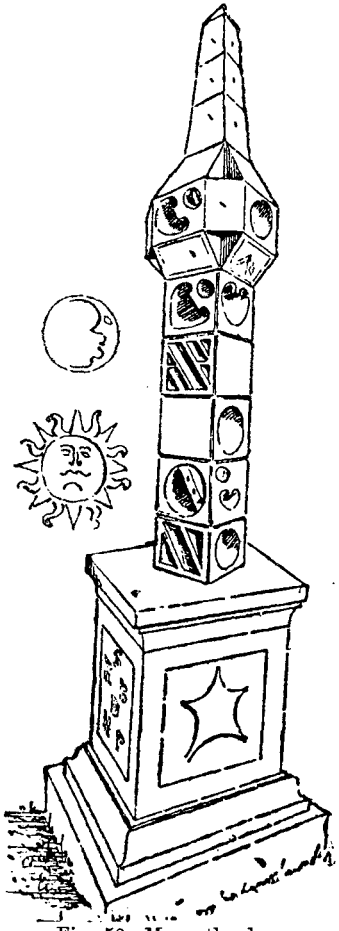


Fig. 58. Meggatland.

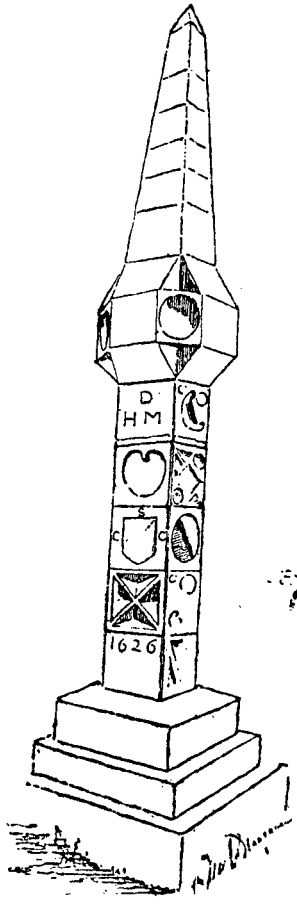


Fig. 60. Lochgoilhead.

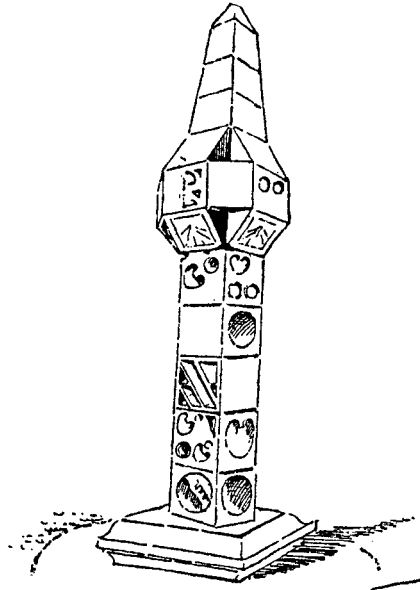


Fig. 59. Barnbougle.

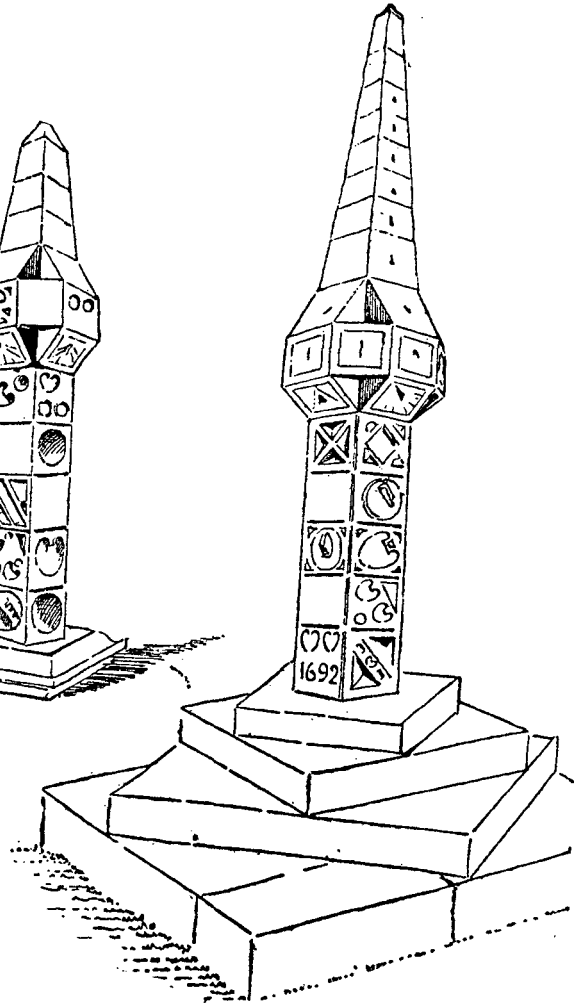


Fig. 56. Barnton.

The dimensions of the dial are:—Shaft, 3 feet 10½ inches high; the capital, 1 foot 6⅞ inches high; and the top about 3 feet 4 inches high; or 8 feet 9⅜ inches in all, and including the three steps, 10 feet 2⅞ inches. The width of the capital is 1 foot 7⅛ inches, and of the shaft 10½ inches. The remains of an iron finial are on the top of the dial. One other example of an obelisk dial having this feature is shown (see fig. 63, p. 202).

Like the dial at Barnbougle, this one has on one of the compartments of the north side the Cunnyngham Arms. A shake fork, and the presence of three stars seems to indicate the Cunynnghams of Belton, and on the compartment beneath there is a lion rampant.

Meggatland.—This dial (fig. 58) stands in the grounds of Meggatland House, about 1 mile west from Merchiston Castle. It has a square moulded pedestal with four panels; in the south, east, and west panels respectively, there are sculptured representations of the sun, moon, and a star; and on the north panel occur the initials R.B. and D.H.P.—the last initial is indistinct, and may be R. or B.

The pedestal is about 34 inches high, and the dial about 7 feet more, or nearly 10 feet high altogether; the shaft of the dial is 9½ inches square.

Barnbougle Castle.—When this dial (fig. 59) was sketched, it was standing in a garden in front of the cottages at Lang-green, not far distant from Barnbougle Castle, to which place it was removed a few years ago when the castle was restored. It has a base a little deeper than is shown by the sketch, the lower part having been partly concealed.

The dial is about 7 feet 2 inches high, and including the base 8 feet 4 inches, with a shaft 10 inches square. The Mowbrays disposed of Barnbougle in 1615 to Thomas, Lord Binney, Earl of Haddington, and in 1662 it was purchased by Sir Archibald Primrose of Carrington.

On one of the spaces of the shaft, on the north side, are the Cunnyngham Arms, as noted above under the Bonnington dial.

Lochgoilhead, Argyleshire.—This is a conspicuous object in the village, and was probably a market-cross (fig. 60). On the north side, and on the upper space of the shaft, there are the initials $\frac{D.}{H.M.}$, and farther

down on a shield are the initials S.C.C., and on the under space is the date 1626.

The dial was overthrown and broken across the middle of the shaft by some Glasgow excursionists about thirty years ago. It was repaired and set up again, and is now protected by an iron railing. The drawing is from a photograph made expressly for the purpose by Mr John Parker, C.A., Glasgow.

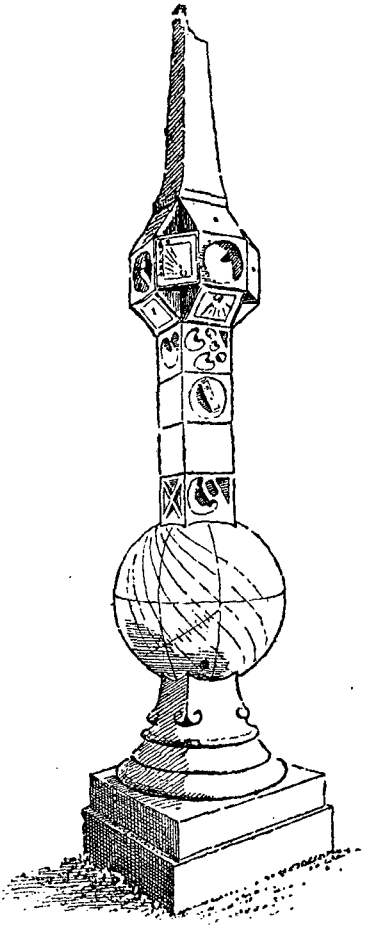


Fig. 61. Craigiehall.

Craigiehall, near Cramond.—This dial, which is one of the normal type (fig. 61), has undergone a considerable transformation. When the mansion-house was rebuilt about the middle of last century by the Hon. Charles Hope Weir, second son of the first Earl of Hopetoun, the dial, which I imagine was broken, was set up on a new and most original base, consisting of a globe about 2 feet 2 inches in diameter, into which the shaft is fitted, burying the whole of one of the five spaces. The globe is supported on a rounded base, and the whole rests on a square plinth. The upper portion was also renewed, but not strictly after the old form, a slightly curved outline without division lines having been given to it. The whole of the renewed work is of white sandstone, while the original dial is of red sandstone. The height from the ground to top of globe measures about 4 feet 8 inches, thence to top of capital

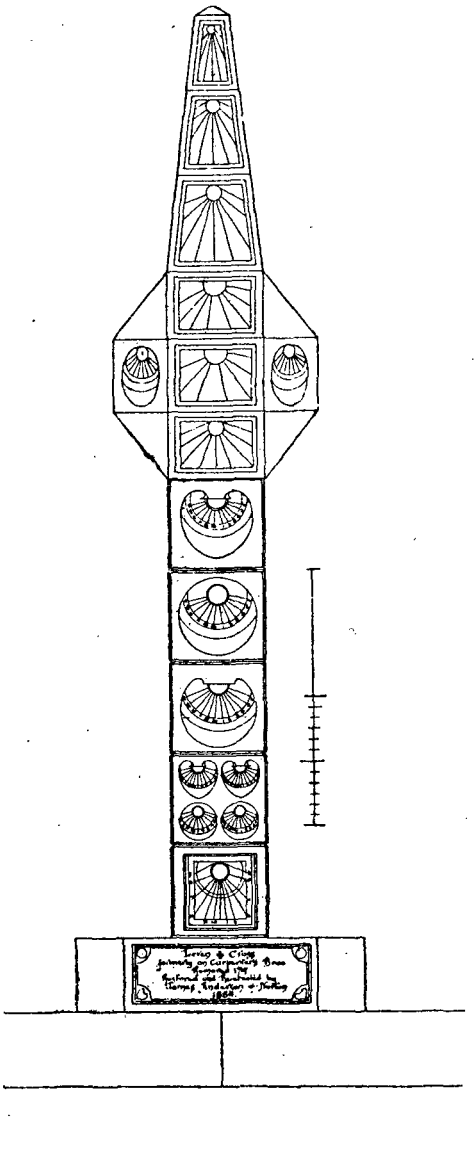


Fig. 62. Leven.

about 4 feet 5 inches, and the renewed top 2 feet 11 inches; total height is about 12 feet. The width of the base at the ground is 2 feet 2 inches. The dial stands in a park, and is protected from the cattle by an iron railing, which it is to be hoped will be kept secure.

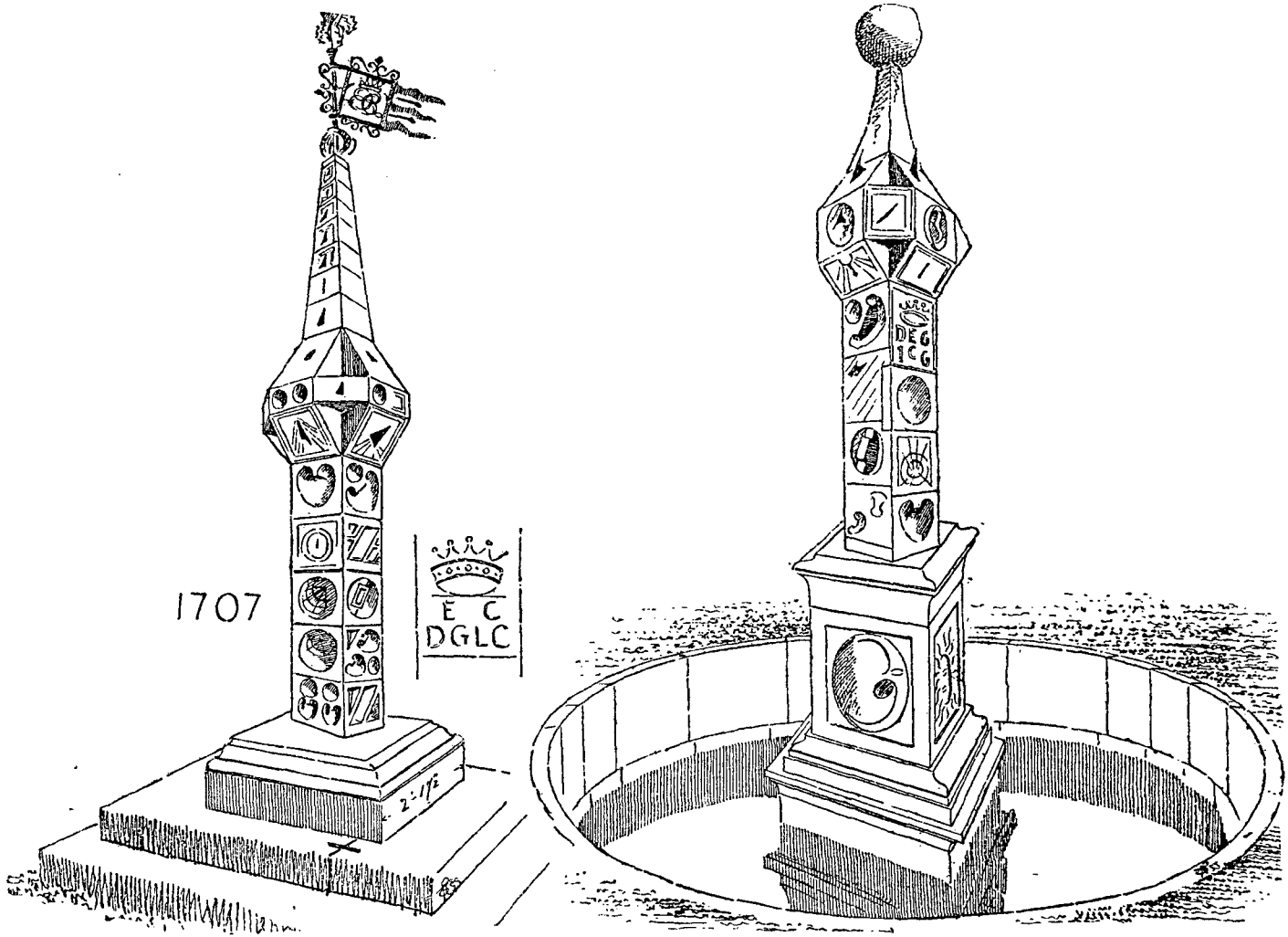
Leven, Fifeshire.—This dial (fig. 62) is believed on sufficient evidence to have been the town-cross of Leven. All knowledge of its existence was lost till, on the 15th January 1889 (the day after this paper was read), Mr James Anderson, of Norton, Leven, observed it broken and built into a garden wall. He had it taken out, and found the shaft in two pieces with a portion of the centre lost, as well as the upper portion, but the capital was entire. The whole has now been restored under the direction of Mr Andrew Dewar, architect, Leven, and set on three steps, on one of which is the following inscription:—"Leven Cross,

formerly on Carpenter's Brae, removed 1767, restored and rebuilt by James Anderson of Norton, 1889."

It has been handed over by Mr Anderson to the custody of the trustees of the Greig Institute. The dial stood on Carpenter's Brae, and it was taken down to allow the passage of Mr John Gibson of Darie's funeral in 1767. After the burning of Darie House in 1764, Gibson lived in the High Street of Leven. The height of the upper part as restored is purely conjectural, and the whole height as it now stands, exclusive of the steps, is 7 feet 3 inches.

Kelburn, Ayrshire.—These companion dials (figs. 63, 64) adorn the gardens which surrounds the fine old Castle of Kelburn. They seem to be in their original positions, and unlike the two dials at Newbattle, to be described further on, they are in no way designed to balance or harmonise with each other, not being visible from any point at the same time. Fig. 63 stands diagonally on a moulded base. The obelisk terminates with a wrought-iron vane of most delicate design and workmanship, enclosing the entwined and coroneted monogram of the Earl of Glasgow and his wife, the whole being surmounted with a Scotch thistle. This is a beautiful piece of wrought-iron work; it was loose and otherwise worn by time, but Captain Boyle has just had it most carefully restored. The dimensions of the dial are:—Height of shaft, 3 feet 8 inches; height of capital, 1 foot 8 inches; height of finial, 2 feet $5\frac{1}{2}$ inches; height of moulded base, 9 inches; total, 8 feet $6\frac{1}{2}$ inches. The moulded base is 2 feet $1\frac{1}{2}$ inch square, and the breadth of the shaft is $9\frac{1}{2}$ inches.

The other dial (fig. 64) is generally of the normal type, but certain deviations therefrom seem to show that it has been altered. The shaft has only four spaces, and there has been mending done on it, and probably a space has been lost; and attention may be drawn to the unusual circumstance that the spaces on each face are not all of one size, in this respect resembling the dial at Tongue. The curved finial on the top and the ball termination are probably the results of a repair like the altered finial at Craigiehall. The dial stands anglewise on a pedestal which is not unlike in design to that of the Meggatland dial; in both there will be observed similar figures of the sun and the moon.



Figs. 63 and 64. Kelburn.

Many of our dials stand on a stone pavement slightly raised above the grass, often of a circular or octagonal form, and this feature certainly adds to their dignity and consequence. This dial at Kelburn exceeds most others in this respect, as it stands in a built stone basin supplied with running water. The height of this dial and pedestal is about 10 feet.

On fig. 63 there is the date 1707, with the initials $\frac{E.D}{G.}$ and $\frac{C.}{L.C.}$ These stand for David Boyle of Kelburn, who was created Lord Boyle in 1699, and Earl of Glasgow in 1703, and his first wife, Margaret Lindsay Crawford, daughter of the house of Kilbirnie. The other dial is undated, but having the same initials, is probably of about the same age.

Tongue, Sutherland.—This obelisk, known as "Lord Reay's" dial (fig. 65), stands in the gardens of Tongue House. Bishop Pocock thought it worthy of notice when he visited Sutherland[1] in July 1760; he says, "in the middle of the kitchen-garden is a pillar entirely covered with dials." Mr Kemp's note on the dial is that it is made of "red sandstone, too soft to resist the action of time and storm, so very few of the old dials are now decipherable." Its total height is 7½ feet, the pillar and main dial-stone being 5 feet, with an obelisk of the same stone, "but of much newer appearance" (it is newer, having been restored early in this century), "standing on the top of it. It is covered with dials from top to bottom, except on the north side of the pillar, which bears the remains of an earl's coronet, with escutcheon underneath, now blank, below that a heart cut in stone, then the date 1714, with a double letter R below, and farther down a cross or star."

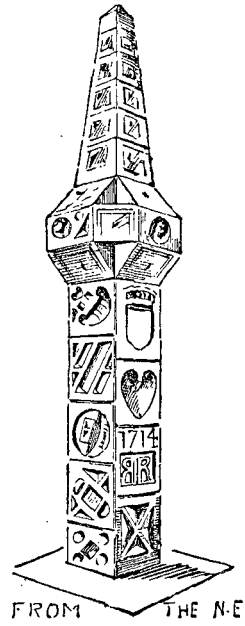


Fig. 65. Tongue.

[1] See *Sutherland Papers; Pocock's Tour*, p. 21, notes by Mr Daniel William Kemp.

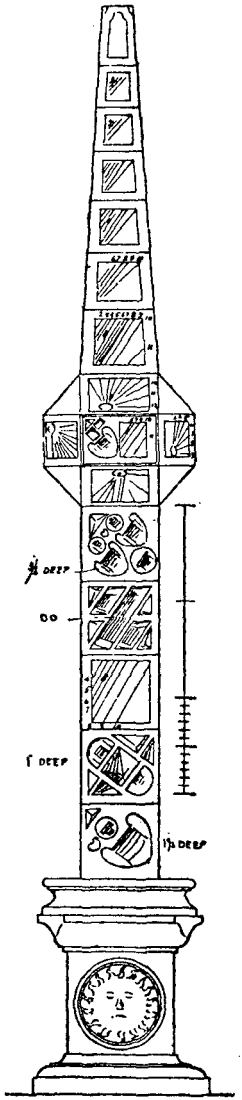


Fig. 66. Mount Stuart.

The view of this dial is made from a pen sketch kindly lent by Mr W. Fowler, architect.

Mount Stuart.—The drawings of this dial (fig. 66), which were lent me by Mr G. Washington Browne, architect, are so minute as to render description scarcely necessary.

The dial rests on a pavement of flat red stones taken from the shore. The shaft and the tapering part of the dial each measure 3 feet 10 inches, the capital is 1 foot 10 inches, and including the pedestal the whole height is 11 feet 4 inches.

The capital of this dial differs from those of the normal type in this respect that the four triangular pieces connecting the octagon with the square are left in on the upper reclining surfaces, and are only cut out in the usual manner on the under or declining surfaces.

Special Varieties of Obelisk Dials.

The obelisk dials still to be described have each certain variations from the normal type —these are shown on the sketches, and will now be pointed out.

Drummond Gardens.—This dial stands (fig. 67) in the centre of the splendid gardens at Drummond Castle. Its upper part is considerably higher than the shaft, and the whole dial is covered with placques which correspond to the spaces of the normal type. On the shaft only they are enriched with hollow figures, some of which are new and different from those hitherto met with. The shaft contains four spaces instead of the usual five spaces, and for

the first time we have a neck-moulding beneath the capital, while the triangular spaces at the angles of the obelisk are left in, thus losing the effective shadows so conspicuous in the dials of the ordinary type. The dial finishes with a stone ball having a metal point, and for its base a thin spreading moulding. A Latin inscription informs us that it was erected by the second Earl of Perth in 1630. And from the *Dictionary of Architecture* we find that it was made by John Mylne (the third of the name), who was the architect of extensive additions at Drummond Castle. The dial contains five stanzas of rhyme in which the hours as sisters descant on the flight of time.[1]

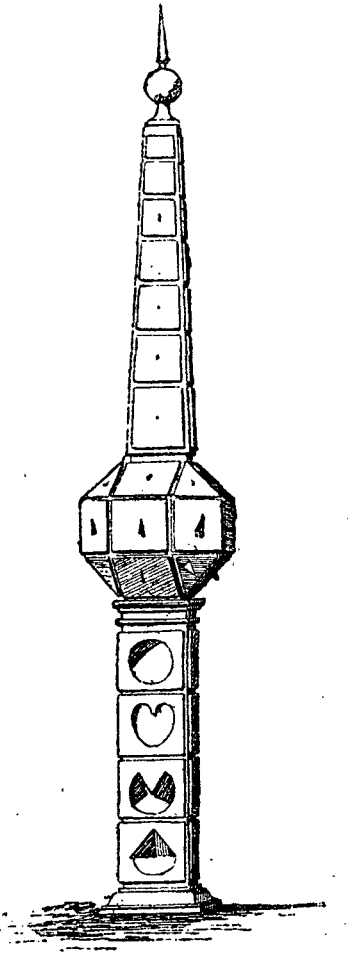


Fig. 67. Drummond Gardens.

[1] Inscription on the dial erected in 1630 in Drummond Castle Gardens, translated by Dr W. Barrack, Rector of Dollar Academy:—

We are the hours on the pillar you see,
Marked by the shadows that ever flee,
And move with the sun in its course on high,
Noting the time passing swiftly by.

Sisters are we, then why are we clad
In joyful robes, and robes that are sad.

We who have rays from the sun at morn
Are servants to those in the East who are born,
Who live in those regions far remote,
Where the Medes and the Persians round Babylon
fought.

We whose robes are red and bright
Have our names from the sun's retreating light,
Italians, Bohemians, all are we,
And the bright red tints of the West you see.

We who are dark and dusky in hue
Mark out the hours on the zodiac blue,
To the people of France and the people of Spain,
Who live by the side of the weltering main.

(There are two or three lines at bottom of pillar illegible.)

Invermay.—This dial (fig. 68) shows a greater divergence from the normal type than any other known example, and in certain of its details it resembles the dial at Drummond Gardens, from which it is distant about 10 miles, and that the design of the one influenced that of the other there can be little doubt. The placque arrangement is alike in both, so is the base and the neck-moulding.

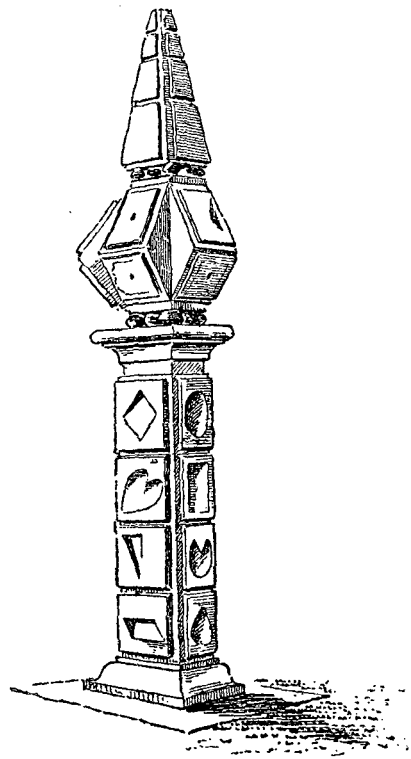


Fig. 68, Invermay.

The capital has inclining and declining dials only, the octagon centre with its upright dials being entirely omitted, giving it a cleft appearance. It rests on the shaft on little rounded balls, and so does the finial rest on the capital.

These small rounded balls, forming rests for architectural objects, like feet peeping out beneath a skirt, are of frequent occurrence in the architecture of the time—they will be found in connection with the Newbattle and Pinkie dials, and at Pitreavie and Aberdour they support the whole structure. I am indebted to Mr Andrew Grant, of Invermay, for fine sketches of these dials made by James M'Laren, a young man on the estate.

Ballendalloch, Balfron.—This dial (fig. 69) is of the normal type, except that the octagonal part of the capital is extremely thin, being reduced to $1\frac{1}{2}$ inch; and on the cardinal sides there is a narrow sinking. The dial rests on three steps, the upper one being round. The dimensions of the dial are:—Height of shaft, 2 feet $10\frac{1}{2}$ inches; height of

capital, 1 foot 2½ inches; height of top, 2 feet 5 inches; height of steps, 1 foot 9 inches; total height, 8 feet 3 inches. The breadth of the shaft is 8½ inches. For a perspective sketch of this dial I am indebted to Mr R. Thornton Shiels, architect, and for its dimensions to Mr A. H. Cooper, W.S.

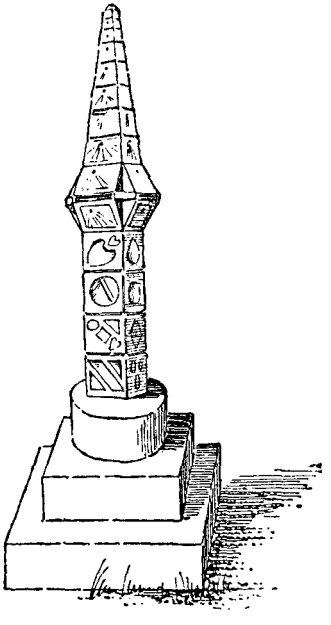


Fig. 69. Ballendalloch.

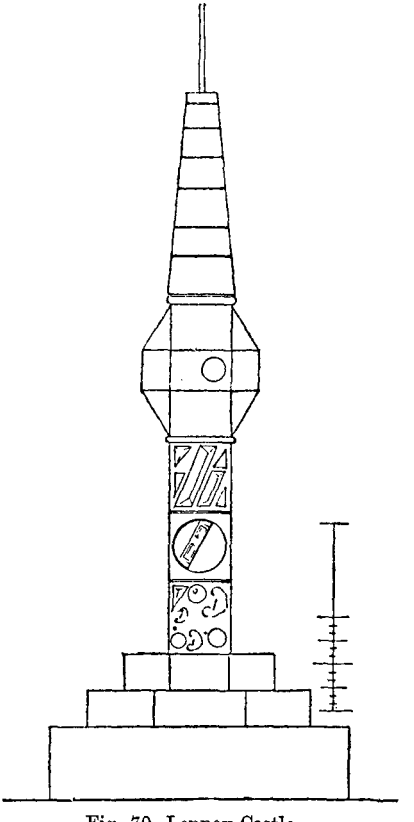


Fig. 70. Lennox Castle.

Lennox Castle, Stirlingshire.—This drawing is made from measurements and sketches sent me by Mr John B. Ross, land-steward at Lennox Castle.

The peculiarities of the dial (fig. 70) consist in the shortness of its

shaft, which contains only three sections, being the fewest of any known example, and in having a bead-moulding beneath and above the capital. The dial stands on two octagonal steps, each $5\frac{1}{4}$ inches high, with a third step beneath, 3 feet 2 inches square by 8 inches high, and it has a tapering iron rod for a termination 35 inches long.

The height of the shaft including the bead is 27 inches, and of the capital 17 inches. The tapering top including the under bead is $26\frac{7}{8}$ inches, height of dial 5 feet $10\frac{7}{8}$ inches, and the total height of the stonework including the steps is 7 feet $5\frac{3}{8}$ inches.

Carberry, Midlothian.—There are two companion dials in the grounds of Carberry Tower. Of the dial (fig. 71) only the octagonal capital is old, the pedestal with the carved neck being quite modern, and clearly not according to the original design, as this is evidently the capital of an obelisk dial, and a very remarkable one it is, being pierced quite through in the manner shown. The raised placques on the faces are of uncommon shapes.

A wooden pin or dowel, the rounded end of which is seen on the top, goes down through the capital into the necking, and the rounded bead seen between the two is of wood. The total height of the dial as it now stands is about 6 feet.

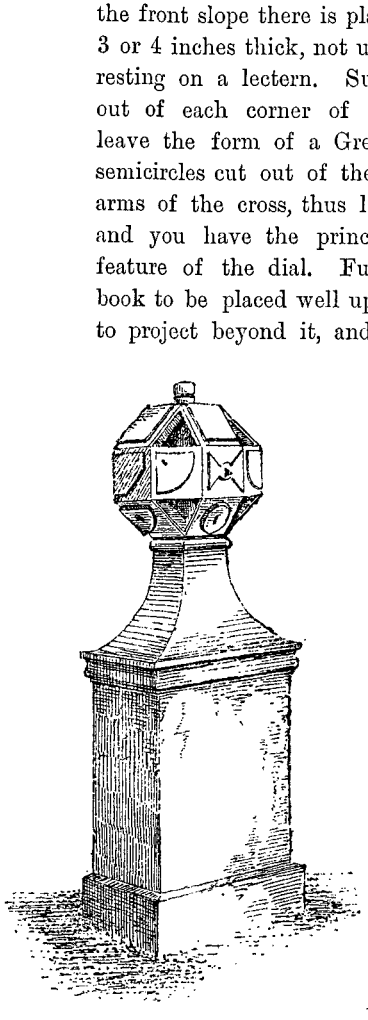
Fig. 72 shows an attempt to restore it to something after its original design, the idea of the open obelisk to suit the open capital being taken from Polton (fig. 124). The capital is $17\frac{1}{2}$ inches high, and the faces of the octagon measure about $6\frac{3}{4}$ inches wide by $6\frac{5}{8}$ inches high.

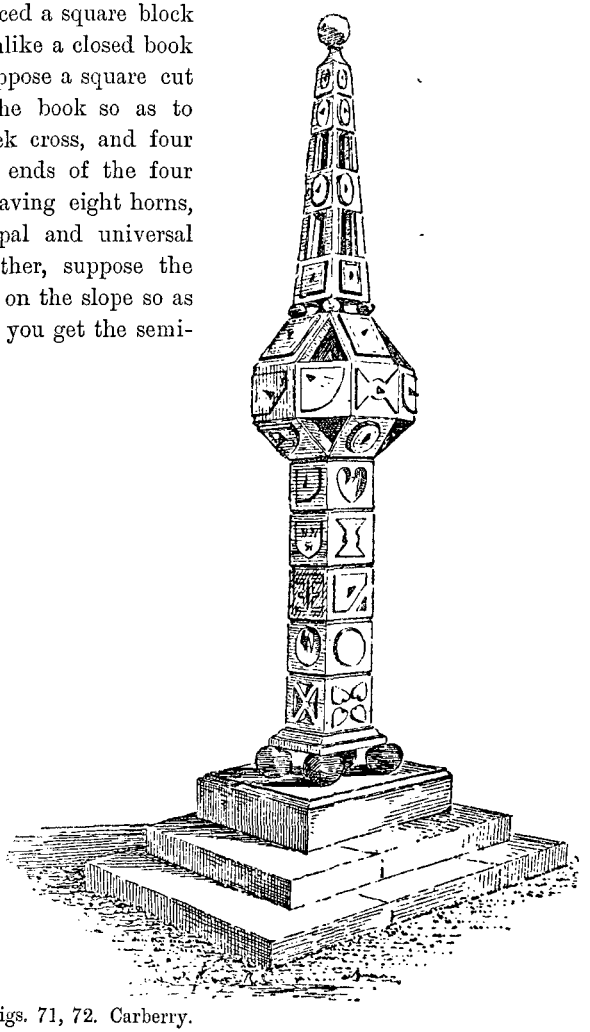
2. Lectern-Shaped Dials.

The dials of this type are as unlike those of the obelisk class in appearance as any two things can be which are designed to serve the same purpose. The characteristics are a shaft (on which there are no dials) supporting a stone cut in a peculiar manner so as to contain several sundials, the whole bearing a very decided resemblance to a music-stand or lectern.

The dial-stone is cut, angled, bevelled, and hollowed into a multiplicity of parts not easily described—in a general way the front and back

present sloping surfaces, and the ends or sides are perpendicular. On the front slope there is placed a square block 3 or 4 inches thick, not unlike a closed book resting on a lectern. Suppose a square cut out of each corner of the book so as to leave the form of a Greek cross, and four semicircles cut out of the ends of the four arms of the cross, thus leaving eight horns, and you have the principal and universal feature of the dial. Further, suppose the book to be placed well up on the slope so as to project beyond it, and you get the semi-





Figs. 71, 72. Carberry.

cylinder cut out of its upper side, continued down the sloping back

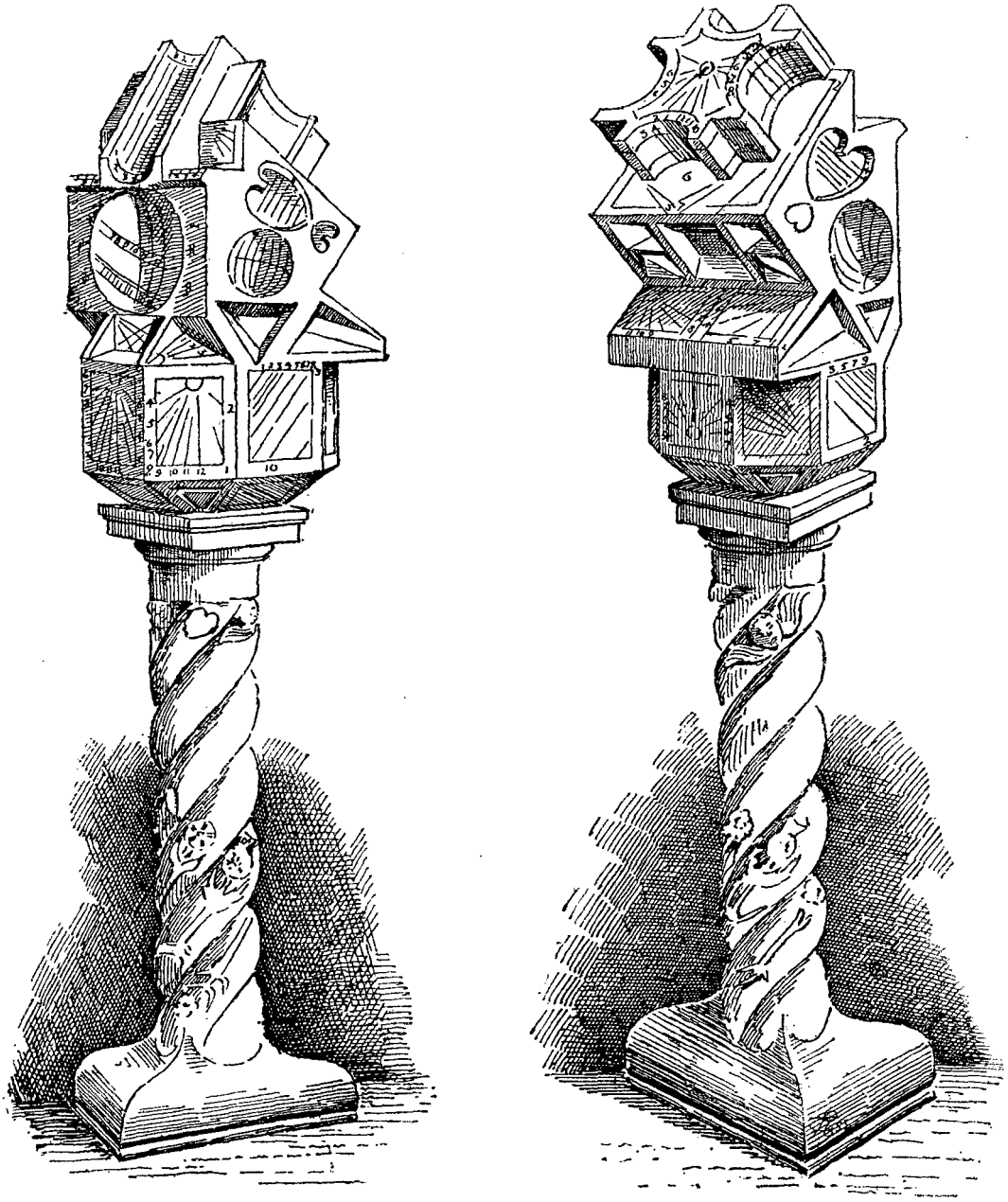


Fig. 73. Woodhouselee.

of the dial, another constant feature of this design. The forerunners of this pattern we saw in those at Cockburnspath and Oldhamstocks, where a similar semi-cylinder is employed. The lower part of the stone generally contains declining dials, which are almost concealed from view.

Woodhouselee.—This is the most elaborate dial of the type. It (fig. 73) consists of a broad, spreading base, from which rises a twisted shaft 8 inches in diameter, and including base and cap 3 feet 9 inches high. The total height of shaft and dial is 6 feet 3 inches. In the lower part of the hollows of the shaft the thistle and the rose are carved alternately, with winged cupid heads and hearts at the top. In addition to the usual features of the type there are eight upright dial faces; two of these on the front are overshadowed by square projecting horns similar to those serving the same purpose at Oldhamstocks.

This dial, like many others, is, I am imformed by Mr Tytler, a wanderer. It belonged to the Napiers of

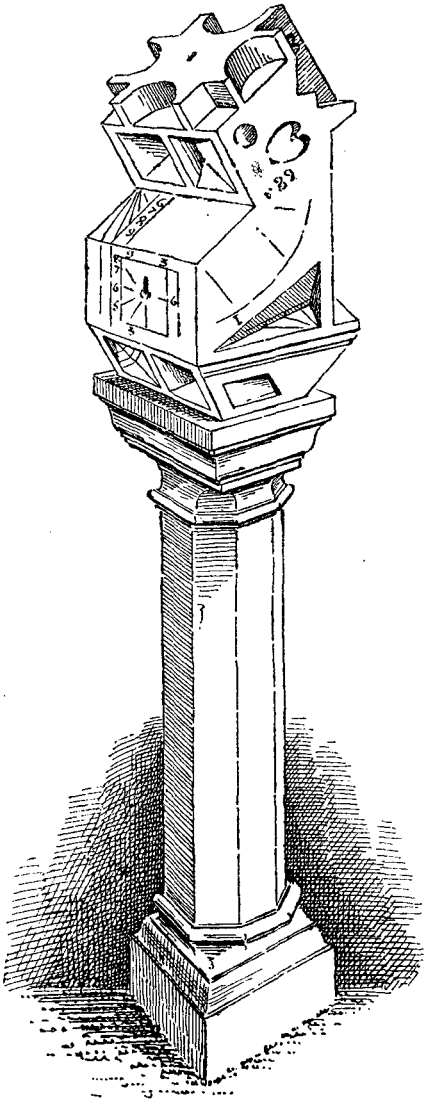


Fig. 74. Ruchlaw.

Wrychtisthouse, and fortunately, before that mansion was destroyed in 1800, it was purchased by Lord Woodhouselee and set up in his grounds in its present position.

Ruchlaw, Stenton.—This most graceful dial (fig. 74) stands in the garden of the old house of Ruchlaw. It has a plain octagon shaft with a base and capital on which rests the dial-stone, and which contains about thirty-five gnomons. The shaft is $7\frac{1}{2}$ inches in diameter, and is 3 feet $5\frac{1}{2}$ inches high, and the total height is 5 feet 8 inches. There are two carved window pediments on the old house. One has the arms and initials of Archibald Sydserf and the date 1663, the other has the same date and initials, with the addition of those of his wife, also a Sydserf, and in all likelihood this is the date of the construction of the dial.

The dial was broken and cast aside, and about the beginning of this century it was restored and put up where it now stands, and for security the dial-stone was clasped to the capital with iron bands.

Neidpath Castle.—This dial (figs. 75 and 76) has all the permanent features of the type, but the book part instead of being square, as in the normal conditions, is oblong, and the sloping cylinder is closed about half-way down, and on the flat surface thus made there is a cup-hollow. Its other features are all normal.

The measured drawing (fig. 76) of this dial, prepared by Mr Robert Murray, architect, gives a definite representation not of it only, but of those of the type.

This dial belonged to Neidpath Castle, and about the time (1795) when "Old Q." begun his work of desolation there, his gardener, Mr Spalding, fortunately got possession of the dial; his son, a nurseryman in Peebles, erected it in his grounds, where it remained for many years, till it was presented to the Chambers Institute a few years ago, and where it now remains, but without the shaft.

Mid-Calder House.—This dial (fig. 77) is placed in the garden of Mid-Calder House. At some unknown period it got broken and was in danger of being lost, when Lord Torphichen had it repaired and placed on a new shaft and base. It has the constant features, and in addition, the centre portion, a narrow octagon band which is cut away

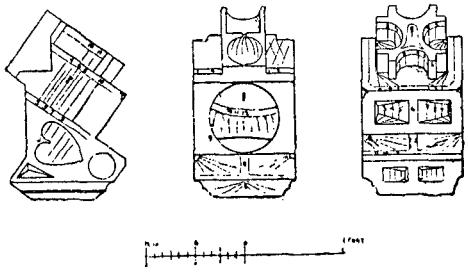


Fig. 76. Neidpath Castle.

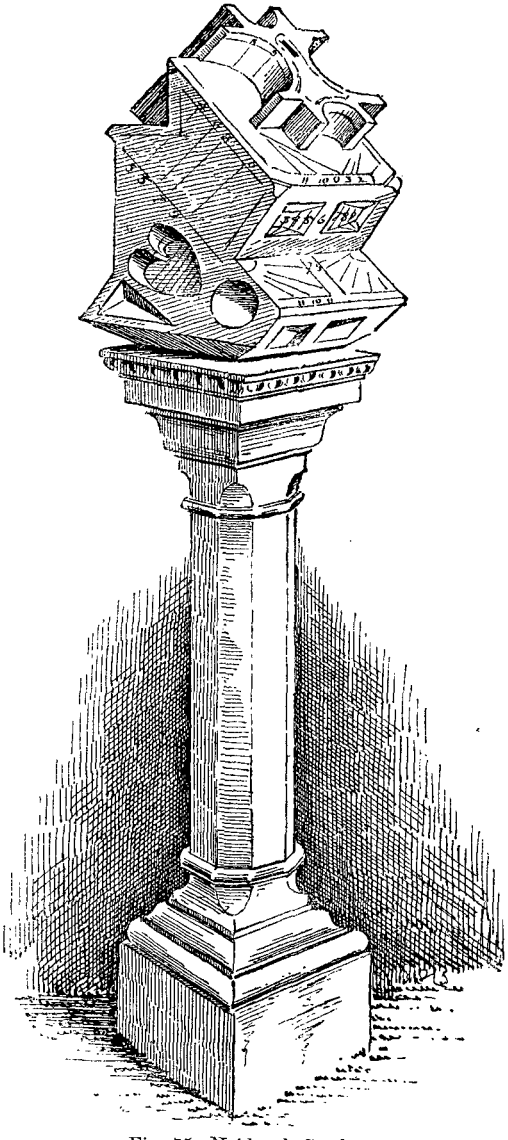


Fig. 75. Neidpath Castle.

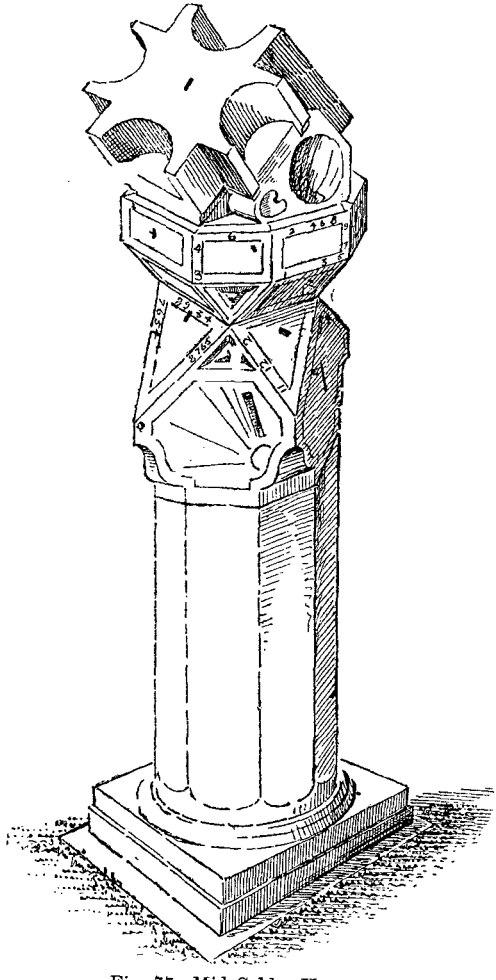


Fig. 77. Mid-Calder House.

beneath, and is then splayed out from the octagon to the square with sloping and perpendicular dials. The dial-stone is 27 inches high, and the

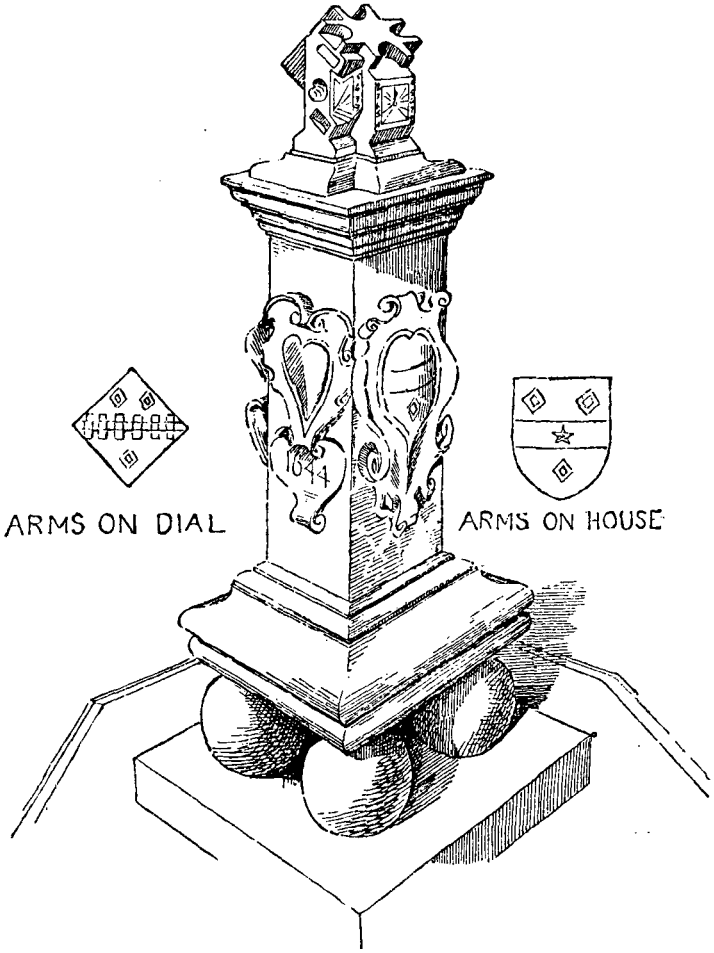


Fig. 78. Pitreavie.

width across the horns of the book part is $13\frac{1}{8}$ inches. The whole height as it now stands is $35\frac{1}{2}$ inches, but it was doubtless higher in its original state.

Pitreavie.—This dial stood (fig. 78) on a terrace which ran along the south front of the old house of Pitreavie. A flight of stone steps led up to the dial, which had a wide octagon-paved space around it. This with the stair and terrace gave a finished and dignified air to the dial. It stands on a square pedestal, instead of the usual shaft, with carved escutcheons on each face containing the initials of Sir Henry Wardlaw, the family arms, a heart-shaped figure, and the date 1644.

This dial is not quite so elaborate as others of the type, but it contains all the permanent features, and is fitted gracefully to the pedestal with a bold, flowing moulding. The pedestal is $10\frac{3}{4}$ inches square, and measures from floor to top of cornice 4 feet $5\frac{1}{4}$ inches, and the whole height is 6 feet $1\frac{1}{4}$ inches.[1]

A copy of this dial was put up in the gardens of Fordel about thirty years ago.

Dundas Castle.—This combined fountain and dial (fig. 79) well illustrates the magnificent ideas which prevailed during the seventeenth century on the monumental accessaries considered necessary for the adornment of pleasure-grounds and gardens, and we learn from the inscriptions on the fountain that many more objects of the kind once existed here which have been swept away.

The fountain and dial do not appear to be in their original position, as is evident from an unpublished drawing in the possession of the Royal Scottish Academy.[2] They were probably shifted when the old house was taken down. A flight of ten steps leads up to the dial, which is supported on an octagonal shaft adorned with winged figures; above this is the swelling basin of a second fountain, out of which rises the dial proper. It contains the permanent features, with certain peculiarities which can easily be seen on examination of the sketch.

The fountain, which is square, measures about 7 feet by about 7 feet high to platform, above which the dial rises to a height of 5 feet 8 inches. From an inscription seen on the drawing we learn that the structure was built ANNO SALVTIS HUMANÆ 1623. There are numerous initials and other inscriptions on the fountain; the former are those of Sir Walter Dundas and his lady, Dame Ann Menteith, and the latter amongst other things advise visitors

[1] For these measurements I have to thank Mr Henry Beveridge of Pitreavie.

[2] A copy of the drawing was exhibited.

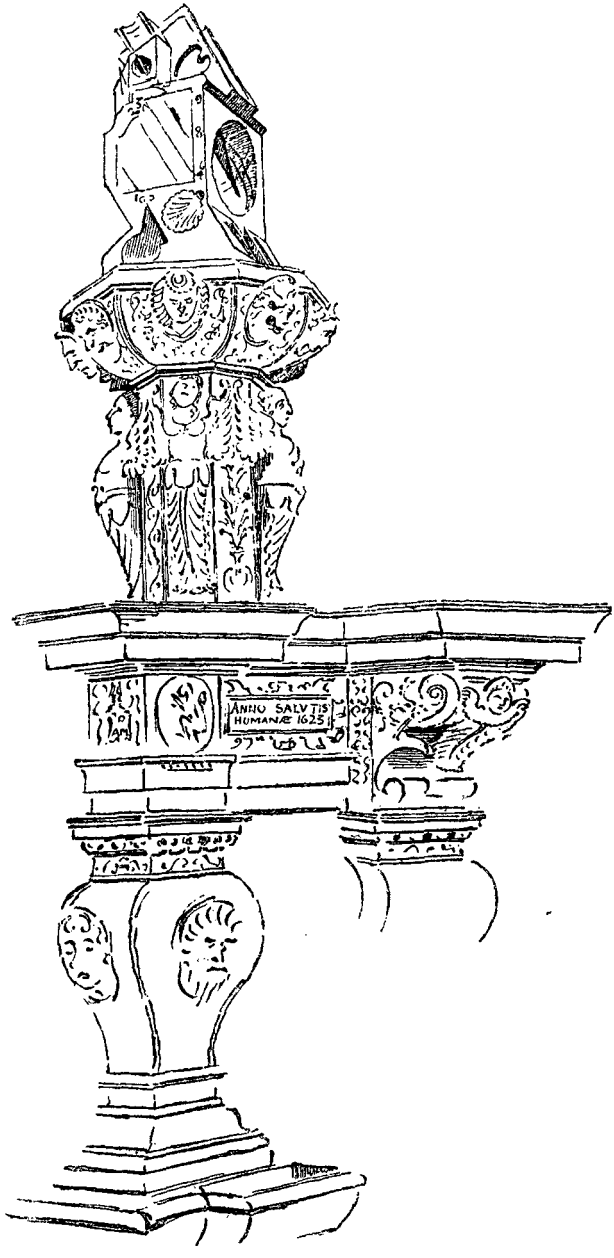


Fig. 79. Dundas Castle.

to behave themselves seemly, to forbear to do harm to the fountain, "nor yet should'st those inclined to injure the signs of the dial."[1]

Lamancha House, Peeblesshire.—This most beautiful dial (fig. 80) exhibits the greatest variation from the type of any known example. It has the usual cylinder hollowed out in a very pronounced form, but all the other details are changed. The face-dial is square (the eight horns being wanting) with the lower corners canted off, the figures are arranged in a circle, and are finely cut, and the gnomon made of thin iron is of a pleasing design. Following the circle of the cylinder is the motto "Fugit Hora." The under side of the stone is cut into so as to leave a drum-shaped dial (a new form), the shadows on which are cast by the sides of the cutting.

The sides of the dial-stone contain each a distinct and different figure unlike those usually found in this position. The oblong hollow on the one side has two carved serpents starting with their intertwisted tails and wriggling round the sides of the hollow, the upper edge of which forms the style, the lower edge is not sunk. Serpents in a similar position will be seen on the dial at Pinkie (fig. 110).

The other "haffet" has a heart or shell-shaped figure, hollow, with a flat field, with the sharp overlapping top for a gnomon. The sides of the shell are splayed and contain the figures. The whole of the faces are carefully lineated and figured.

The dial is placed on the top of a basket of fruit. The wicker-work and fruit disappear as you get round to the front, and with most successful effect the rounded stone is here left uncarved. The basket and dial are cut out of one stone. Mr M'Glashan, sculptor, to whom I am indebted for bringing this dial under my notice, informs me that it rested on a pedestal $25\frac{1}{4}$ inches high by $16\frac{3}{4}$ inches wide, the total height being about 4 feet 4 inches. There is no date on the dial, but judging from the lettering of the motto, which resembles the lettering of the dial at Cadder dated 1698, and from the whole circumstances it probably dates from late in the same century.

Zoological Gardens, Edinburgh.—A very fine dial of this type, of which an illustration is given in *Chambers's Encyclopædia*, stood in the old Zoological Gardens. I have made various inquiries regarding

[1] For further particulars see Miss Gutty's Book on Sundials.

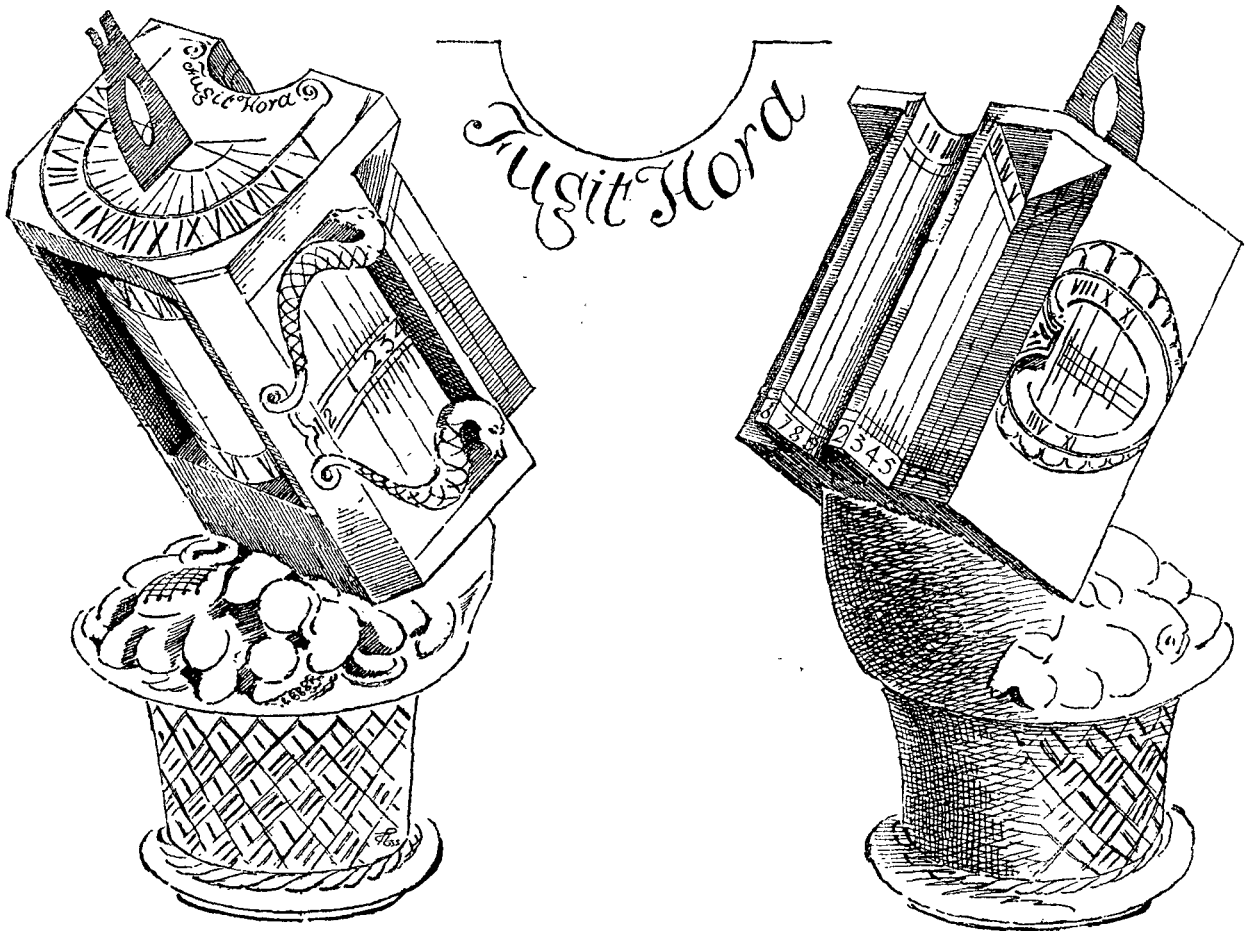


Fig. 80. Lamancha House.

its present location, and a query in the *Scotsman*, but have not learned anything on this point.

Drummore House, near Musselburgh.—Only the shaft of this dial (fig. 81) belongs to the lectern type. The commonplace square block dial now crowning the shaft is not a part of the original dial, it is of red sandstone, while the shaft is of white sandstone, similar in material and design to the shaft at Woodhouselee. They are twisted in the same manner, and similarly ornamented with foliage in the hollows. The winged heads, instead of being placed in the hollows at the top of the shaft, as at Woodhouselee, are formed so as to make a capital; thus, all the elements of design to be found in the one are found in the other. The present insignificant dial bears the date of 1753, with the initials of W. Finlay, a former proprietor of Drummore.

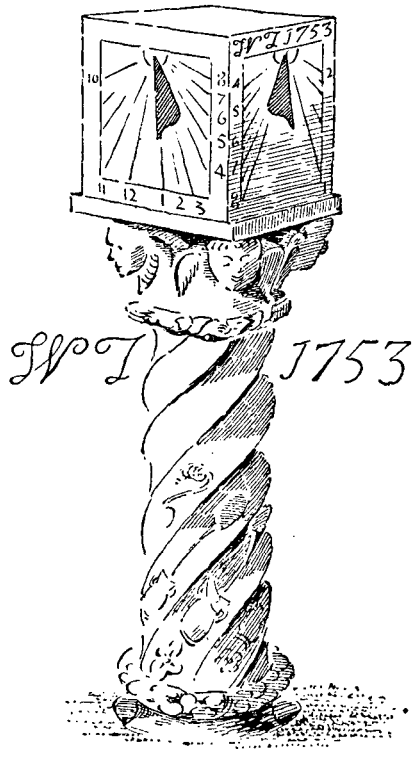


Fig. 81. Drummore.

Skibo Castle, Sutherlandshire.—The careful drawings of this dial (fig. 82) were made by the Rev. Donald Grant, Dornoch. Although differing greatly in its details from the other dials of the type, it retains in a very marked degree the general lectern appearance. As at Lamancha, the eight-horned figure is absent, and there is a plain-faced dial instead. The cylinder (which is $1\frac{1}{2}$ inch deep) is retained with the peculiarity of having its ends closed. The north and south sides have each a large plain-faced dial. All the other

figures (triangular, oblong, and circular) are sunk. The large circle on the east side is sunk $2\frac{1}{2}$ inches, and it has a gnomon stretched across the cup as at Cadder. The triangular hollows are all 1 inch deep on the west side; the oblong semicircle is $1\frac{7}{8}$ inch deep. The shaft is circular, and rests on a square base, measuring together about 1 foot 8 inches high, the total height being about 3 feet $2\frac{1}{2}$ inches. So far as is known, Mr Grant says that this dial stands in its original position.

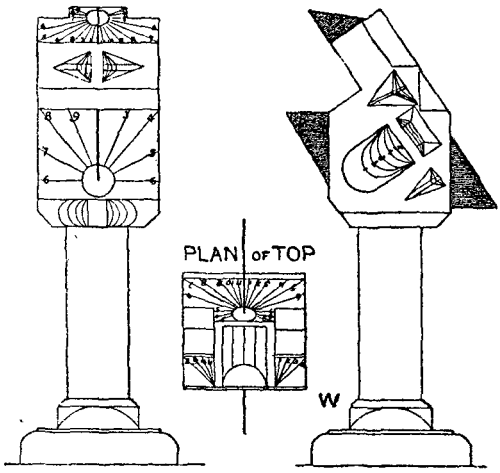


Fig. 82. Skibo Castle.

Scotscraig, Fifeshire.—The view of this dial (figs. 83 and 84) is copied from a pencil sketch furnished by Mr T. S. Robertson, architect, Dundee. This is a very exceptional dial, having only the sloping cross—a Latin one instead of the usual Greek cross peculiar to the type. The dial stood in the courtyard of the old mansion-house of Scotscraig, which Mr A. H. Millar says (see *Dundee Advertiser*, 16th August 1888) "was habitable until a comparatively recent time." The house was removed, and the courtyard was transformed into a

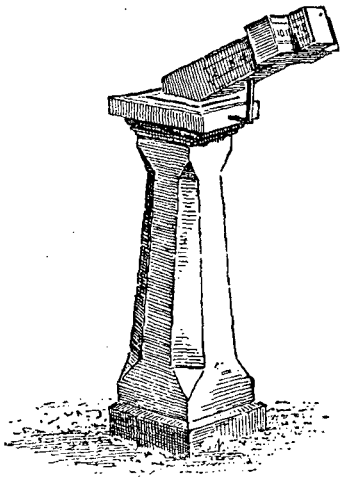


Fig. 83. Scotscraig.

garden. The dial, which is of close-grained sandstone, was mounted on its present pedestal by Admiral Maitland Dougall.

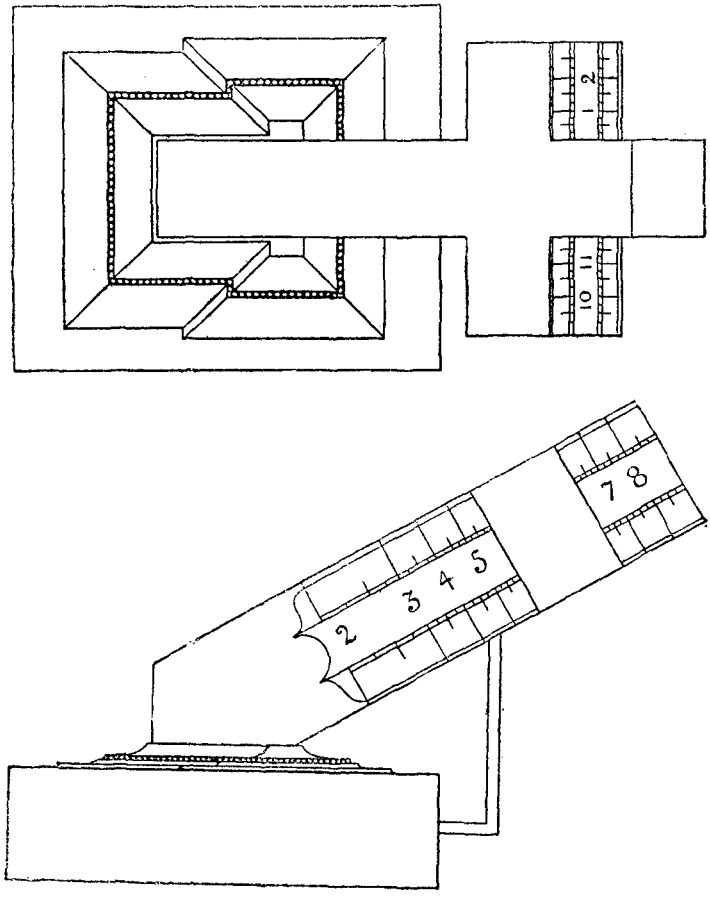


Fig. 84. Scotscraig.

Scotscraig was acquired by Archbishop Sharp, Mr Millar believes, about 1661, and the gateway leading to the mansion, which was erected

by the Archbishop, still stands, bearing his initials A.I.S., with his arms and the date 1667. There seems every reason to believe that this was the Archbishop's dial.

A sketch of a modern dial in Shenstone Churchyard, near Lichfield, bearing a considerable resemblance to the one at Scotscraig, is given by Miss Gatty, No. 221.

Kenmure Castle, Kirkcudbright.—I am indebted to Mr George Hamilton, of Ardendee, for bringing this dial (fig. 85) under my notice, and for the great trouble he has taken in searching out the various readings which have been made at different times of its closely-printed faces, which are somewhat difficult to decipher. These were made out by the late Rev. George Murray, Balmaclellan, and Provost M'Kay, New Galloway, in 1867; and again, in 1871, by the present minister of Kirkpatrick-Durham. These inscriptions were written by a local schoolmaster, whose name is forgotten. The dial consists of two flat slate slabs, three-quarters of an inch thick, set up against each other at an angle like the sides of a lectern or music-stand, and they are supported on a modern shaft. Although differing in many points from the other lectern dials, it may, for convenience sake, be classed along with them.

The faces are both of the same size, and measure about 2 feet by 1 foot 8½ inches.

On the front dial (see figure) the following inscriptions occur. It is difficult to say in what order they should be read.

Round the circle of the upper half is the following:—

ANTE SOLIS OCCASUM DEBET DIES CLARA FECIT
ITAQUE DEUS DVO MAGNA ILLA LUMINARIA LUMINARE
MAJUS AD DOMINIUM DIEI ET LUMINARE MINUS
AD DOMINIUM NOCTIS ATQUE STELLAS
INNOCUI VIVITE NUMEN ADEST.

VIGILATE QUIA NESCITIS $\frac{\text{DIEM}}{\text{HORAM}}$ NEQUE DICTAM
HORAM QUA FILIUS HOMINIS VENIET.

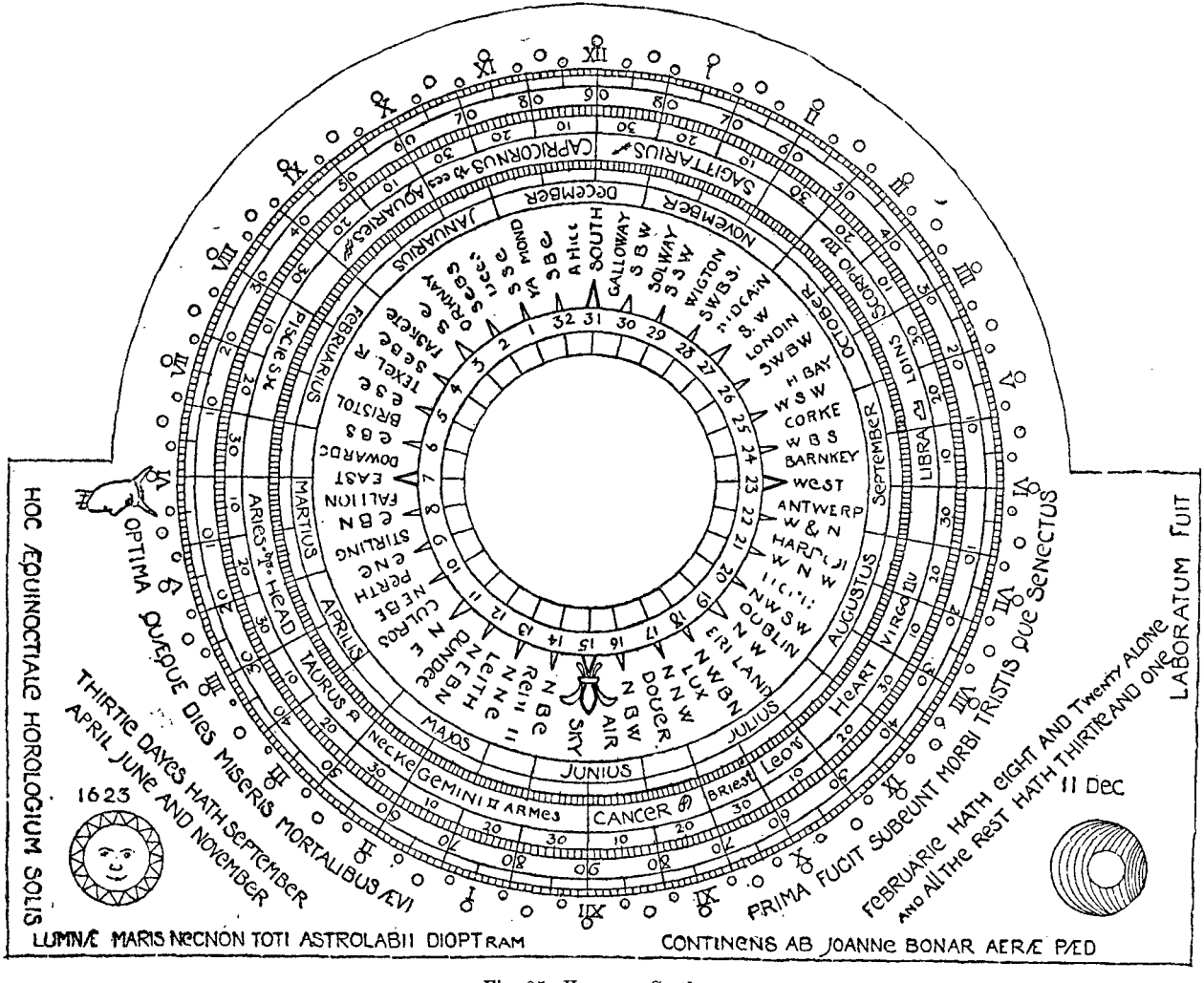


Fig. 85. Kenmure Castle.

Round the under side of circle :—

OPTIMA QUÆQUE DIES MISERIS MORTALIBUS ÆVI PRIMA
FUGIT SUBEUNT MORBI TRISTIS QUE SENECTUS.

THIRTY DAYS HATH SEPTEMBER APRILE
JUNE AND NOVEMBER
FEBRUARIE HATH EIGHT AND TWENTIE ALONE
AND ALL THE REST HATH THIRTIE AND ONE.

Along the base and sides :—

HOC ÆQUINOCTIALE HOROLOGIUM SOLIS (LU)NÆ
MARIS NECNON TOTI ASTROLABII DIOPTRAM
CONTINENS AB JOANNE BONAR AERÆ
PÆD . . . . . OS . . . . . LABORATUM FUIT.
1623 II DEC.

The names of the zodiac, the months, and numerous towns, mostly English and Scotch, are all cut on the dial face.

This inscription occurs in eight lines round the top part of the back dial :—

QUHAIR MENNOK[1] MONTANE MOUNTES FRA THE WOLD
A LAPICIDE DID RAISE ME FRA THE RUITE
TWYSE NYNE THOWSAND OF MILES PHŒBUS IS ROLD
THE NATURALL DAY TO RINE ON ME BUT BUITE
QUHEN HE WALD FEED ON VENISON AS FRUITE
THEN CAPRICORN WITH HORNS DOES HIM EFFRAYE
HE HAISTES SYNE TO LEIFF ON LAMPETTS RUIDE
OUT THROUGH THE SIGNS WITH CANCER FOR TO STAYE
QUHEN ARIES AND LIBRA MAK'S DERAYE
IN SABLE WEED FOR PHAETON HIM CLEEDS
ENDYMIONS SPOUS THAT LIQUID FEELDS ARAYS
PORTUMNUS SOJORS[2] TEACHES HEER THAIR MEEDS.
LET ALL ESTAITS MY MUISSINGS HEERON SKANCE :
EARN BY MY SHADE OF WARDLIE GLEE THE GLANCE
LAUS HONOR IMPERIUM DOMINO. AMEN.

And along the bottom of the dial is the inscription :—

1623 II DEC.
DUM LICET ET VEROS ETIAM NUNC EDITIS ANNOS
DISCITE EUNT ANNI MORE FLUENTIS AQUÆ.

[1] NN should be RR. [2] SAILORS.

3. Facet-Headed Dials.

Facet-headed dials are generally supported on some kind of baluster rather than a shaft. In three instances lions take the place of the baluster; but whatever shape the supports may take, as in the case of the lecterns, dials do not occur on them, with the one known exception of the very remarkable dial at Mount Melville.

Each face of the facet-head contains a dial, either on a flat surface or in cup-hollows. Only in a few examples, as at Holyrood, are the heart-shaped sinkings, so common on the obelisks and lecterns, to be found.

The facet-head is generally supported on a small pivot, which gives to these dials one of their most striking peculiarities.

Holyrood.—This dial (fig. 86) is situated in the grounds of Holyrood Palace; it stands on a wide, spreading, high base consisting of three moulded steps. The support of the dial is hexagonal, and it is delicately carved and moulded. The dial itself is the most elaborate of the type, and the principle of its plan is found only at Invermay (fig. 87). At top and bottom it has five sides, and cut horizontally in the centre it presents ten sides. This results from the alternating triangle principle; thus we have a triangle resting on its base, then one resting on its apex, and so on.

The dials are studded with hollows of various shapes. In one the gnomon is formed by the nose of a grotesque face; in another by the points of a thistle-leaved ornament. The under surfaces have no dials, except on a small heart-shaped lozenge, but are decorated instead with heraldic and other devices. There are the Royal Arms as borne in Scotland, with the collar and badge of the thistle. There are also the initials of Charles I. and his Queen, Henrietta Maria, for whom Charles is said to have had the dial made.

From the *Dictionary of Architecture* we learn that this was made by John Mylne (the third of the name) in 1633, with the assistance of his two sons, John and Alexander, "for which he was paid the sum of £408, 15*s.* 6*d.* Scots."

The dial and pedestal measures 6 feet 7 inches high, and the total

height including the base is 10 feet, and the width at the ground is 10 feet 3 inches.

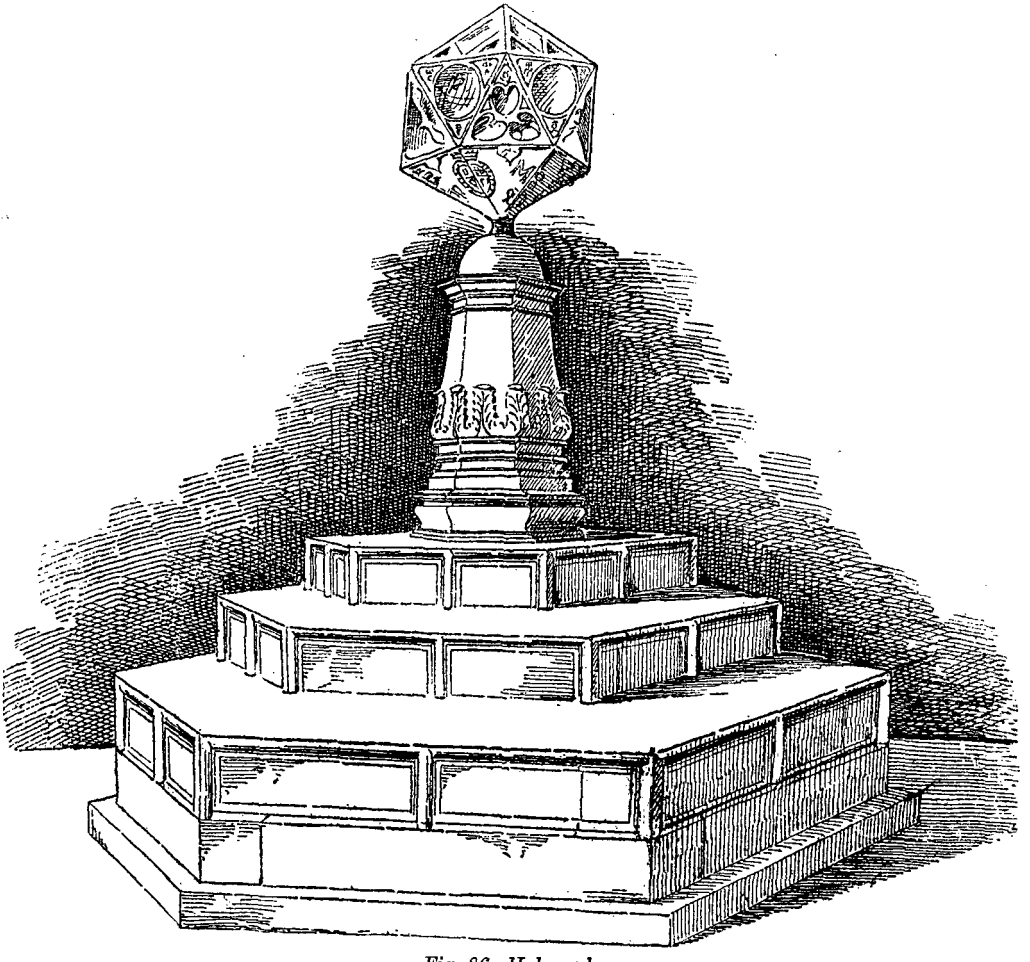


Fig. 86. Holyrood.

It is stated that this dial was lying broken and uncared for, and that it was put in order by command of the Queen.

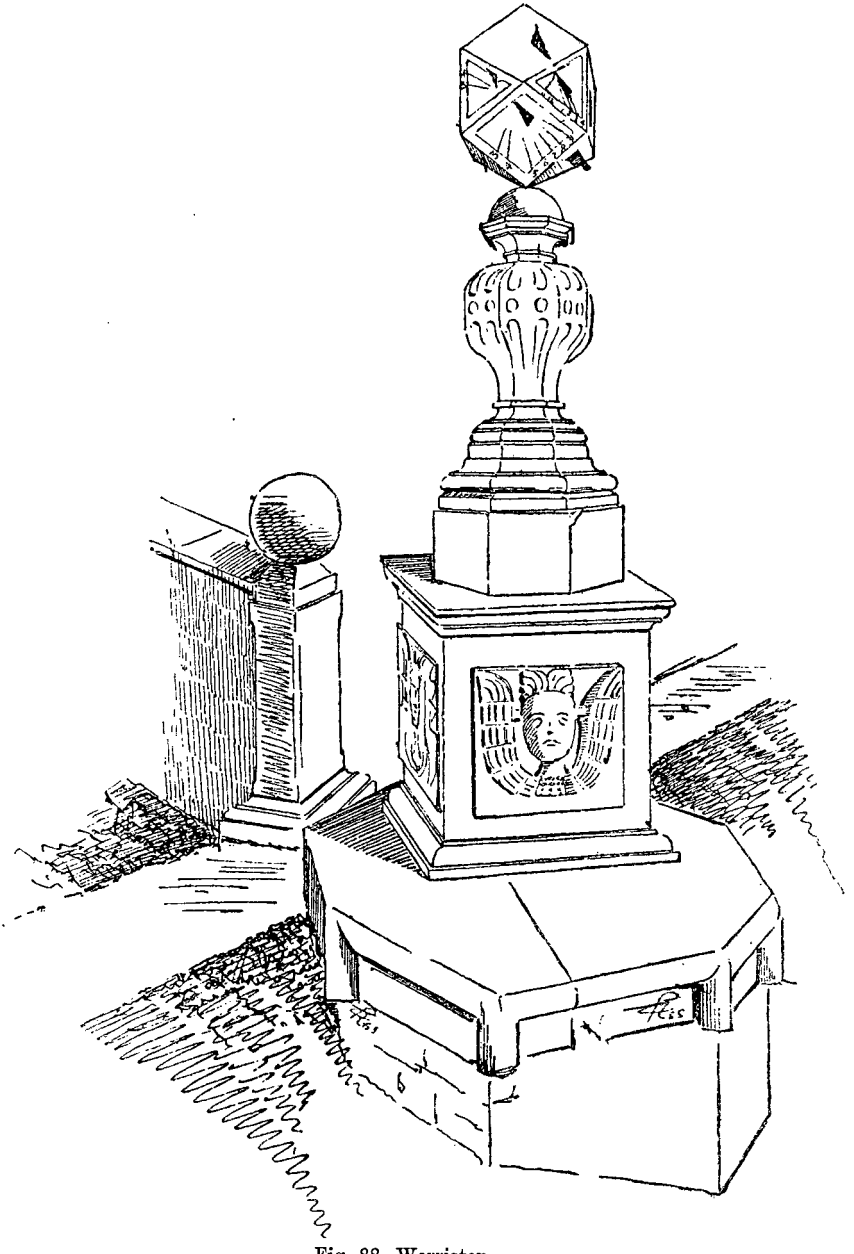


Fig. 88. Warriston.

Invermay.—This dial (fig. 87) is shaped on the same principle as the one at Holyrood, but is simpler in its construction. It is fixed on a point, and rests on a low, quaintly designed baluster.

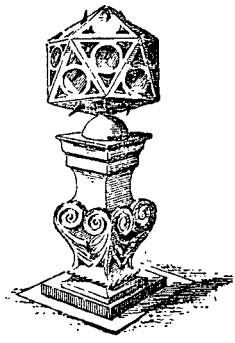


Fig. 87. Invermay.

Warriston, Edinburgh.—The dial here (fig. 88) is probably all that remains of the old mansion-house of Warriston. It has had a stepped base, like what is found at Holyrood, but only a portion of this now remains, otherwise the dial is perfect. On the top of the remaining step there is a square pedestal ornamented with Oriental-looking heads, above which rises the moulded baluster for supporting the dial, which rests on a point. Round the centre the dial is six-sided, with flat dials on its numerous faces, except on one side, where there is a cup-hollow. The height of the dial and baluster is 5 feet 3 inches, and the pedestal measures about 1 foot 10 inches above the steps.

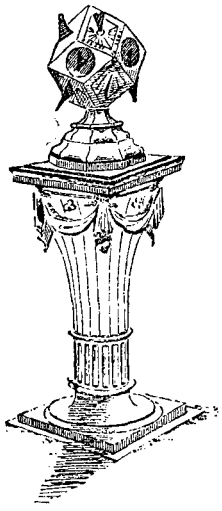


Fig. 89. Cammo.

Cammo, Cramond.—This dial (fig. 89) stands in the gardens adjoining the mansion-house. It has cup-hollows in the upright facets, and flat dials on all the others. It is considerably older than its pedestal, and was taken to Cammo by the present family, in recent years, from Minto House Gardens, Edinburgh.

On the square abacus of the pedestal there occurs the initials of Charles Watson, a former proprietor of Cammo, with the date 1795, so that this pedestal must have supported some dial constructed for itself, if indeed it was not a horizontal dial, which its broad abaci seem to suggest. The pedestal is very graceful, and has a Greek character in its refined details. This dial indicates the hour on five faces at one time.

Woodhall, Juniper Green.—This dial (fig. 90) has evidently had a

checkered career. It now stands with its head downmost, and its support up in the air, the latter bearing a metal dial roughly fixed down, and showing the inscription, "Made by John Justice, and gifted to Woodhall, 1717."

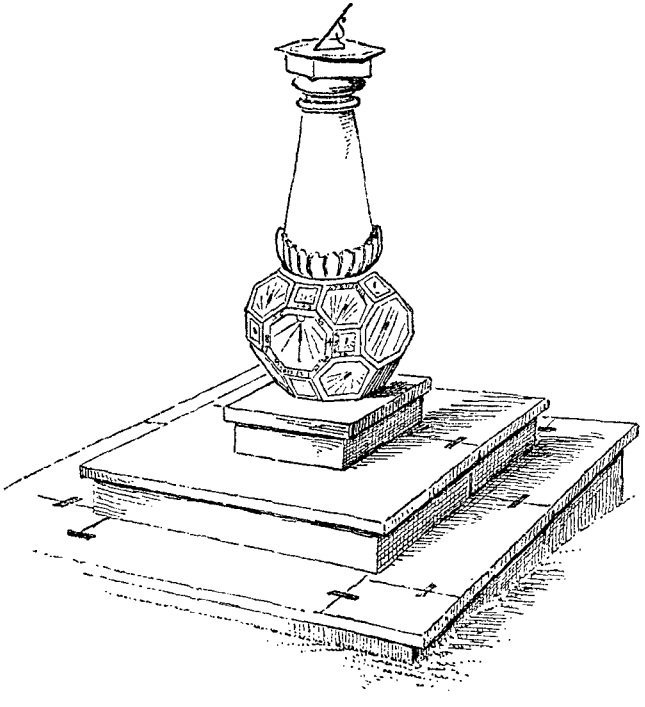


Fig. 90. Woodhall.

The facet-head is peculiar; it consists of a series of large otagonal faces separated by small squares. The height of the pedestal is 26 inches, and the dial and pedestal measures 3 feet $5\frac{1}{2}$ inches. The width across the bottom step is 5 feet $2\frac{1}{2}$ inches, and along the top step $16\frac{3}{4}$ inches.

Inveresk Lodge.—This dial (fig. 91) has had rough usage in some long bygone period, but General Hope, to whom it belongs, has most carefully preserved its parts, and has recently had it repaired by Mr

Bryson, optician, and set up again. It is a neat and carefully cut dial, with a very graceful baluster. It is dated 1691.

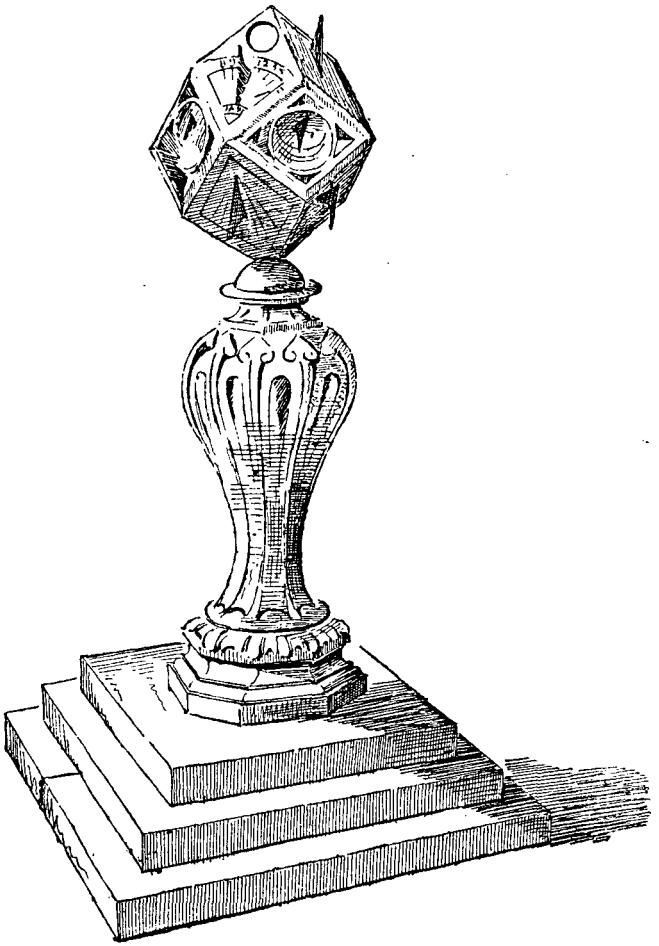


Fig. 91. Inveresk Lodge.

Inveresk House.—This is probably the dial (fig. 92) referred to

by Delta in the *Roman Antiquities of Inveresk*, p. 13. It bears a considerable resemblance to the last-mentioned dial, but it is not so careful in its workmanship. It has a stock fitted into its under side, which probably rested on some sort of pedestal. The dial is now cast aside on a garden rockery. It doubtless belonged to the ancient mansion of the Earls of Sutherland which stood here, and the dovecot of which still remains.

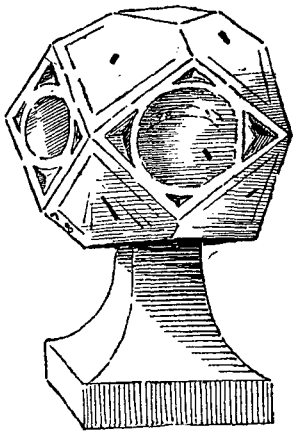


Fig. 92. Inveresk House.

Pitfirrane, Fifeshire.—The dial part of this fine lion-shaped pedestal (fig. 93) is lost. The lion holds between his fore-paws a shield, with a lion passant regardant, on three piles, the cognisance of the Halketts of Pitfirrane. The date on the castle is 1580, but there is nothing to connect this date with the dial, and the earliest dated dials (at Dundas Castle and Kenmure Castle) are forty-three years after this time. This dial disappeared, and all knowledge of its ever having been at Pitfirrane was lost, till the late Mr Paton, Dunfermline, found it lying in a garden in the neighbourhood, and on Sir Arthur recognising the arms as his own it was restored to Pitfirrane. The height of the lion is 2 feet 6 inches, and including the base 3 feet 3½ inches; breadth of base, 12½ inches; breadth across shield, 9½ inches.

Fig. 94. Waygateshaw.

Waygateshaw, Carluke, Lanarkshire.—This dial (fig. 94), having a lion support, stands at present, along with other sculptured animal figures, over the old archway leading to the mansion-house of Waygateshaw—a property which belonged during the sixteenth and seventeenth centuries to the Lockharts. The height of the whole is about 3 feet.

Craigton, Linlithgowshire.—Only the head and breast of this lion dial

support exists. There is a neatly carved abacus on the head of the lion for the dial to rest on.

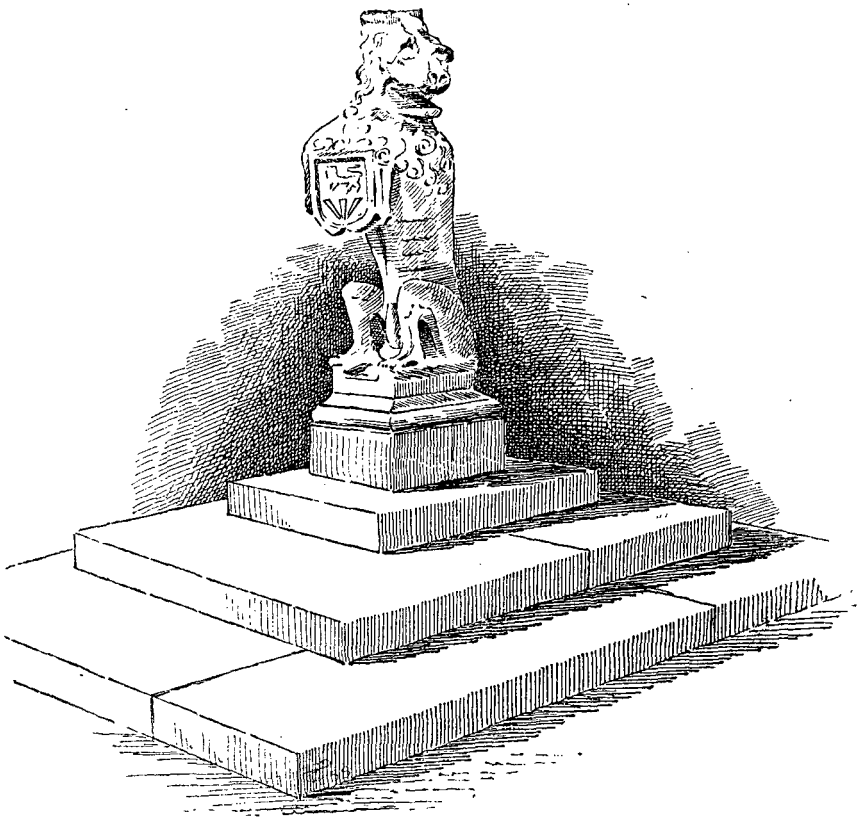


Fig. 93. Pitfirrane.

Cramond, Mid-Lothian.—This is a most remarkable dial (fig. 95), and possesses certain peculiarities giving it a distinct character of its own within the type. It stands on a graceful square baluster, nicely moulded and carved, on which rests its peculiar sphere-angular double

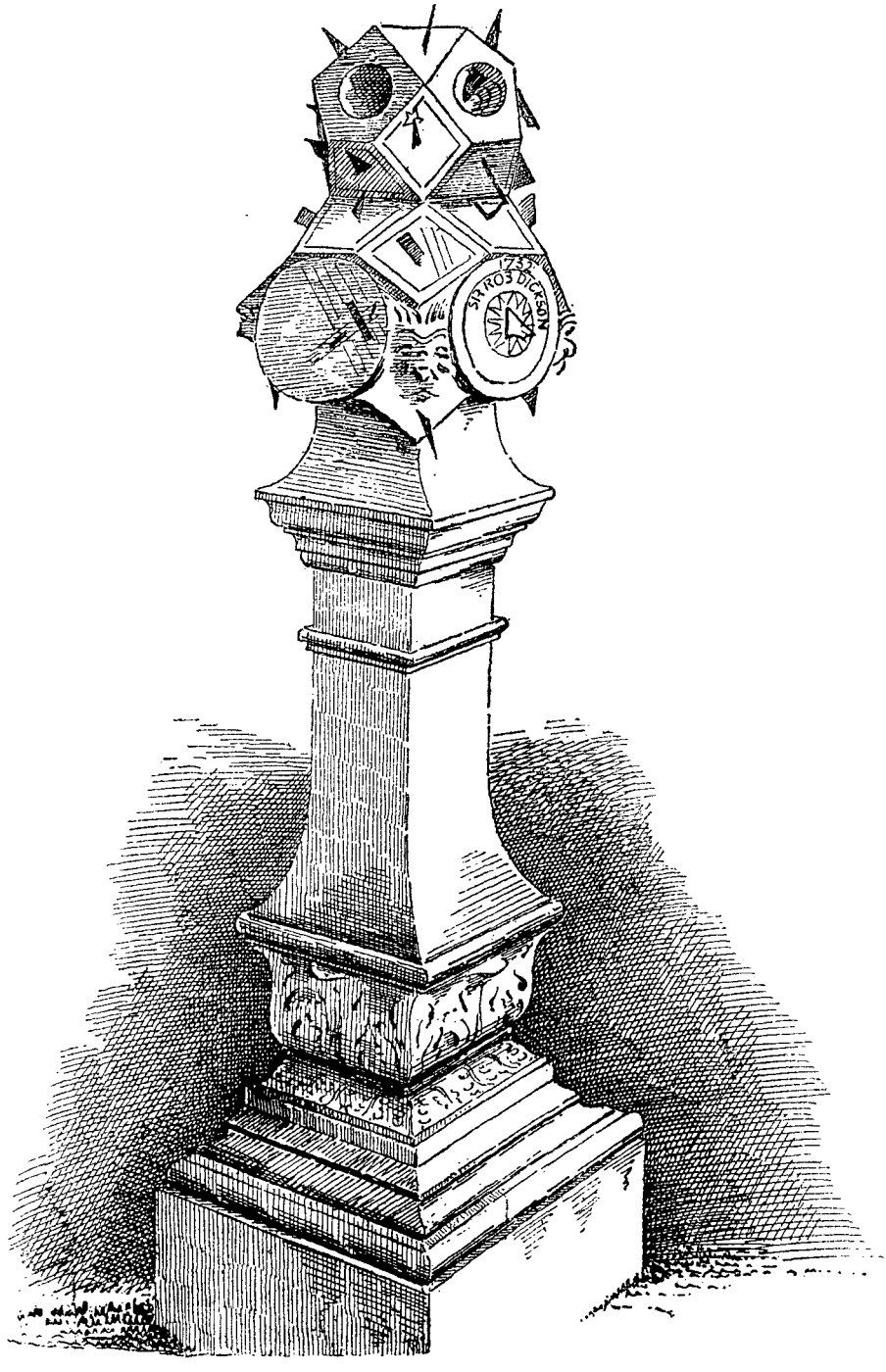


Fig. 95. Cramond, Mid-Lothian.

head. On the lower head there are four circular upright dials, with grotesque faces between, and sloping dials above. The upper head is of the form peculiar to the type. On one of the round dials there is carved the name "SIR ROB DICKSON," and the date 1732. Sir Robert was a descendant of the well-known David Dickson, Professor of Divinity in Edinburgh College. His father acquired the estate of Carberry and Sornbegg, now designed Inveresk, and sold the latter to the Duchess of Monmouth at the beginning of last century. Sir Robert was the chief bailie of Musselburgh during the Rebellion of '45. He died in 1760. On the other side of the dial occurs the inscription, "ARCH HANDASYDE FECIT." His name occurs on one of the two dials already described as lying in the churchyard of Inveresk (p. 167). It is satisfactory to be able to identify him as a dialmaker, and although the dials at Inveresk and Cramond are widely different in design, they have a point of resemblance in their open gnomons.

On finding that this dial, through Sir Robert, was connected with Inveresk, an examination was made of the churchyard, and on a tall dial-like tombstone, to the south-west of the church, an epitaph was found identifying Handasyde as a mason in Musselburgh, or, as it is rendered in the epitaph, "*CŒMENTARII CONCHI POLENSIS.*" His own death is not recorded on the tombstone, but there are various dates from 1729 to 1733.

About four years ago this dial was found lying in an outhouse, broken in several pieces, and we were then informed by the gardener that it once stood in the neighbouring grounds of Lauriestoun. In 1886 it was repaired and placed in the grounds of the Edinburgh Exhibition, and on being returned to Cramond it was set up in front of the house.

The finial is modern, and is the "poppy-head" of a cast-iron railing. While it was in the Exhibition it was copied, at least once, the copy, with a different support, having been exhibited in the Exhibition of Decorative Handiwork held in Edinburgh in 1888.

The height of the square base is 9 inches, above which to the top of the cornice is 3 feet 2 inches, and from thence to the top of the dial (not including the finial) 2 feet 2 inches. The total height is 6 feet 1 inch.

Cadder.—This dial (fig. 96) stands in front of the old mansion of

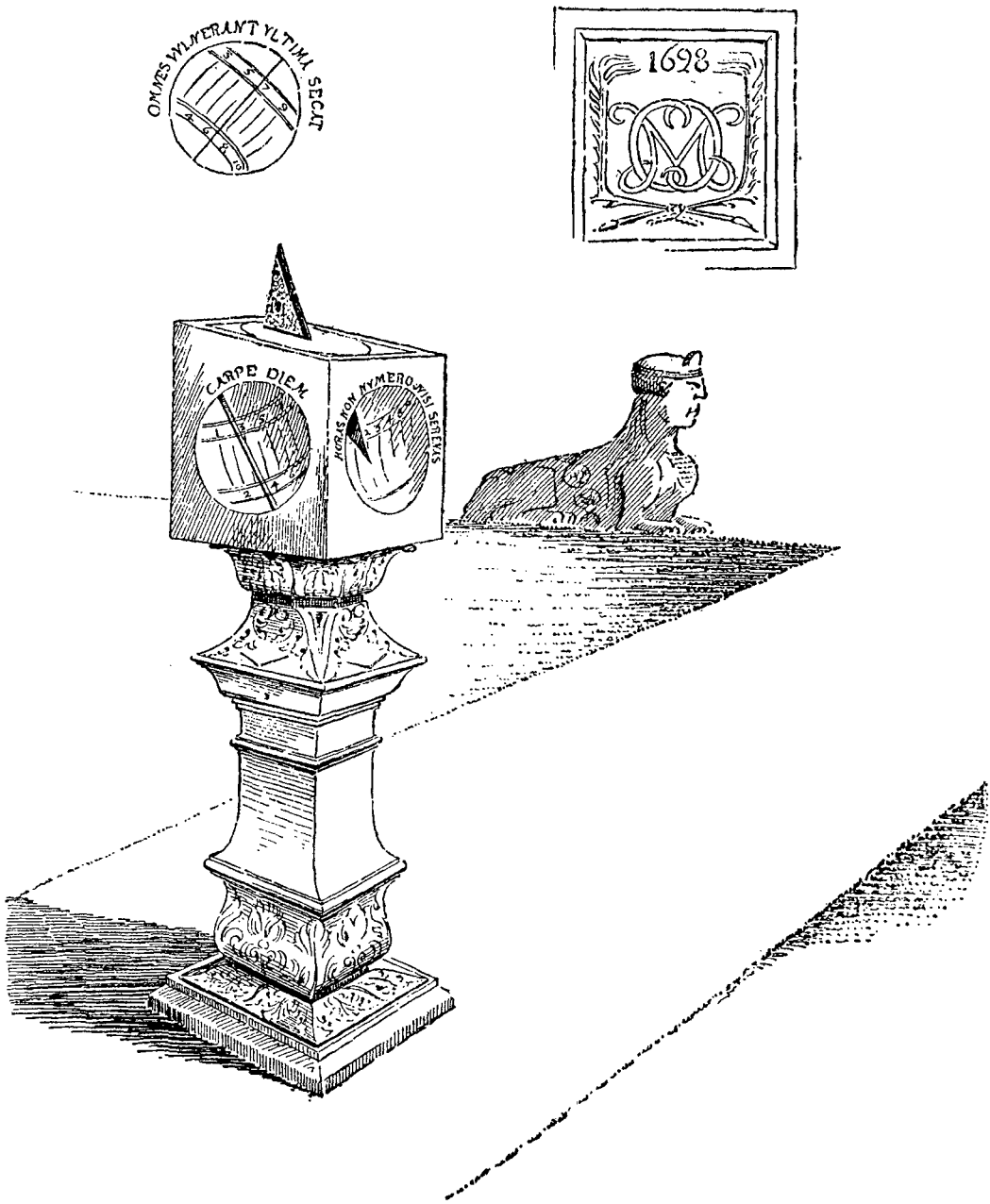


Fig. 96. Cadder.

Cadder, about 5 miles north-east from Glasgow. Its shaft bears a considerable resemblance to the shaft at Cramond, but nothing could be more unlike than the two dials themselves—the one the most complicated of the type, and the other designed with a Doric simplicity which marks it as distinct from all its companions. Comparing the two shafts it will be observed that they consist of the same general members. Two corresponding members at the base are decorated with carved foliage. From the cap-moulding of both a carved slope leads up to support the dial; in the one this member is carved, and in the other it is plain. While this does not prove that the Cadder dial was designed by Handasyde, it is worth noting, as there are only thirty-two years between the dates of both works.

The Cadder dial consists of a block $14\frac{3}{4}$ inches square, with a sloping upper surface; the height of the block is $13\frac{1}{8}$ inches and $14\frac{1}{4}$ inches; the height of the shaft is 3 feet. On the east, west, and south faces there are large cup-hollows, $9\frac{3}{4}$ inches in diameter, all carefully lineated. Over each hollow there is a motto; these in the order given are:—

CARPE DIEM.
OMNES . VVLNERANT . VLTIMA . SECAT.
HORAS . NON . NUMERO . NISI . SERENAS.

The gnomons consist of thin stripes of metal stretched across the cups.

On the sloping upper surface there is a metal dial-plate (which may be called a horizontal dial, not a usual feature in this type), the gnomon of which is the finest piece of workmanship and design of that of any known dial. It is a thin piece of brass most delicately perforated and chased, and containing the arms of the Maitland or Lauderdale family—a lion rampant within a double tressure.

On the north side in a panel the initials of Charles Maitland and his wife Lilias Colquhoun are entwined, with the date 1698.

Lilias Colquhoun married Sir John Stirling of Keir. In their marriage contract, Sir John settled on her in liferent his manor-place of Cadder. Sir John died in 1684, and shortly afterwards she married the Hon. Charles Maitland, third son of the third Earl of Lauderdale. She died in 1726, and was buried at Cadder.

At the distance of a few yards from the dial two sphinx-like figures guard the approach.

Bowland, Galashiels.—This dial (fig. 97) is designed on the same principle as the one at Cadder; the square block of the dial has its angles

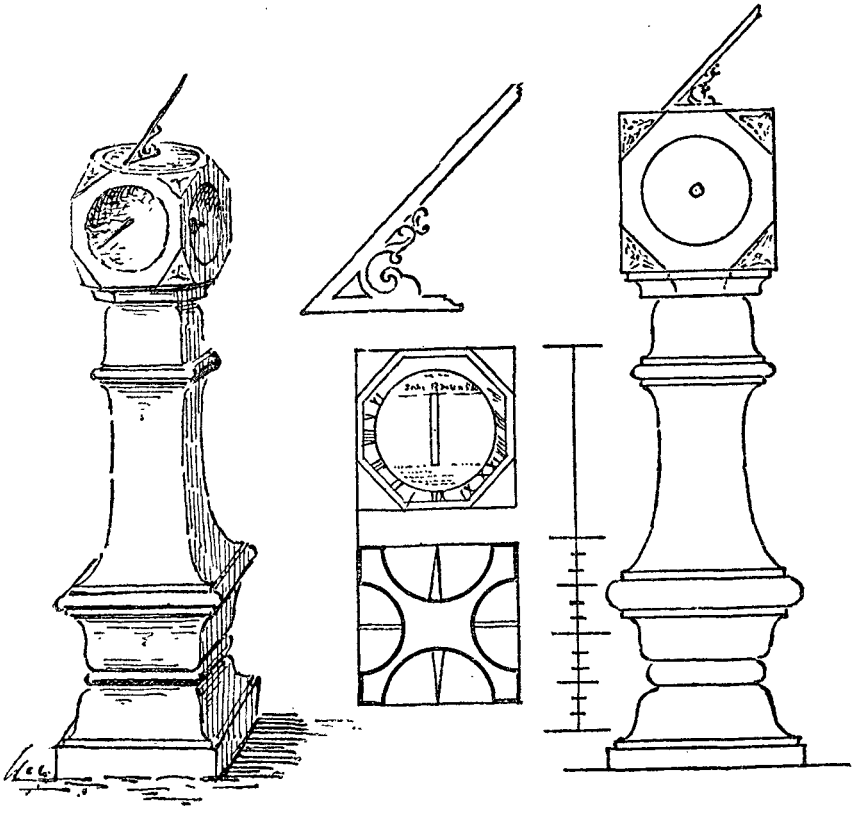


Fig. 97. Bowland.

canted off on each face. There are four cup-hollows measuring about 7 inches, and each having a metal gnomon. On its upper surface there is a horizontal dial of bronze or copper, and on each side of the gnomon

there is an engraved table for every day of the year, arranged in monthly columns, with the following inscription behind, which shows that dial-makers were not antagonistic to watch-makers, but rather the reverse:—"Set ye watch so much faster or slower than ye time by ye sun according to the table for ye day of ye month when you set it. And if ye watch go true ye difference of it from ye sun any day afterwards will be the same in ye table. John Brown, Edinburgh." On the east side is the date "June 1708, 11 day."

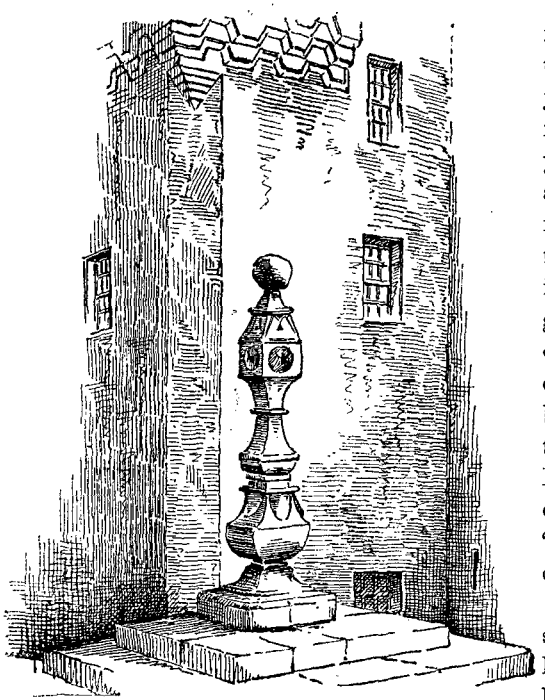


Fig. 98. Midmar.

The *shaft* measures 2 feet 7½ inches high, and the total height is 3 feet 5½ inches.

The dial was brought to Bowland from St Fort, in Fife, which at one time was in the possession of the family of Sir William S. Walker of Bowland.

This drawing is made from sketches by Mr Anderson, Galashiels.

Midmar, Aberdeenshire.—This dial stands (fig. 98) in front of the grand old castle of Midmar, it is of quaint design, and contains nine dials; its age is uncertain, but it is believed to have been made a little

over a hundred years ago. The drawing was made from a beautiful sketch by Miss Gordon, Midmar.

Mount Melville, Fifeshire.—This very remarkable dial of the facet-headed type (fig. 99) contains certain features peculiar to the obelisks and lecterns, and to those of Cockburnspath and Oldhamstocks; thus its

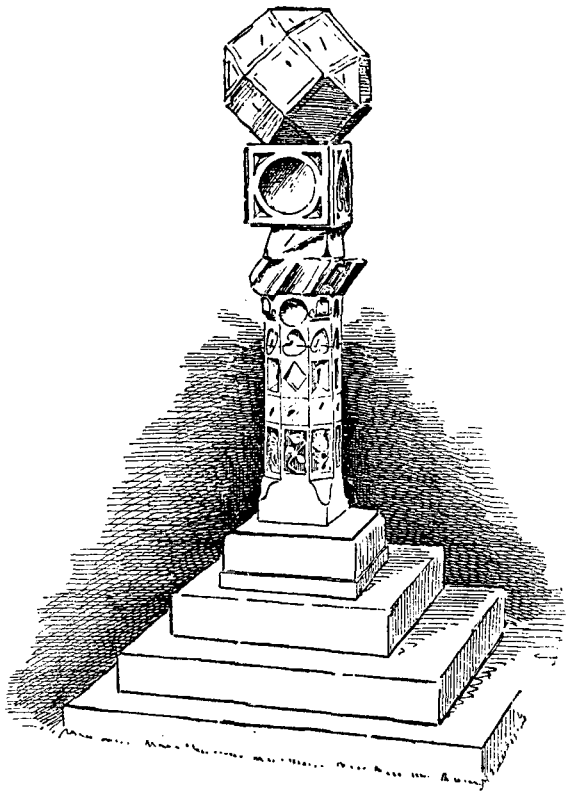


Fig. 99. Mount Melville.

shaft contains dials as in the obelisks, but differently arranged, and on an octagonal shaft instead of the universal square of the latter, and the dials of a certain shape are arranged on a sequence all round, while on the

obelisks there is no such sequence. (1) A series of plain dials; (2) oblong-shaped sunk dials, all upright except one, which is placed obliquely; (3) heart-shapes, variously turned; and (4), on the cardinal faces only, cup-hollows.

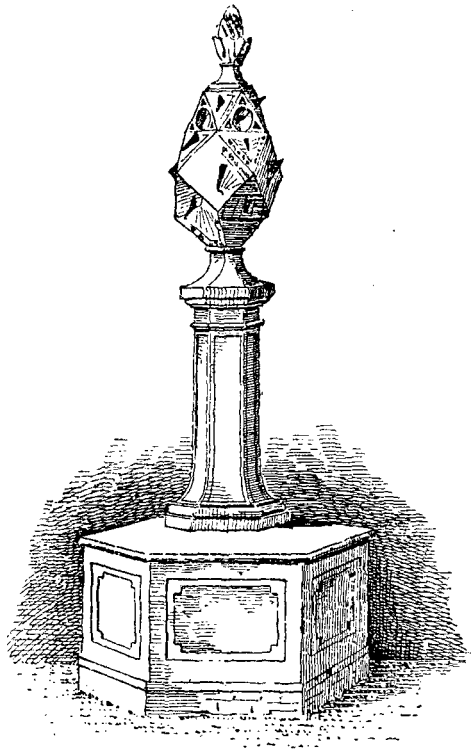


Fig. 100. Edmonston, Mid-Lothian.

At the base of the shaft there are upright panels with rose and thistle carvings alternately, except on one face where two twisted serpents with indefinite carving beneath occupy the space. Above the shaft a collar contains a series of five cylinders, and behind these four slanting, oblong sunk dials. Above the collar, and resting on a base, there is a square block not unlike the Cadder dial, with three large cup-hollows, and which probably had similar gnomons. At the back there is a large heart-shaped hollow. Above this square block is placed the facet-head, but not fixed as will be seen on the usual pivot principle.

This singular structure contains seventy dials, twenty-five of which are on the sphere-angular top, which measures about 18 inches in height. The block beneath is about 10 inches square. For photographs of this dial, and for information regarding it, I am greatly indebted to J. M. Balfour Melville, Esq., of Mount Melville.

Edmonston, Midlothian.—This dial (fig. 100) stands in front of the mansion-house. The dial and finial only are ancient; the shaft and pedestal date from early in this century. The dial has a resemblance to that at Cramond, but is of simpler design; it is in perfect order, with figures and lines clear and distinct. The centre squares measure $10\frac{3}{4}$ inches by 10 inches high, the height of dial is 18 inches, and including finial 2 feet 4 inches. The shaft and pedestal are six-sided; the former is 2 feet 11 inches high, and the latter is $19\frac{1}{4}$ inches high. The total height of the dial is 6 feet 10 inches.

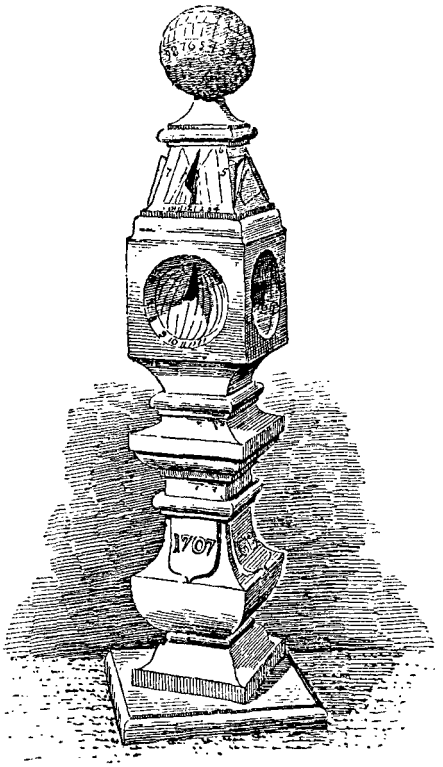


Fig. 101. Aberdeen.

Aberdeen.—I am indebted to Mr John Morgan, of Rubislaw House, for bringing this dial under my notice, and for a large photograph as well as for information regarding it.

The dial (fig. 101) belongs to the city, and stands in a property formerly called Arthur's Seat, now absorbed in "The Duthie Park," a park presented to Aberdeen by the late Miss Duthie of Ruthrieston.

The dial-faces and the ball on the top are painted a light blue colour,

and the lines and figures are gilt; there are shields on each of the four sides of the support bearing respectively the initials C.G., G.B., the date 1707, and a representation of a mortar and pestle. This dial bears a considerable resemblance to the one at Midmar; and, omitting all above the square block with the cup-sinkings, it is not unlike the Cadder dial.

Rubislaw Den, Aberdeenshire.—I am indebted for a large photograph of this dial, and for information regarding it, to the proprietor, Mr William Keith of Rubislaw Den.

This fine monumental dial (fig. 102) was erected by the Earls Marischal in the garden behind their town house in Aberdeen. The house was demolished about the year 1789, and the name of "Marschal Street," and this dial, are now probably the only tangible memorials left of their residence there.

The late Mr Skene rescued the dial, and had it set up at the old house of Rubislaw, where it remained till the property fell into decay, and was let out in tenements. It then passed into the possession of the proprietor of Rubislaw Den, where it is now in good preservation except that its eight gnomons were cut off and stolen during a time that the house was unoccupied. The dimensions of the dials are:—Width of stone platform, 6 feet; width of base on which balusters stand, and of table supported by them, 3 feet 11½ inches; the dial-block above is a cube of 17 inches; the cup-sinking, 12 inches diameter; width of dial-block above, 13⅛ inches, from thence to top of ball, 14 inches; height from top of platform to top of table, 3 feet 4⅓ inches. Total height from ground to top of ball, 9 feet 5 inches.

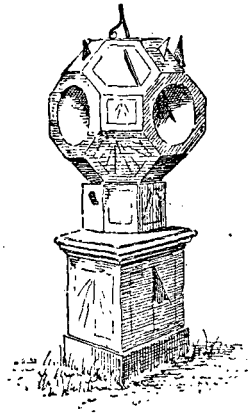


Fig. 103. Nunraw.

Nunraw, Haddingtonshire.—This dial (fig. 103) stands in the grounds of Nunraw House, and Mr Walter Wingate Grey of Nunraw, in sending a photograph, writes: "The small dials include dials for Cairo, Ispahan, Jerusalem, Mount Sinai, Jamaica, &c., and also Savannah,

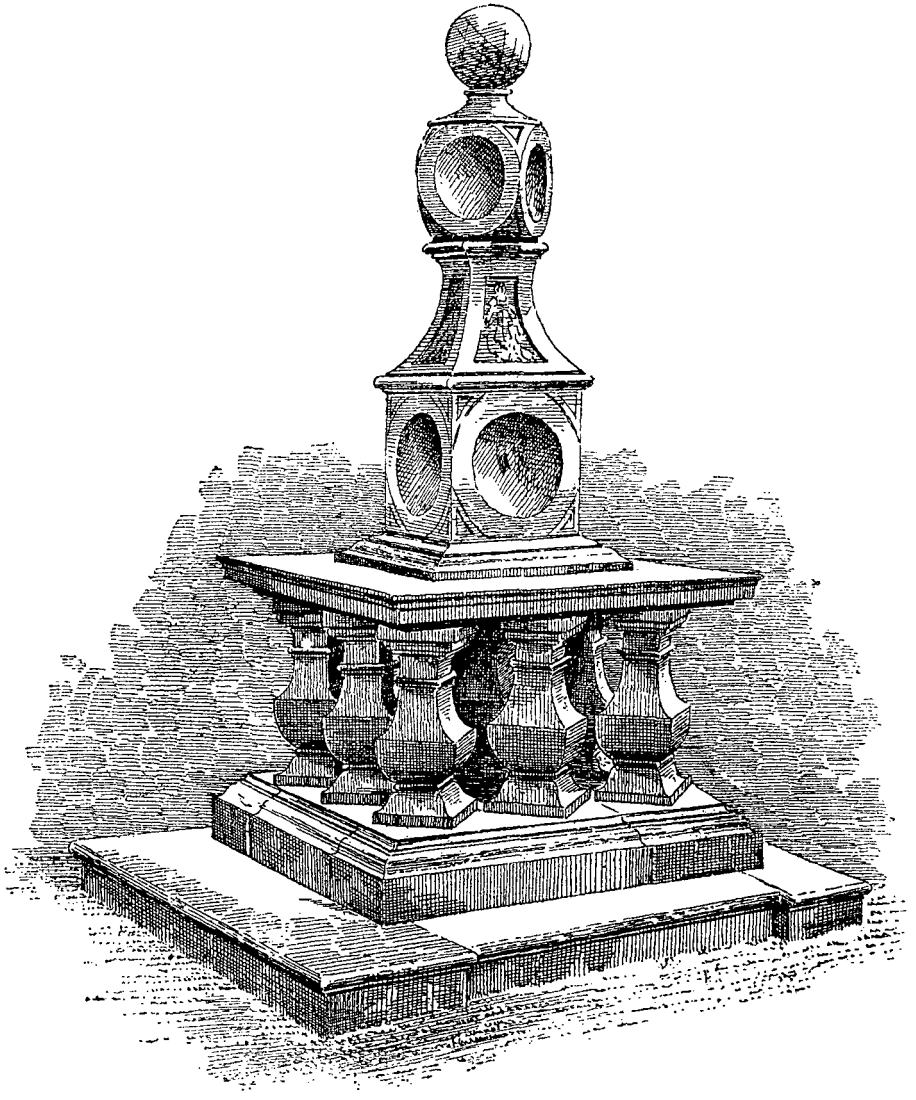


Fig. 102. Rubislaw Den.

Philadelphia, &c., which shows that it cannot be more than a hundred years old. Also on one of the sides of the pillar there is a system of figures for making an equation of time and so called." The upper part, the facetted, has the usual dials hollowed and plain.

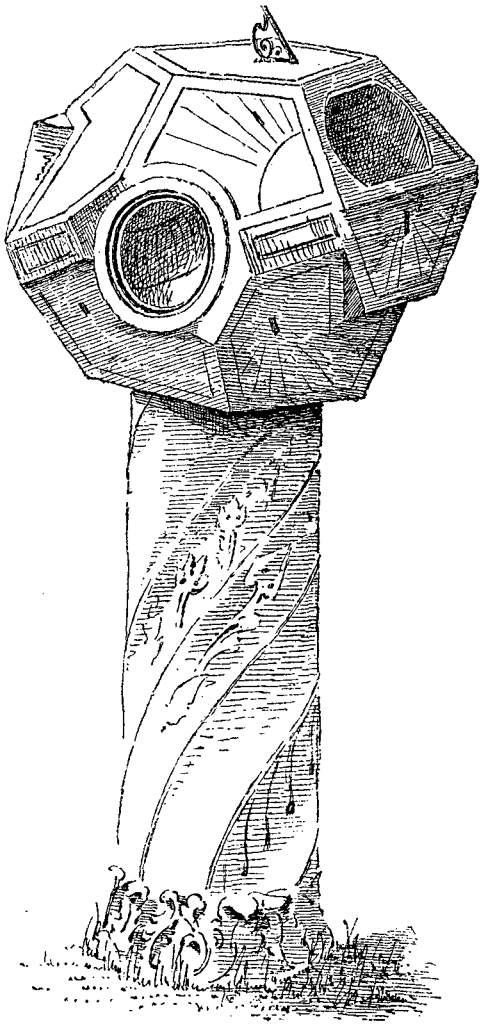


Fig. 104. Haddington.

Haddington.—This is a facet-headed dial (fig. 104) of a most complicated and twisted kind, so that no two sections of it would be alike. Its horizonal face is five-sided, from which diverge five reclining faces, which grow into eight faces, and these again change and turn in a manner not easy to describe, and which necessarily gives the dial an unbalanced appearance from whatever side it may be viewed. There are four hollowed dials: two of these are round, and on opposite faces; the other two are elongated into the appearance of the gun-holes seen in mediæval castles. The one seen in the view is a

recliner, and the opposite one is a decliner. Dr Howden, to whom the dial belongs, informs me that when he got it it had no pedestal, and was merely placed for convenience on the shaft shown in the view, which is doubtless a piece of seventeenth-century work, and not unlike the shafts at Woodhouselee and Drumore.

The block of the dial measures about 19 inches on the square by $16\frac{1}{4}$ inches high. The shaft is about 2 feet 5 inches high by $7\frac{1}{2}$ inches in diameter.

Haddington.—This dial (fig. 105) in its general conception is unique, although its parts are to be found in many others; but in its general idea it may be classed as a facet-headed dial. Its cup-hollows on each of its octagonal faces are not unlike what is found on the horizontal dial at Pinkie; and in the same way certain of the hollows have faces acting as gnomons as at Pinkie, Newbattle, and other places. Between each of the hollows there is a mask.

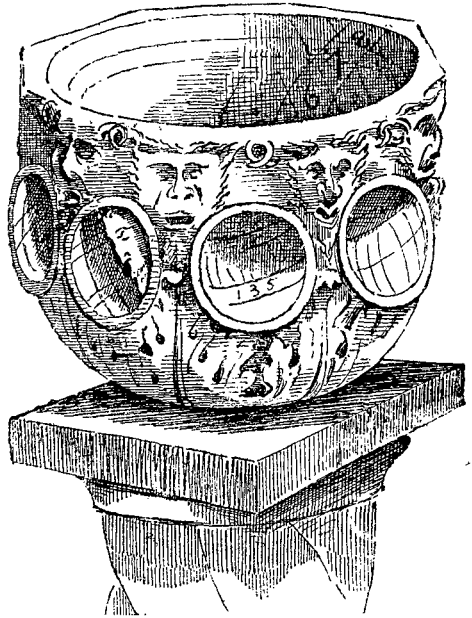


Fig. 105. Haddington.

The peculiarity of the dial consists in its vase form being hollowed out in the inside, and lineated so as to form a horizontal hollow dial. There is a hole at the bottom of the vase to allow the rain to escape.

Its pedestal or support is gone, and Dr Martine, to whom it belongs, says that the history of the dial is not known further than that it and the dial from Haddington (fig. 104) were at one time companions

at Bellview, at the west end of the town, and this being a modern place they were wanderers there.

The dial is 11¼ inches high by 15½ inches wide, and the basin is 6 inches deep. The cup-hollows surrounding the dial are 4½ inches wide.

North Barr, Renfrewshire.—This singular and most graceful sundial (fig. 106) stands in the centre of the old-fashioned semi-decayed gardens of North Barr, at a distance of a few minutes walk up the Clyde from Erskine Ferry. There is something extremely droll and quaint in the conception of the lady, with her remarkable headpiece and picturesque seventeenth-century costume, as she stands gracefully holding a rose at her breast and smiling on the spectator. The two hair curls standing out in relief very considerably heighten her odd effect, and at the same time give apparent strength to her slender neck to carry the overhanging and weighty dial. The dial itself is an octagonal block with seventeen faces. On the perpendicular faces there are cup-hollows alternately with plain face dials. The gnomon of the west hollow is a piece of metal stretched from side to side with its under face serrated like a saw. The hollows on the last face are four heart-shapes disposed somewhat as they are at Holyrood. On the horizontal dial, which is 14½ inches wide, there occur the initials of Donald MacGilchrist, with the date 1679. North Barr was for generations in the possession of a branch of the Stewarts of Darnley. The North Barr Stewarts became extinct in the seventeenth century, and the last of them alienated most of his estate about 1670 to Donald MacGilchrist, a wealthy Glasgow merchant; he built the house of North Barr in 1676, and died in 1684.

The dimensions of the dial are:—Height of lady, 3 feet 11½ inches; height of lady and dial, 5 feet 3½ inches; height of steps, 8 inches each; width of upper step, 3 feet ¼ inch; of under step, 5 feet. The whole structure, in fine preservation, is cut out of grey freestone.

Lord Blantyre, to whom North Barr belongs, kindly allowed Mr John Parker, C.A., Glasgow, to make a photograph of the dial for the purpose of this paper. The dial stands in its original position, and tells the hours with exactness.

Glamis.—This dial (fig. 107) has been classed with those of the facet-head type, as it has their distinguishing feature in a very pronounced

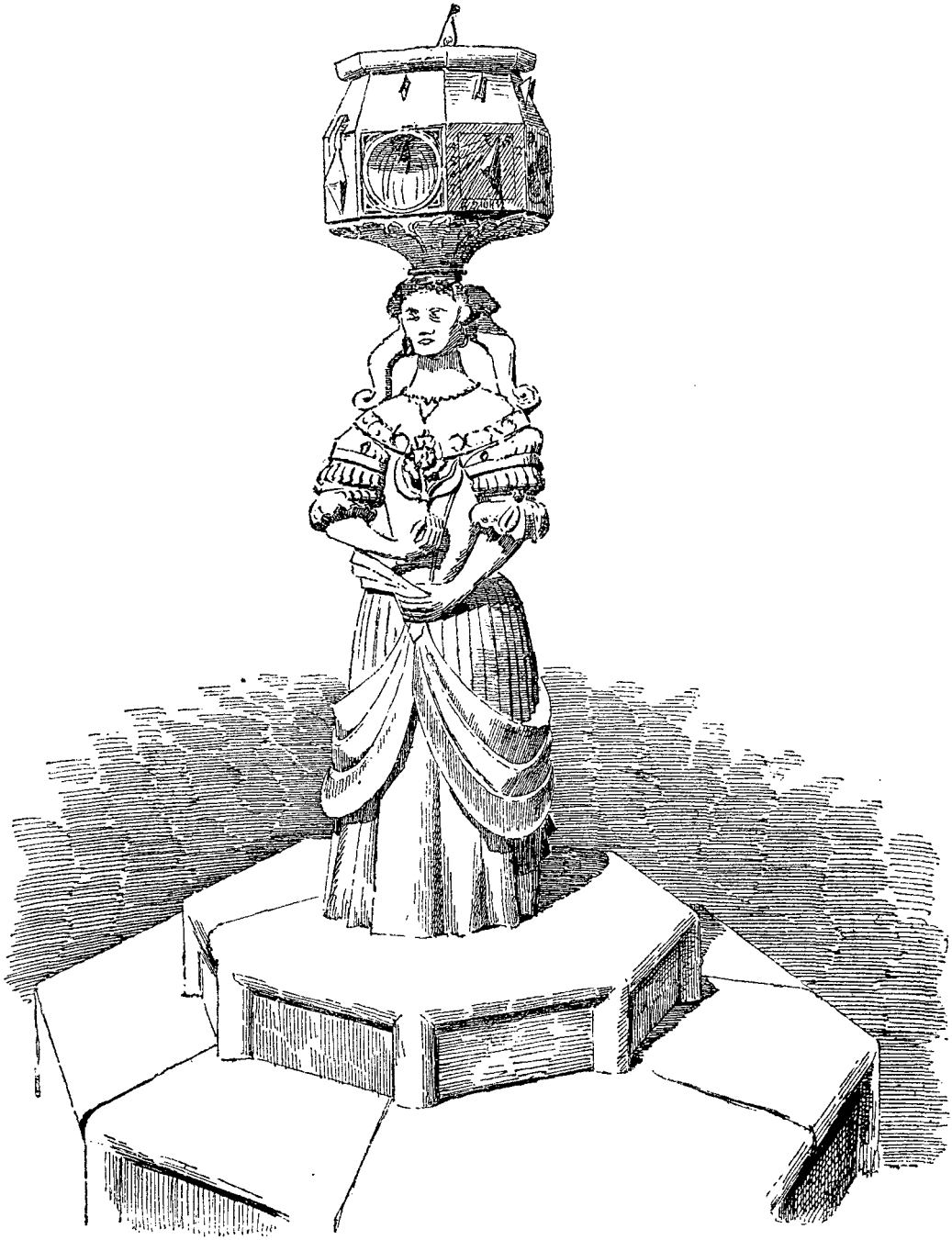


Fig. 106. North Barr.

form. It may be regarded as certainly one of the finest monumental dials in Scotland, befitting the majestic castle beside which it stands.

It consists of an octagonal base, on which there are four rampant lions, each holding a dial in his fore-paws. The dial held by the lion facing the south is elliptic in shape, and measures 19 inches by 14 inches; the north one is round, and measures 16 inches in diameter; the west one is rectangular, and measures $15\frac{1}{2}$ inches high by $13\frac{1}{2}$ inches wide; the east one is $13\frac{1}{2}$ inches square. Between the lions there are twisted pillars with carving in the hollows, which support a canopy from which a carved neck rises up bearing the sphere-facetted globe, the facets of which are arranged in three tiers.

The dimensions of the structure are:—Height from ground to platform on which lions stand, 3 feet 7 inches; height of lions, 5 feet 2 inches; the cornice above them is 12 inches thick; from top of cornice to under side of facetted dials, 3 feet $3\frac{1}{2}$ inches high; the height of the facet-head is about 3 feet $5\frac{1}{2}$ inches, and it contains twenty-four facets, each facet containing three or four dials. The earl's coronet, supported by the four carved scrolls, is about 4 feet 9 inches high. The total height of the dial from ground to top of coronet is thus 21 feet 3 inches. Behind the lions, in the centre of the structure, there is an octagonal pillar 12 inches thick. The width of the lower step at the ground level is 10 feet 10 inches, and the width of the base of the structure at the level of the top of the second step is 5 feet 4 inches. For particulars regarding this dial I am greatly indebted to Mr Andrew Ralston, Glamis.

Meadowbank, New Galloway.—Mr Hamilton, Ardendee, informs me that there is a dial in front of Meadowbank House. It is an old dial in the shape of a cube cut out triangularly, and the gnomon of steel left on one side.

4. Horizontal Dials.

The dials of this type are so numerous that a list of them would probably include the name of every parish in Scotland, and the making of them has continued down to our own time. Horizontal dials may be divided into two classes: (1) Those which in appearance are not unlike a card-table, consisting of a pedestal supporting the flat dial-stone

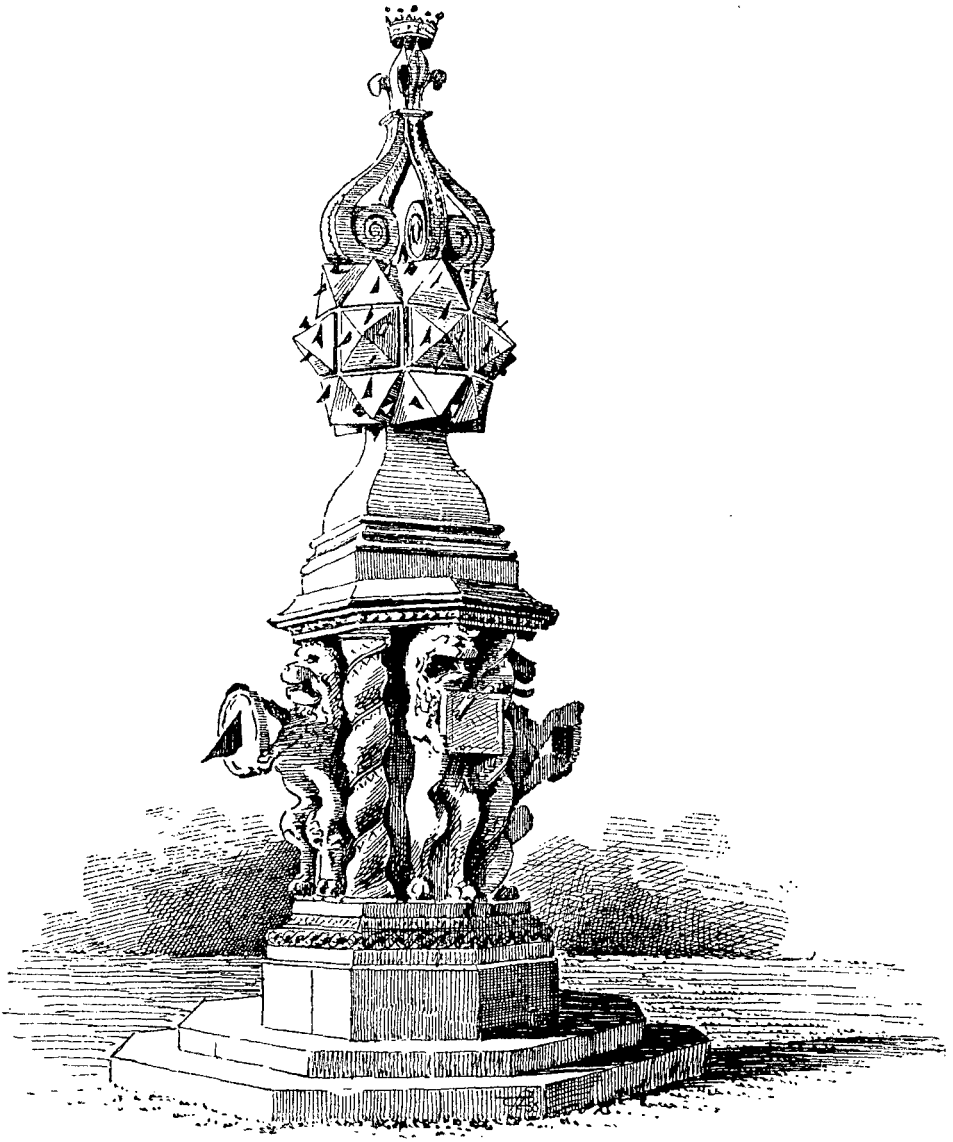


Fig. 107. Glamis.

which is either square, octagonal, or round; (2) the class in which the top of the pedestal itself becomes the dial.

Ruchlaw, Stenton, Haddingtonshire.—This is a typical example of the class (fig. 108). It has a marble face inserted in the stone table, which bears the name "Archibald Sydserf, Roughlaw." His initials (see page 212) occur on a stone at Ruchlaw, dated 1663.

Polton, Lasswade.—There is here one of the largest of its class, measuring from the top of the first step 4 feet 4 inches high by 2 feet

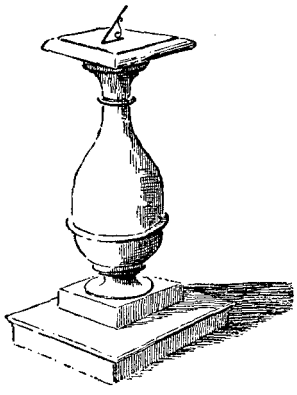


Fig. 108. Ruchlaw.

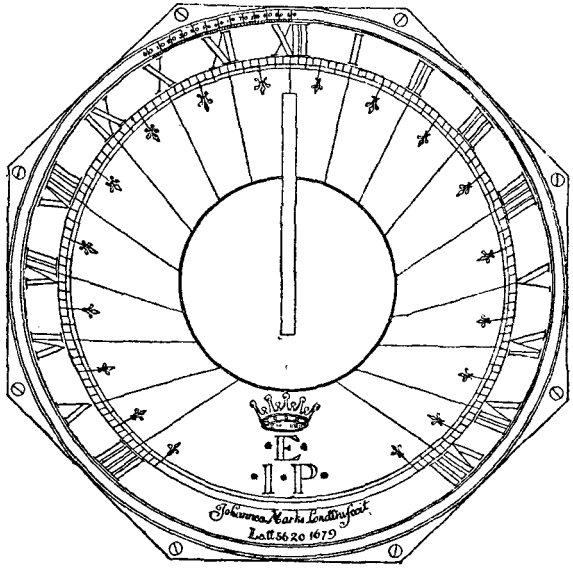


Fig. 109. Drummond Gardens.

11 inches across the table, on which is the cypher DC for the Dundas Durhams of Polton.

Drummond Gardens.—Figure 109 is a rubbing kindly obtained for me by Mr Henry Curr, from one of two brass dials which stand on the garden terrace at Drummond Gardens. It contains the initials of John, Earl Perth, surmounted by an earl's coronet, with the inscription

on the margin "Johannes Marke, Londini, fecit. Latt 56 20 1679." The plate measures 11⅝ inches across.

Pinkie.—This is one of the finest examples of the class (fig. 110), but it is unfortunately broken into two pieces, and its support is lost. The table is octagonal, and measures 16 inches across. The face of the dial is beautifully cut, and has fine figures. In appearance the dial resembles the upper part of the typical Norman capital. The scalloped sides are 5 inches deep, and each contains a dial, three of which are hollowed. In the upper part of the hollows occur carved twisted serpents, which recall those on the Lamancha dial (page 218).

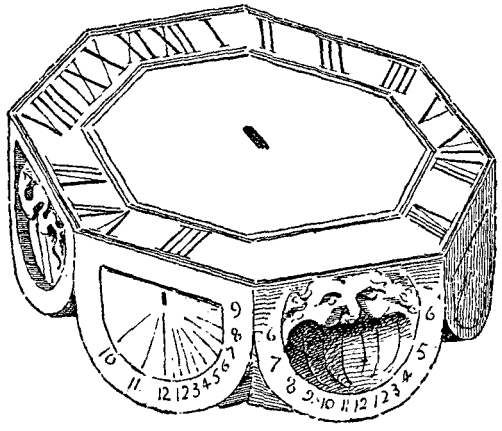


Fig. 110. Pinkie.

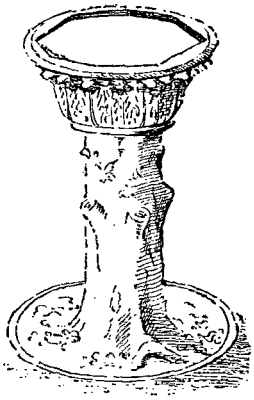


Fig. 111. Hatton House.

Hatton House.—This is the fifth dial (fig. 111) described as existing at Hatton. The pedestal is carved in imitation of the trunk of a tree, a poor design, which finds great favour in modern terra-cotta garden-work. The table is round, and measures 26 inches in diameter, and in it was fixed the metal dial-plate, now lost. The height of the dial is 3 feet 7 inches.

Polmaddie, near Rutherglen.—The following interesting account, accompanied by a photograph, of this dial, was kindly communicated by

Mr John Parker, accountant, Glasgow. The pillar and table are of free-stone, and in the table a square cavity is cut, in which is inserted a square cube of hard slate on which the nine dials are cut. The centre one is for Glasgow alone. Smaller dials at the four corners show the hours at

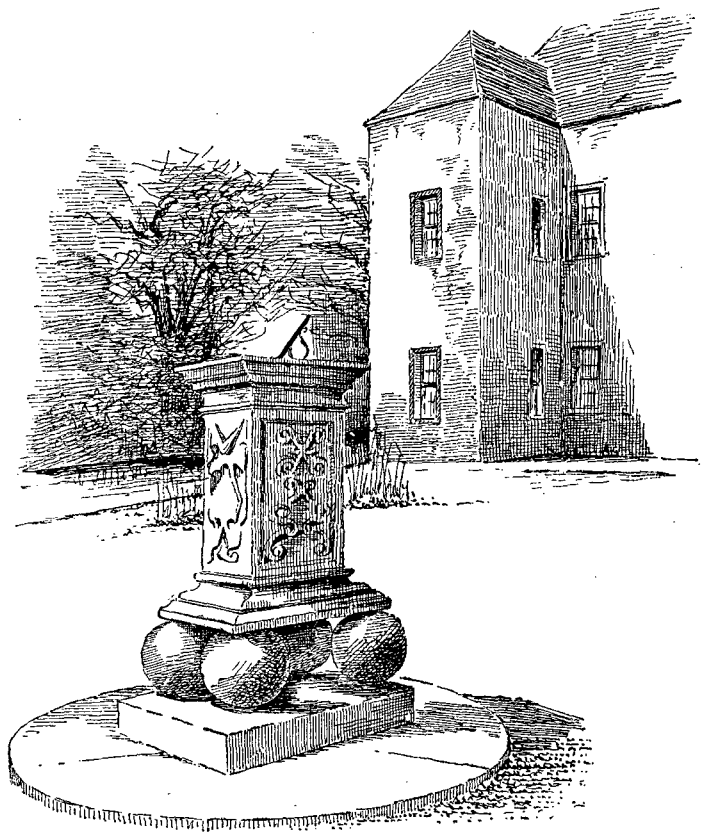


Fig. 112. Aberdour.

different places, corresponding to the hour at Glasgow. Thus, when the shadow indicates *noon* at Glasgow, the style on the upper left-hand circle would give an hour in the *morning* at Boston or Charlestown, not

the same in each, but both morning, while that on the upper right-hand cover would similarly give an *evening* hour at Alexandria or Cape of Good Hope. Between these corner dials at each side there are three smaller dials recording the time at only one place each.

Aberdour, Fifeshire.—This quaint dial (fig. 112), drawn from a sketch by Mr John D. Michie, artist, stands in the gardens of "The Place" of Aberdour. It belongs to the second class of horizontal dials. Its square ornamented pedestal, resting on four large balls, is similar in idea to the pedestal of the dial at Pitreavie, about four miles distant (see page 214), and both rest on a raised pavement, which is of a circular form here, and octagonal at Pitreavie.

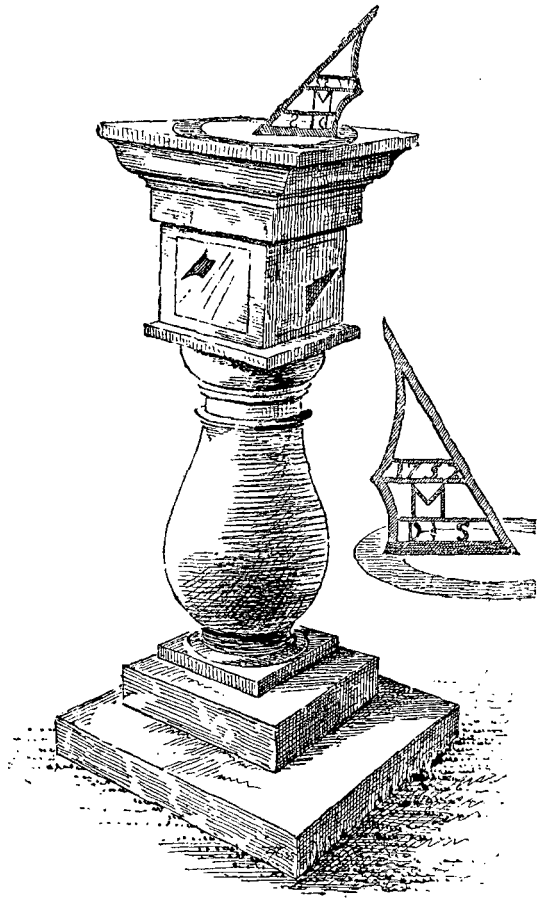


Fig. 113. Whitehouse.

From information supplied by Mr Patrick Borrowman, it appears that on the north-west face of the pedestal there is a coronet with the insignia

of the Order of the Garter, and the motto "Honi soit qui mal y pense," and on the south-west face the Douglas heart. The south-east face contains what appears to be a clam-shell, and on the north-east face a grotesque and undecipherable sculpture. The dial is set north-east and south-west, so that twelve o'clock falls exactly at the north-east corner of the stone. The letters are on the edge of the stone, and a circle with the degrees numbered on it within.

Whitehouse, Cramond.—This dial (*fig.* 113), which stands in the garden of Whitehouse, contains four vertical dials on the frieze of its shaft, along with its horizontal table dial. The latter is a circular strip of metal cut out like the letter O, and is 3 or 4 inches in breadth, with the figures and lines cut on it. The gnomon, of which an enlarged sketch is given, is very large, being about 11 inches high by $7\frac{1}{4}$ inches. It contains the initials $\frac{M}{DS}$, with the date 1752, and on the dial-plate there is the inscription, "MR DAVID STRACHAN," with the date 1732. Mr Mackay of Whitehouse, in manuscript notes, says, that Strachan's conveyance to the property is dated 21st May 1750, that he was a bailie of Leith, and a prominent man in the affairs of the locality till his death in 1771. It thus appears, that if the stonework of the dial was made by Strachan after he purchased Whitehouse, he must have brought the plate with him from some other dial. The horizontal dial measures $9\frac{1}{4}$ inches high by $9\frac{1}{2}$ inches in breadth, and the table is $20\frac{1}{4}$ inches square, and is 4 feet from the ground.

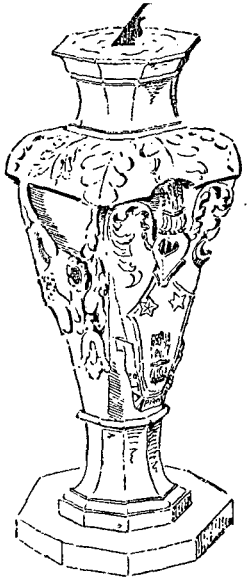


Fig. 114. Niddrie Marischal.

Lethington Castle.—A round horizontal dial with a baluster shaft stands in front of this ancient castle; it is undated, but on its metal face is engraved "David Lyon, sculpsit."

Niddrie Marischal.—This is a fine example of the second class of horizontal dials (fig. 114), it stands in front of the mansion-house on the

edge of a swift-flowing burn. The arms of the Wauchopes of Niddrie, with all the accessories, are very skilfully wrought on the pedestal, and on the metal face is the inscription "JACOBUS CLARK, DUNDEE, FECIT."

Haddington.—A dial of this type stands in the garden of Haddington House, a fine old mansion near the church. On the bronze plate are the initials A.M. × K.C. and the date 1688.

Craigiehall and Hopetoun, Linlithgowshire.—The horizontal dials at Craigiehall and Hopetoun are almost identical. The carved work on the pedestals was probably wrought by the same hands. On the first-named is the inscription, "Made by England, Instrument-Maker to Her Majesty at Charing X, London," with the arms of the Marquis of Annandale quartered with those of his wife, a Fairholm of Craigiehall.

Houstoun, Linlithgowshire.—This is a massive square dial (fig. 115), which probably dates from the latter part of the seventeenth century; it stands on a circular stone base, which is flush with the ground, beside the old mansion of Houstoun.

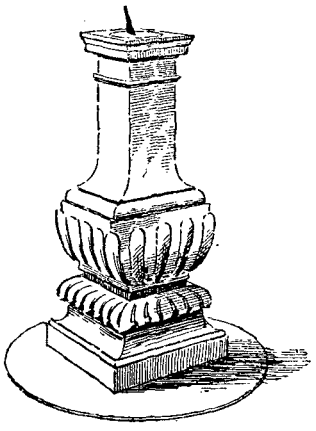


Fig. 115. Houstoun.

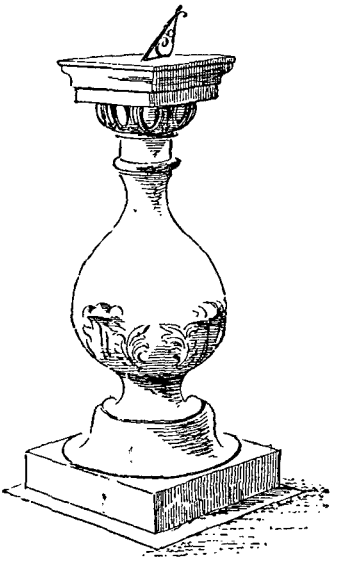


Fig. 116. Craigton.

Craigton, Linlithgowshire.—This dial (fig. 116) is situated in the garden of the seventeenth-century mansion-house of Craigton; it has a

circular baluster support with boldly cut egg and dart enrichment supporting a square abacus on which is placed the bronze dial-plate. I am indebted to the Rev. Mr Primrose, Broxburn, for bringing this and various other dials under my notice.

Elsick, Kincardineshire.—This dial (fig. 117), as may be judged from the plate (not engraved), belonged to an agriculturist. Mr J. Crabb Watt, to whom I am indebted for bringing it to my knowledge, and for sketches, informs me that James Rae, whose name is engraved on the plate, was a farmer at Crowhillock, Kinneff, father of the celebrated Rachel Rae, an excellent fiddler, in whose house Neil Gow composed "Ratchell Rae's Rant," and his strathspey "Crowhillock." The dial was shifted about from one farm to another until its present owner, Mr Forbes, got possession of it, and set it up in the garden of Elsick House. The dial bears the inscription "WM. NICOL, FECIT, LATITUDE 56."

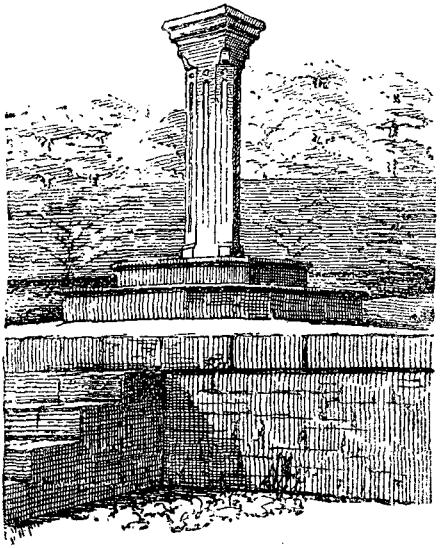


Fig. 117. Elsick.

Portobello.—This is a dial of very great interest, as it is known to have been the work of Archibald Handasyde, and it is pleasing to know that it still remains in the possession of his descendants of the third generation. His grandson, the late Mr Handasyde, had it erected in his garden at Windsor Place, Portobello, where it now stands. The whole is of stone, and is about 4 feet high; the face is rudely cut, and is lettered from 1 to 8 and from 4 to 12, and has the date 1775.

Neworth, Kelso.—The drawing of the dial at Neworth (fig. 118) is

made from a water-colour sketch by the designer of the dial, and kindly lent to me by his great-grandson, Mr Patrick Robertson, Fountainhall. Mr Robertson informs me that his ancestor made the dial in 1760, when he was a very young man, and had the pedestal hewn by a local mason at Ednam, where it was first put up, and after being once or twice removed, as the family changed their abode, it was finally brought to Neworth by the son of the designer when he purchased that property in 1854. The dial-plate is of metal.

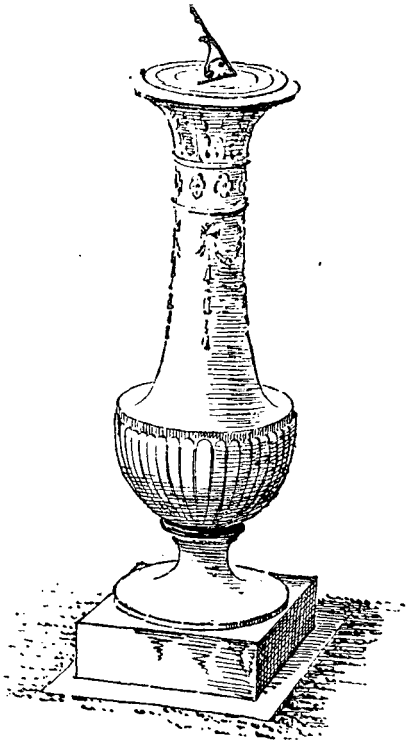


Fig. 118. Neworth.

Cults, Fifeshire.—There is a simple dial here which stands in the manse garden. A pencil sketch sent me by Mr T. S. Robertson, architect, Dundee, shows its base to be quite overgrown with ivy.

Tongue.—There is a companion dial at Tongue to the one already described on page 203; it has an octagonal shaft about 9 or 10 inches square, with a rounded top on which there is a horizontal dial.

III. DIALS OF EXCEPTIONAL DESIGN.

We have now passed in review specimens of all the types of attached and detached dials to be found in Scotland. There only remain to be noticed certain dials which cannot strictly be classed as belonging to any type, each dial being more or less of an independent design.

Newbattle, Midlothian (fig. 119).—There are two dials here of a very monumental description, they are exactly alike in all respects, and stand in the gardens on the east side of the Abbey. They are not, however, in their original position, having been moved from another part of the grounds. In appearance they bear a considerable resemblance to articles of goldsmiths' design, and the pedestal seems thin for such a massive superstructure; this is, however, compensated for in a great measure by the widespreading steps on which the structure stands.

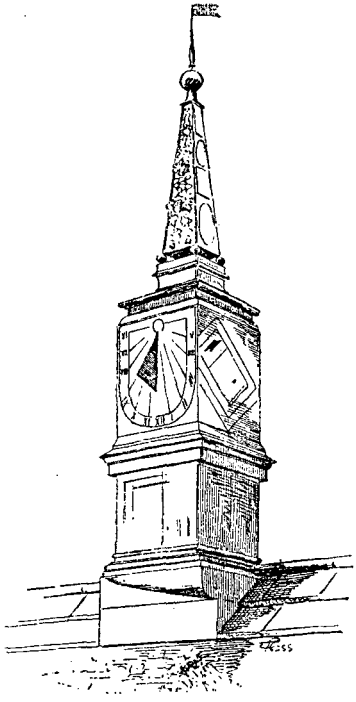


Fig. 120. Pinkie.

The dial part is octagonal, and contains two tiers of dials. Four of the spaces, however, do not contain dials, but are filled (1) with coronetted initials of William, Earl of Lothian; (2) those of Annie, Countess of Lothian; (3) the arms of the earl; (4) a figure of the sun, the crest of the family. These are all drawn in detail, as is also one of the slightly hollowed dials where the profiles of diagonally opposite faces act as gnomons. Sir William Ker, of the Ancrum family, married in 1631 Lady Anne Ker, who succeeded to Newbattle in her own right. He was created earl in the same year, and the dial was doubtless erected between then and 1667, the year in which the countess died.[1]

The gnomons, figures, and lines of the dials have all been gilt.

The total height, measuring from the surface of the upper step is about 16 feet.

[1] Since the above was written, Lord Lothian has found, from papers at Newbattle, that the date of the dials is 1635.

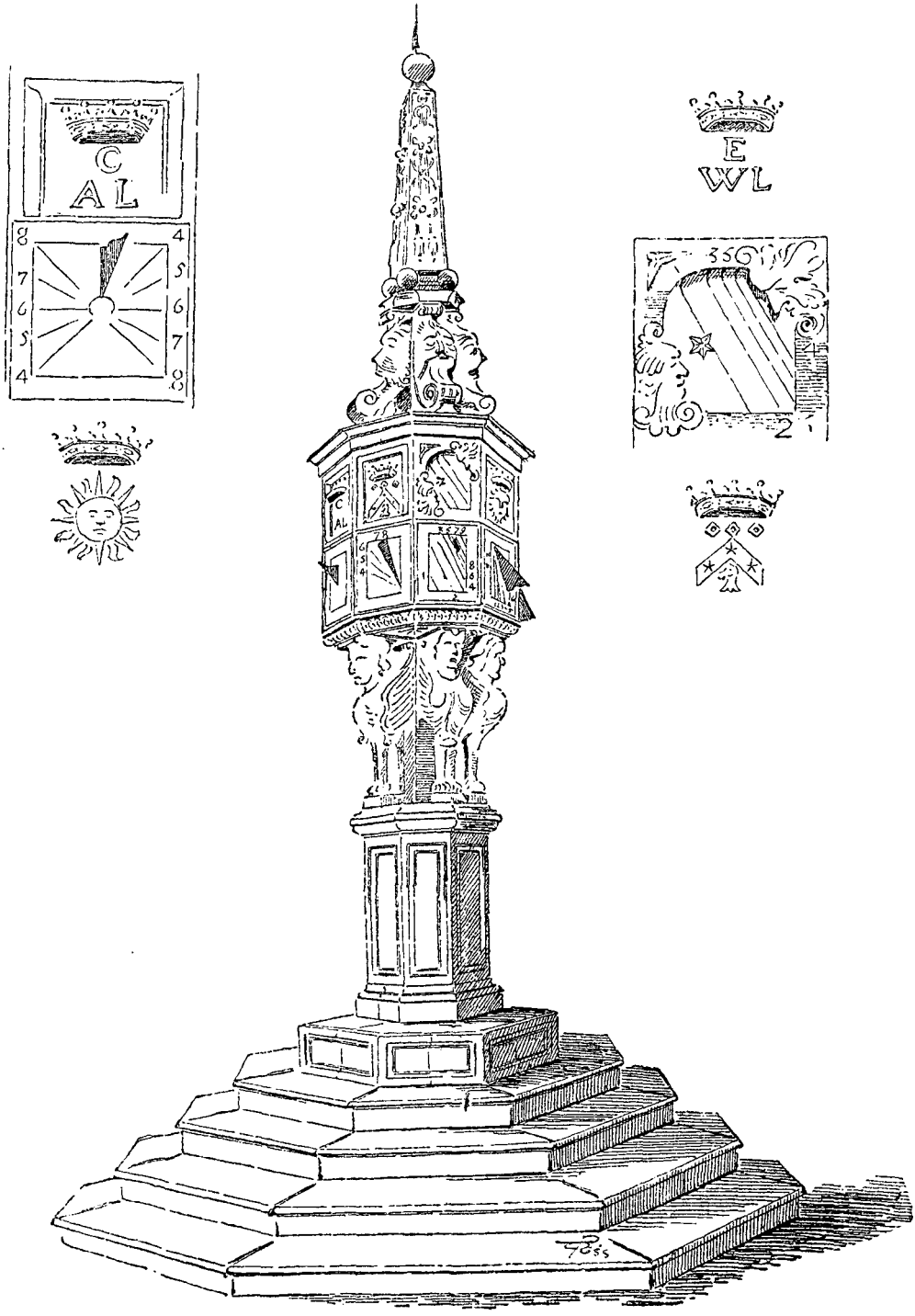


Fig. 119. Newbattle.

Copies of the dial have been made for Lord Haddington and Lord Home.

Pinkie.—This dial (fig. 120) stands on the top of the old garden wall on the east side of Pinkie House. It is canted a little to one side, so that its face does not coincide with the line of the wall. The structure is square throughout. On the spaces immediately above the wall-cope there appear to have been painted dials, none of the lines being incised. The crowning obelisk resembles that of the dial at Newbattle. This is, however, a very characteristic feature of the architecture of the period, and is to be found crowning the pillars of the entrance gate at Pinkie, and at numerous other places throughout the country. The measurements are—the height of the wall on which the dial stands is about 10 feet, and from the cope to the top of the balls supporting the obelisk is about 6 feet; the obelisk with the stone ball on top about 3 feet 6 inches; the face of the dial is 23¼ inches in breadth.

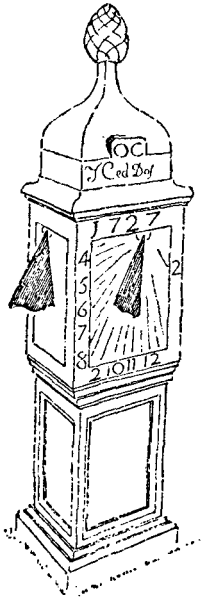


Fig. 121. Inveresk.

Inveresk House.—This small unpretending dial (fig. 121) stands in the garden of Inveresk House, where we already describe a dial (p. 166); it is square on plan, and is about 5 feet high. It bears the initials of Oliver Colt, with some unintelligible contractions beneath, and the date 1727.

Dunglass.—This dial (fig. 122) stands on the summit of a circular artificial mound about 50 yards south-west from the ruined Collegiate Church of Dunglass. It is square on plan, and has very much the appearance of being a fountain, with what seems to be a broad projecting square basin, but it is a dial only. The pedestal (cut out of one stone) is fashioned with four pilasters at the angles; these are fully relieved, showing daylight between. The dials are on the top of the seeming basin, the upper surface of which is flat; they measure about 15 inches square by about 2 feet high, but it is doubtful if this part of the structure is in its original condition. There are various loose stones, moulded and

carved, lying about, and that these are connected with the dial seems probable, but this can only be determined by permission of the proprietor. The height from the ground to the top of basin is about 6 feet 2 inches, and across the basin the measurement is 5 feet 1 inch; the width across the pedestal is about 20½ inches.

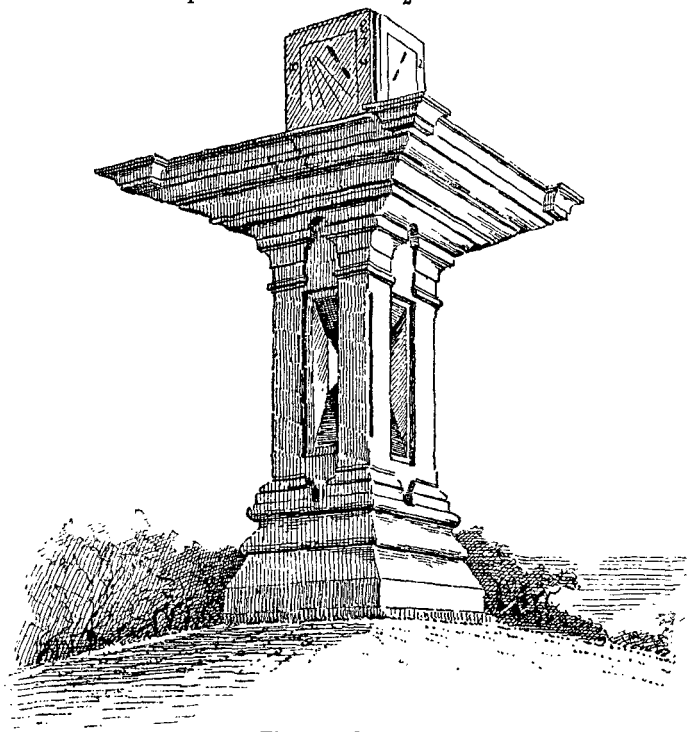


Fig. 122. *Dunglass.*

Barnton.—This dial (fig. 123) stands on the west side of what is now called Barnton House, and anciently known as Cramond Regis. It contains the arms of the Lord Balmerinoch, from which we may infer that it is not in its original position, as Barnton possessed by the Balmerinoch family was only the eastern part of the property now known by that name; and the old house of Barnton, built by the Lords Balmerinoch in

1623, stood not far from the village of Davidson's Mains, where without doubt this dial also stood.

John, fourth lord, sold Barnton in 1688, the year in which his son Arthur, sixth Lord—who was fated to end his days on Tower Hill—was born.

We may be almost certain that this dial was erected by the fourth Lord Balmerinoch; its details forbid an earlier date being assigned to it than towards the end of the seventeenth century. It contains eight dials, two of which have cup-sinkings.

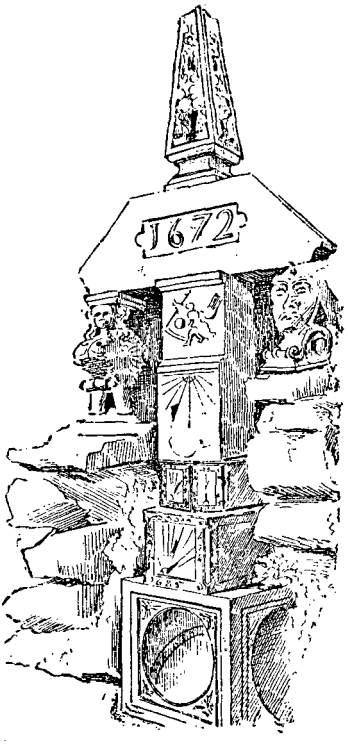


Fig. 124. Polton, Lasswade.

The open pierced mouth of the masks in the lower part of the structure are suggestive of a fountain. The dial rests on steps placed anglewise, as in the case of its companion (described, p. 196). The history of this latter dial cannot, however, be made out. The whole height of the Balmerinoch dial, including steps, is 10 feet 2½ inches.

Polton.—This drawing (fig. 124) shows the ruins of what has been either one or two dials apparently of exceptional design. They are now built up against the garden wall so as to form a rockery, and are here sketched as they appear. The three lower dial-stones have been part of one structure. They are unusually fine in workmanship and design—all the figures and ornaments being raised in relief. The under stone is a cube of about 22½ inches, and has large cup-hollows of about 13 inches diameter. The next two tiers of dials are cut out of one stone, the lower being a square of 13 inches by 22 inches in height,

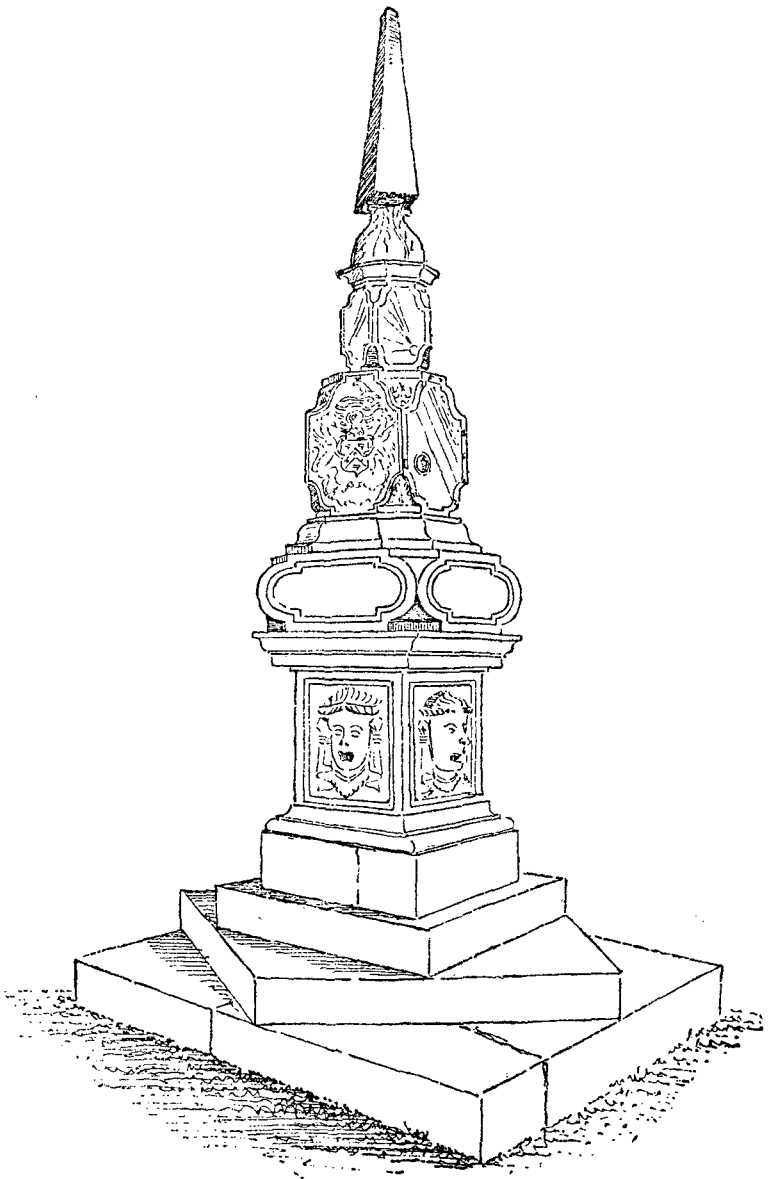


Fig. 123. Barnton.

and contains the date 1685; the next, of a polygonal section, is 9¼ inches high, with faces of about 6 inches in breadth. On one of the exposed sides are the initials $\frac{\text{I.I.}}{\text{A.M.}}$ These are parts of one dial, and when the exceptionally large size of the under stone is considered, along with the careful finish and beauty of the whole, we are warranted in concluding that this must have been one of the finest of Scottish dials.

The dial-stone immediately above, with the figure of Death and his Scythe encircling the globe, appears to have belonged to a different structure. The two carved stones on either side are suggestive of having belonged to a dial similar in design to those of Newbattle; the left-hand figure would fit such a position as those standing on the pedestal of the latter (see fig. 119), while the carved head on the right hand, reclining on the scroll, recalls the similar features on the upper part of the Newbattle dials, and so likewise does the carved tapering finial. The lintel-like stone on which this latter rests may or may not be a part of the dial. It contains the date 1672.

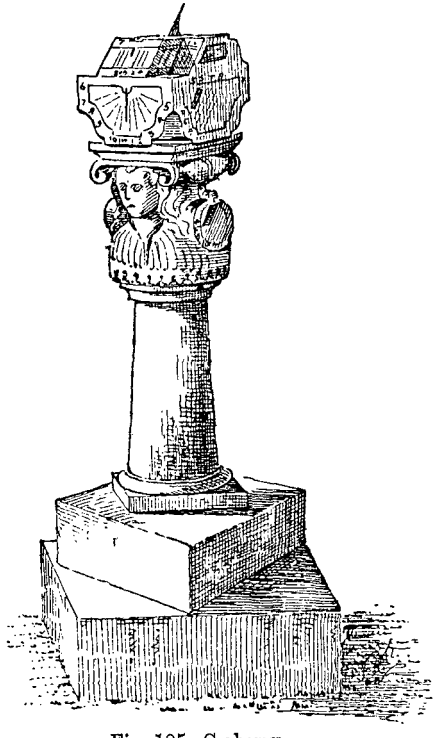


Fig. 125. Carberry.

Carberry (fig. 125).—This is one of the most quaint and beautiful dials we possess. The support—a short rounded column—has for its capital a graceful female bust showing a face to the north, and another (the one shown) to the south, with the Ionic volutes and abaci so frequent in

Renaissance work. On the top rests the dial-stone, fashioned to contain upright, reclining, and horizontal dials. There is also an upright round dial at the shoulders of the bust pendant from the volutes. Altogether there are thirteen dials on the structure. The base and steps, as is so frequently the case, are set diagonally. The measurements of the structures are:—Height of steps, 18½ inches; shaft and base, 20½ inches; bust and abacus, 13½ inches; total to top of abacus, 4 feet 4½ inches. Above this the dial-stone is 10½ inches high by 10⅞ inches on the face, and 11 inches in width on the sides. The pendant dials are 5 inches in diameter, and the lower step is 2 feet square.

Oxenford, Midlothian.—There are three dials at Oxenford Castle. The first stands in the centre of the garden; it is a plain circular horizontal dial, with a marble dial-plate. The second stands in the old churchyard adjoining the castle; it is a square horizontal dial, and has also a marble dial-plate, which, in addition to the figures, has the name "James Anderson" cut on it. The third dial, of an extremely simple design, is the one shown by fig. 126. On each face of the square pedestal there is cut a bear—evidently the crest of the MacGills of Cousland, from which place this dial was brought.

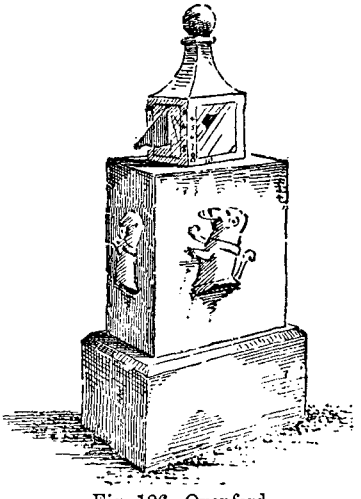


Fig. 126. Oxenford.

There are three dials on the block above. The dimensions of the dial are:—Height of base (which is modern), 13½ inches; the pedestal, 17½ inches high by 15¼ inches wide; dial, 9 inches high by 8¾ inches wide; total height, 3 feet 10 inches.

IV. MODERN DIALS.

Although not strictly within the scope of this paper, it will perhaps not be considered out of place to refer to certain dials erected during this century.

Bredisholm.—In the gardens of Bredisholm, near Glasgow, there is

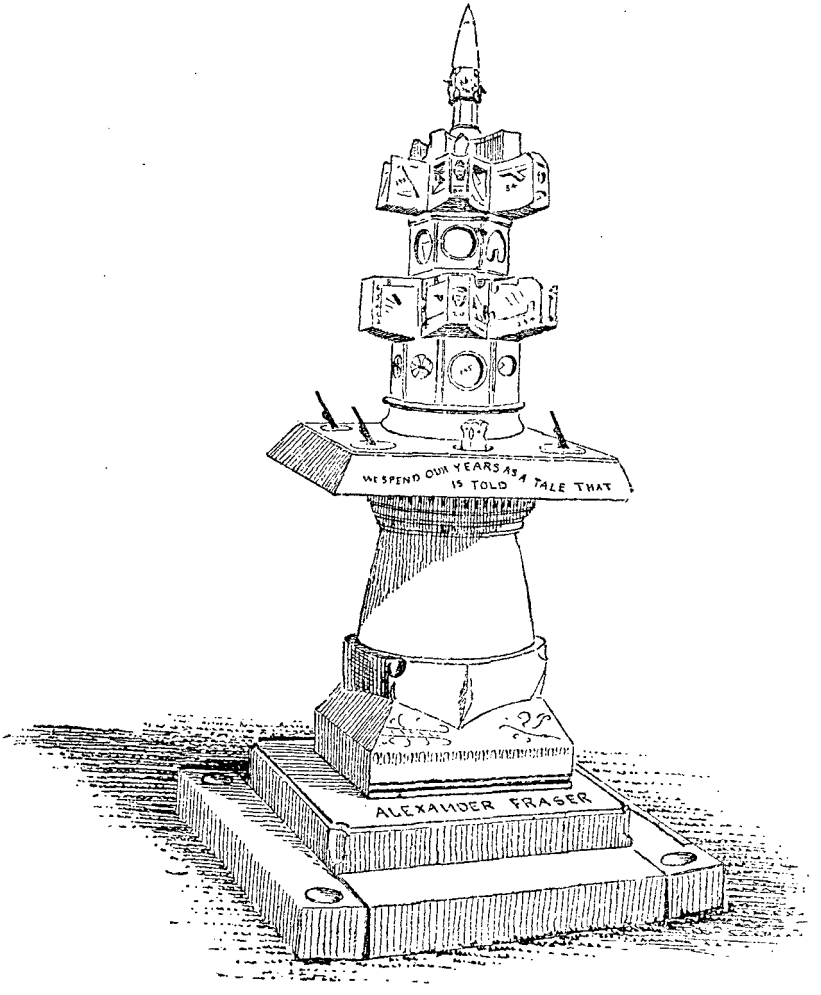


Fig. 127. Bredisholm.

a dial (fig. 127) erected in 1840, not unworthy to be classed with the

ancient examples. It is entirely the work, both in design and execution, of Alexander Fraser, a north-country working mason. The Rev. Mr M'Millan, Bailliestone, having made diligent inquiry, has communicated all that can now be gathered regarding Fraser, and the following few facts, from Mr M'Millan's notes, are interesting:—He rented an orchard adjoining Bredisholm House, and built a cottage for himself, where he lived quite alone. Having no knowledge of horticulture, the management of an orchard proved an unsuccessful undertaking. He devoted a considerable portion of his time to dialmaking, and in one instance, for a very simple dial, he is known to have received £2. During his residence here, which lasted over a few years, he erected this dial in his orchard. Removing to Shettlestone, he again built a house for himself, and embarked in the speculation of building a tenement adjoining Camlachie Parish Church, but evidently with little profit to himself.

For many years he wrought most of the tombstones and sculpture-work required in the locality, and was often seen, Mr M'Millan says, by the people of Old Monkland passing their doors on his way to the churchyard—a modern "Old Mortality." Whatever his occupation for the time may have been, he, it appears, always had a dial on hand. He died about 1870.

When Fraser executed this dial, the art as it was understood in olden times may be said to have been extinct, only the commonest horizontal dials being occasionally set up. All the tradition which guided the men who erected the "obelisks," the "lecterns," or "facet-headed" dials were lost, so that we are not surprised to find that this dial is based on altogether different lines. It may be described as a massive horizontal dial supporting an octagonal column from which there juts out, in two tiers, a series of radiating wings. These wings are carved and sliced into innumerable figures and shapes, which will be partly understood by referring to the drawing, where will be seen a space for a thermometer. There are dials on each corner of the flat table, three of them carved on the stone, and the fourth consisting of a metal plate. There are other contrivances on the table, some of which it is believed served the purpose of a rain-gauge, and they are supposed to be connected with an opening in the base of the dial. Winding round

these dials is the inscription, "It is a light thing for the shadow to go down ten degrees; nay, but let the shadow return backwards ten degrees." It is not unlikely that the arrangement of the table dials may have been suggested to Fraser by the dial at Polmaddie, only a few miles distant.

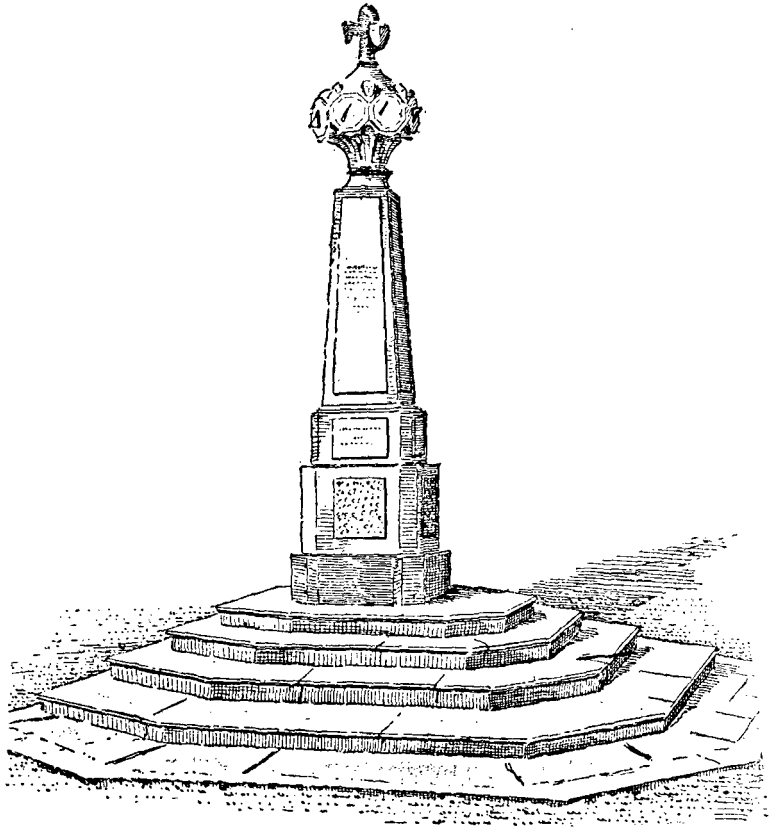


Fig. 128. Newhall.

Newhall, Penicuik.—This dial (fig. 128), which may be regarded as a monument to Allan Ramsay, stands in front of the mansion-house of

Newhall. Its appearance will be easily understood from the sketch. The following information regarding the dial, from Miss Gatty's work, was supplied by Mr John J. Wilson, banker, Penicuik.

There are eight panels on the square tapering shaft, on one of which there is the following inscription:—"Here Alexander Penicuik of Newhall, M.D., is said to have given Allan Ramsay the plot of his celebrated Pastoral Comedy of the *Gentle Shepherd.*" This explains the contents of the six remaining panels: (1) contains a design consisting of shepherd's crook and other pastoral implements; (2) Habbie's Howe and Mause's cottage; (3) the washing-green and Symon's house; (4) the Craigy Bield and Glaud's onstead; (5) a ship enclosed in an oval margin; (6) "Here Allan Ramsay recited to his distinguished and literary patrons, as he proceeded with them, the scenes of his unequalled Pastoral Comedy, amid the objects and characters introduced into it." The last panel contains the motto—

"OBSERVE HOW FAST, TIME HURRIES PAST,
THEN USE EACH HOUR, WHILE IN YOUR POWER.
FOR COMES THE SUN, BUT TIME FLIES ON,
PROCEEDING EVER, RETURNING NEVER.
R. B. 1810."

Grange, Bo'ness.—The baluster supporting this dial (fig. 129) is ancient, but the old dial having become dilapidated, the late Mr Henry Cadell, of Grange, designed the peculiar horizontal dial shown by the sketch.

Fig. 129. Grange.

Amisfield, Dumfriesshire.—There is a neat modern horizontal dial at Amisfield Castle, for a drawing of which I am indebted to Mr J. D. Robertson, Park Terrace, Glasgow, with the inscription on the plate, "This dial belongs to And. Cowan. J. W. Fecit, 1825," with a motto, "Day gives place to night, life soon ends in death, and time will be swallowed up in vast eternity." It tells the hours at various towns throughout the world.

No attempt having hitherto been made to illustrate in a systematic manner the sundials of any country, nor to analyse their designs and classify them accordingly, it is not possible to make any comparison between those of Scotland and foreign countries.

The illustrations now presented, which have all been made by myself either from sketches or photographs, are selected from those exhibited at the meeting of the Society in January last, and since then the collection has very largely increased, so that this may be regarded as a representative collection of Scottish sundials, sufficiently numerous to illustrate the principles which guided the old dialmakers, and it is confidently believed that no further examination of the subject will reveal any new type or system of design. And in order to show the extent of the field which has been gone over, it may be mentioned that about 300 dials have been sketched and measured for the purpose of this paper, and that upwards of one-half of these are now illustrated and described.

An examination of the Table of Dials arranged according to their dates on page 273, shows that the chief dial-making period extended from 1623 (date of dials at Dundas and Kenmure, and Preston Lodge, Cupar-Fife) onwards for a period of about one hundred and fifty years. As has been already shown, there were earlier and later dials, but the period just mentioned may be regarded as the period when the art was at its best. The author has not seen any dial in Scotland which can in his opinion be placed earlier than about the year 1500, and there is no dated dial belonging to the sixteenth century known. An examination of this table shows that the earliest dated dials are amongst the most complicated of their kind. This seems to indicate that the art was imported into this country in a highly advanced state, but till foreign dials have been examined and classified we cannot say positively where the ideas were derived from, nor how far the foreign models were followed. We also see that the types do not follow each other in succession, but that dials of all the types were erected simultaneously. When we consider how few the types are, notwithstanding the number of specimens, and the widespread area they occupy, we conclude that the art of dial-making must have been

in the hands of comparatively few men, and it seems probable that they went to work following certain traditions known amongst themselves, for it is impossible to believe that the designs of the individual specimens of the obelisks, lecterns, facet-headed, and horizontal dials are the emanations of individual fancy. And it is not at all improbable that the scientific principles of dialling was taught in many of the parish schools along with land-surveying, both practical and theoretical, and other mathematical studies. But as the publication of the Ordnance Maps put an end to the study of land-surveying in schools, so has the comparative cheapness of clocks and watches, combined with their greater convenience, put an end to the study of dialling. Two dials of very scientific construction, one at Currie and another at Riccarton, were made in 1836 and 1829 respectively by the village schoolmaster, Robert Palmer, who taught the elementary principles of astronomy, having the walls of his schoolroom painted with astronometical diagrams. Such a man could not fail to give lessons in dialling. We also know that the local schoolmaster had to do with the dial at Kenmure Castle.

Burns, the poet, in an autobiographical letter to Dr Moore, says that he was sent to a "noted school" (Kirkoswald) "to learn mensuration, surveying, dialling, &c." In a controversy on this episode, in the *Scotsman* of January 1889, it was held by certain writers that "dialling" here referred to underground surveying in coal-pits, the proof brought forward being that the writers knew of places where underground surveying is so called. Without entering on this question, in all probability the poet's schoolmaster was prepared to teach mathematics and astronomy, and when we remember that this was at a time when dial-making was a living art, we need not be surprised to know that he also touched on the subject of dial-making, and that the term "dialling" was understood in the sense of sundial-making.

In the same county, at Fenwick, about the time that Burns was sent to learn dialling, we find that Hugh Wilson, the author of the tune *Martyrdom*, having finished his education at the village school, and learning the shoemaking trade with his father, "applied himself assiduously to the study of mathematics and kindred subjects," one of

the kindred subjects being the making of sundials, and one constructed by him may still be seen at Fenwick.[1]

The art appears to have been more popular in certain localities than in others, in part due to the influence of the local school, and in part due to the taste and spirit of the working masons who so frequently set up a specimen on their own dwellings, and thereby spread the desire for, and appreciation of, dials as adornments to their houses. But probably at no time nor place was there a sufficient demand for dials to keep a maker in constant occupation, although there can be no doubt that our forefathers regarded the sundial in very much the same manner as we regard the public clock. Thus in 1719 a sundial was put up on the church at Inverarity for the public benefit, and for which the sum of half-a-crown was paid (note *Epitaphs and Inscriptions*, by Jarvise, vol. ii. p. 304). In Weir's *History of Greenock*, mention is made of a corner dial on a house in that town built in 1716, which was the only "tell-tale time could boast of" till the magistrates built a timber steeple with a clock in 1753. And we have seen that the magistrates of Berwick (p. 177) regarded a dial set up on the church wall "as a benefit to all persons that came that way." In all probability many dialmakers, like Fraser in our own time, found a large share of their employment in the making of tombstones. Mylne and Wallace practised their business very much in the manner of modern architects, and in all likelihood Handasyde was an architect and builder, with a practical knowledge of sculpture and carving.

[1] Article by James Love, Falkirk, in *Parish Magazine*, September 1889, p. 134.

TABLE OF DATED SUNDIALS ARRANGED ACCORDING TO THEIR DATES.

	YEAR
Dundas Castle,	1623
Kenmure Castle,	1623
Cupar-Fife, Preston Lodge,	1623
Lochgoilhead,	1626
Drummond Gardens,	1630
Heriot's Hospital,	1631
Holyrood,	1633
Newbattle,	1635
Aberdour Castle,	1635
Peffermill House,	1636
Yarrow Kirk,	1640
Inveresk House,	1643
House, Water of Leith,	1643
Pitreavie House,	1644
Lethington Castle,	1644
Northfield House,	1647
Berwick Church,	1652
Balcomie Castle,	1660
Melrose Abbey,	1661
Peebles Cross,	1662
Ruchlaw,	1663
,,	1663
Hatton House,	1664
Fettercairn,	1670
Cockburn House,	1672
Polton House,	1672
Hatton House,	1675
Cortachy Church,	1675
Philipstoun House,	1676
North Barr,	1679
Drummond Gardens,	1679
Heriot's Hospital,	1679
Elie, Muckle Yett,	1682
Inveresk House,	1682
Hawick,	1683
Liberton House,	1683
Newstead,	1683
Polton,	1685
Haddington House,	1688
Inveresk Lodge,	1691
Dunnikier House,	1692
Barnton House,	1692
Hatton House,	1692
Alloa,	1695
Galashiels,	1695
Cadder House,	1698
Glencorse Church,	1699
Peebles Cross,	1699
Longside,	1705
Aberdeen, Duthie Park,	1707
Kelburn,	1707
Bowland,	1708
Tongue,	1714
Silvermills, Edinburgh,	1714
Greenock,	1716
Woodhall,	1717
Inverarity,	1719
Inveresk House,	1727
Prestonpans,	1729
Aberdeen Municipal Buildings,	1730
Cramond House,	1732
Whitehouse, Cramond,	1732 / 1752
Inveresk Churchyard,	1735
Elgin,	1736
Lugton, Dalkeith,	1745
Newstead,	1751
Drummore, Musselburgh,	1753
Newstead,	1754
Neworth, Kelso,	1760
West Kirk, Edinburgh,	1774
Newstead,	1777
Cammo,	1795
Newhall,	1810
Amisfield,	1825
Riccarton, Currie Parish,	1829
Currie Churchyard,	1836
Bredisholm,	1840