

ON THE GRATED IRON DOORS OF SCOTTISH CASTLES AND TOWERS.

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Antiquarians have paid little or no attention to Scottish mediæval iron work, partly no doubt because the relics of it are few and scattered, but mainly perhaps because of the superior attractions offered by other subjects, especially those of a prehistoric nature, the study of which has opened up so wide a field for scientific research and speculation. Nevertheless, a certain interest attaches to antiquities of every kind, and when they are peculiarly liable to destruction or decay, as is the case with iron articles, it cannot be an ungrateful task for a Society such as this to preserve some record of them, and thus, perchance, by means of descriptions and engravings, to rescue them from the oblivion with which they are threatened. I have therefore been encouraged to investigate one branch of a neglected subject, which, if thoroughly examined, may turn out to be more extensive than is generally believed.

The cross-barred doors of hammered iron, to the description of which this paper is confined, have perhaps been more fortunate than other ancient articles, composed of the same metal, in escaping the rust of time and neglect, or the more fatal assaults of utilitarianism,—possibly because, long after they ceased to be required for the purpose for which they were originally constructed, they continued to be of some use in barring the entrance to inhabited castles, or to fulfil the humbler office of excluding cattle and other intruders from crumbling ruins. At all events, the number of these iron doors still remaining must be considerable, as from information given by a few friends, and inquiries made in some likely quarters, I am enabled to give a list of twenty-four, which

are to be found in the following counties, castles, and towers, or other localities :—

Peeblesshire, Barns ; *Dumfriesshire*, Isle, Comlongan, Drumlanrig (3) ; *Ayrshire*, Dunlop ; *Berwickshire*, Gordon ; *East Lothian*, Lennoxlove ; *Mid-Lothian*, Crown Room in Edinburgh Castle, Haddo's Hole (now in the Museum) ; *West Lothian*, Dundas ; *Fife*, Pitfirrane, Fordell ; *Forfarshire*, Glamis ; *Aberdeenshire*, Drum, Crathes, Fyvie, Craig ; *Perthshire*, Castle Menzies, Doune (now at Darnick Tower, Roxburghshire) ; *Argyleshire*, Barcaldine, Moy.

No doubt others exist of which I have not heard, but this list is extensive enough to show that these iron doors were not confined to any one district of Scotland, as examples remain to this day in thirteen counties, Lowland and Highland, from the borders as far north as Morayshire. Indeed, there can be little doubt that they were largely used for the defence of even the more insignificant class of fortified houses in Scotland. Thus, Robert Chambers, in his *Picture of Scotland*, mentions that no less than ten fortresses in the parish of Broughton alone were furnished with them. The author was not a man who was likely to make such a statement without being well satisfied of its accuracy, but unfortunately the only evidence bearing on the subject in the text is as follows :—“One of these gates was preserved in the parish for a long time as a piece of antiquity, and had been seen by several people alive thirty years ago” (that is to say, about 1793). Indubitable proof, however, alike of the number of these iron doors on the borders, and of their strength, is to be found in a decree of the Scottish Privy Council, fulminated against them in 1606, entitled “*Irone yettis in the Bordouris to be removit and turnit in plew irinis.*” This Act is published in full in the third vol. of the *Archæologia Scotica*. The preamble complains that from the “*strenth*” of these iron yetts, “*it is very hard and defficle for His Majesties Commissionaires or garisoun to wyn and recover the said houssis and to apprehend the lymmairis therein.*” The Lords of the Secret Council therefore ordain that the “*hail of them should be removit and turned to plew ironis or other necessar work.*” This decree only applied

to "houssis and strenthis pertening to any persone or personis of broken and disordourit clannis, and to common people not being answerable baronis." Thus we see that these iron yetts were not confined to the castles of the great, but were apparently in universal use in all kinds of fortified houses. Whether this order had any effect is unknown. Probably not much. The exception from its application of the more powerful men, probably as great "lymmairis" as the others, seems to indicate the weakness of the central power, whose decrees, as William Chambers shows in his *History of Peeblesshire*, were generally utterly ineffectual in that county when directed against the strong, and of doubtful efficacy even against the weak.

What manner of "irone yettis" then were these, which played so important a part in the defence of Scottish fortresses? In answer to this question, I shall first show the principles of construction and arrangement which are common to them all, and afterwards describe particular examples, giving more minute details, and showing the mode in which they were combined with other defensive means for the protection of the entrances to fortresses in ancient times.

It is a remarkable fact that from north to south the principle of construction of these iron *yetts*¹ is identical, the essential feature being a mutual and alternate penetration of the bars, the alternations taking place not at every intersection of the bars, but in groups according to a uniform system. Thus if we take the Barns yett (fig. 1), we find that it consists of four perpendicular and seven horizontal bars, exclusive of the outer frame. Following out the two perpendiculars on the hinge side, it will be seen that they penetrate the four upper horizontals, and are themselves pierced by the three lower horizontals; the two perpendiculars furthest from the hinges, on the contrary, are pierced by the four upper horizontals, and pierce the three lower horizontals. This principle strictly applies to every one of these yetts, and the result is that they are all divisible into four rectangular parts, of which the upper right

¹ For convenience, I shall generally use the word *yett*, to signify the iron cross barred gates of which I am treating.

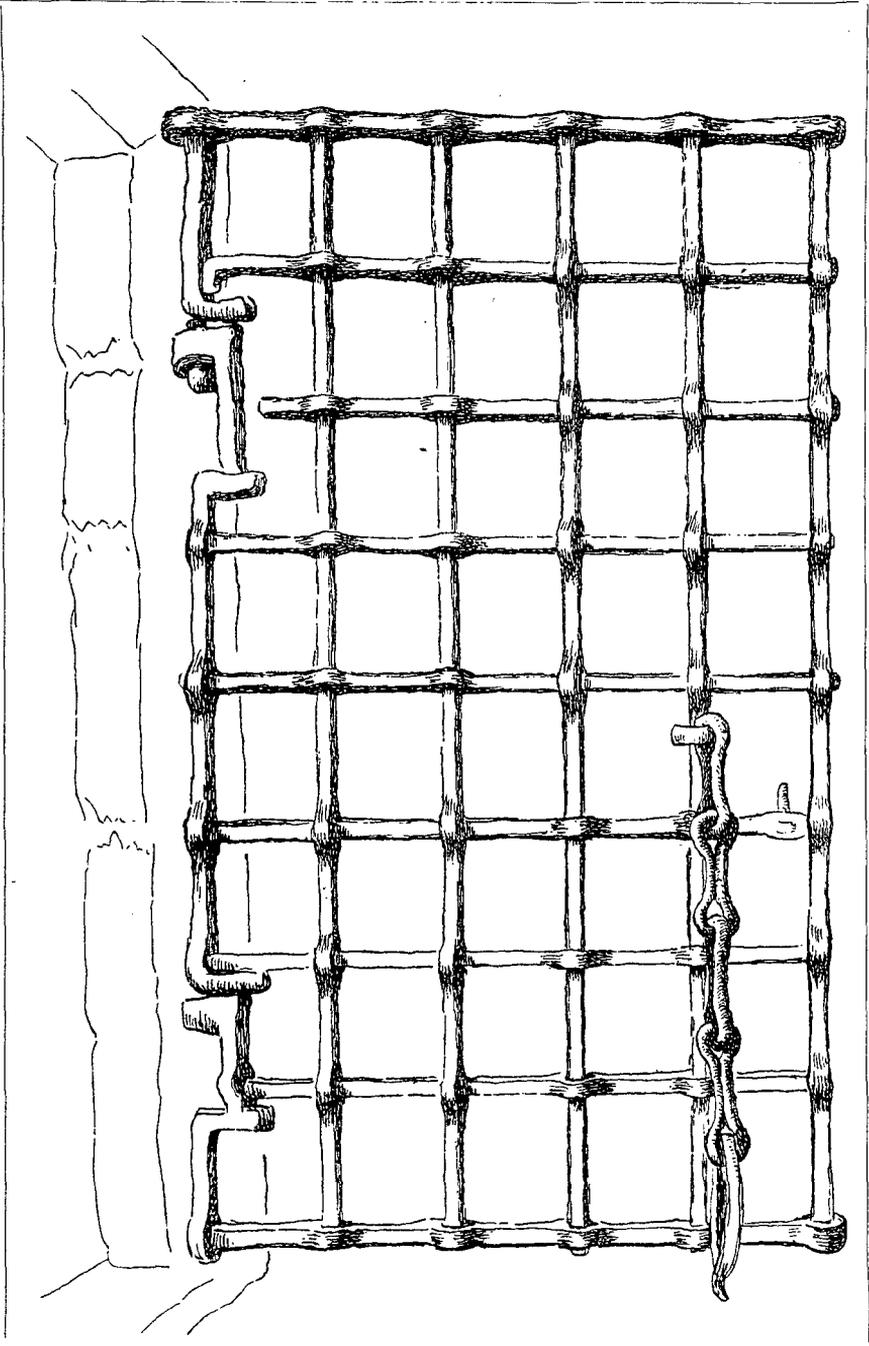


Fig. 1. Grated Iron Door, Barns, Peeblesshire.

and lower left are identical in construction, while the upper left agrees with the lower right. As the bars generally occur in odd numbers, the divisions diagonally opposite to each other, although alike in construction, do not usually agree in area, but the sum of their areas is always equal to that of the other two. All the bars pierce the outer framework, which therefore does not participate in the system of alternate penetration.

The hinges and fastenings are not all of one pattern, but in the great majority of cases they have the following characteristics. The knuckles of the hinges form nearly a circle, and are welded on to the outer margin of the frame. They are not furnished with bands, and are never placed opposite to a horizontal bar. The horizontal limb of the crook is generally almost buried in the masonry, and the whole hinge is sometimes received in a recess of the wall. The yetts were fastened by bolts acting on a principle in common use in modern field gates. They ran into a hole in the wall, and were fixed by a hasp closing over a staple and fastened, presumably, by a padlock. In the Crown Room of Edinburgh Castle a padlock of antique design still remains beside its grate, but I do not know any other surviving example. In some instances, as at Isle, Glamis, and Comlongan, the bolt is cylindrical throughout: in others, as at Edinburgh Castle, Fyvie, and Drumlanrig, it is squared in the central part of its length.

Probably in all cases there was originally a wooden door, studded with large broad-headed nails, outside the iron yett, and generally separated from it by only a few inches. Very few of these wooden doors remain, but the presence of a rebate in the wall, and of hinges, frequently indicate where they had been placed formerly. Holes in the walls prove that in general a bar was stretched across behind either the iron or wooden door. The size of these holes indicates that in some cases the bar must have been of wood, in others more probably it was of iron. As far as I know, only one of these bars, an iron one, still survives.

Such being the general characteristics of the iron yetts, I now proceed to notice them individually; particularly the most interesting examples, of which I have been able to obtain descriptions and drawings.

Barns Tower, Peeblesshire.—The iron yett at Barns was the first to attract my attention, and as it is perhaps the most ancient of them all, I shall not only allow it the first place, but describe briefly the tower in which it still swings on its hinges. This little tower is figured in William Chambers' *History of Peeblesshire*; but by the kindness of Mr Montgomery Burnett, a descendant of the ancient family which possessed



Fig. 2. Barns Tower, Peeblesshire.

Barns from a very early period almost to our own day, I am enabled to give another view of it (fig. 2) taken from a photograph, showing the iron grated door in its present position. The building only measures 29 feet by 20 externally, and has no natural strength of position, being situated on a low mound in the comparatively open and level district where the Manor joins the Tweed. The date of its construction is

doubtful. The figures 1498 are rudely cut in the lintel over the door; but from their style, and the improbability of so old a date being found upon a Scottish tower, it is likely either that they are spurious, or, as William Chambers has suggested, that they were inscribed about a century later, to indicate the age of the building, by William Burnett,—surnamed *the Howlet*, from his skill in conducting midnight expeditions,—whose initials, with those of Margaret Stewart his wife, are carved above one of the upper windows. A weird-looking grey mantle of dead interlaced ivy branches and twigs, killed by the frost of 1880, now almost entirely covers the building, and conceals any external details of interest that may remain. The walls are in good preservation, the roof is modern, and the interior much altered, having been fitted up in recent times to accommodate old servants and retainers of the family.

The entrance is near the north end of the western face. Directly opposite on entering, at the distance of a few feet, is the door of the vaulted basement chamber; and on the left, parallel with the outer wall, is the stone staircase, 2 feet 6 inches wide, which, reaching the north wall in a few steps, turns at a right angle along it, and, by a straight ascent of about a dozen steps, reaches the first floor. This is paved with stone. Strong old beams, resting on stone corbels, support the flimsy modern floor of the room above. This and the upper chamber do not retain any details of interest.

The narrowest part of the doorway is recessed to a depth of a few inches from the outside, and measures 5 feet 7 inches by 2 feet 11 inches. The iron door is fitted into this recess, and being 3 inches wider than the doorway, completely blocks it, and occupies nearly the whole width of the recess. In this position it necessarily opens outwards. A few inches further in there is a modern wooden door in a rebate behind the narrow part of the doorway, and close behind it are rectangular openings in the wall for receiving a strengthening bar; one of these openings runs upwards of 3 feet into the wall, to contain the bar when not in use. The bar, as in almost all similar instances, is not preserved.

I have described the present position of the iron door, but it is possible that it was originally situated further back; not only because the hinges,

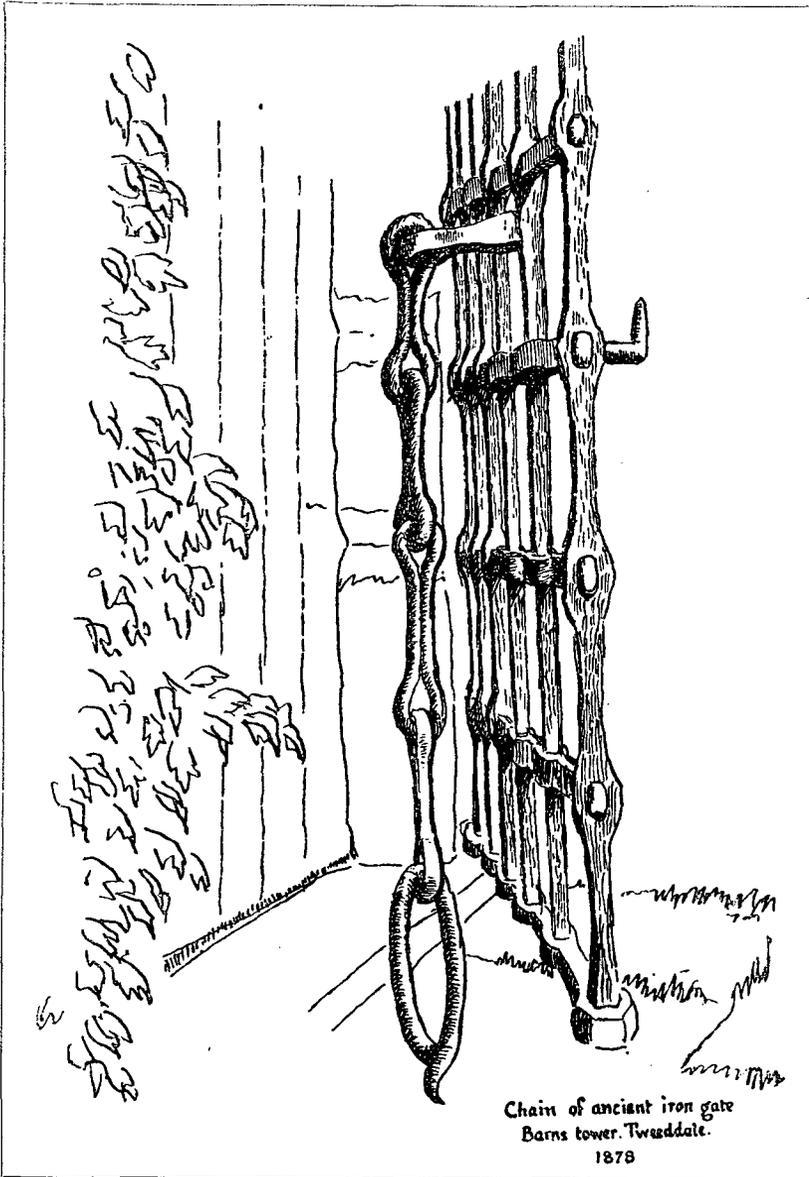


Fig. 3.

as placed at present, are quite exposed, but because all the evidence in other cases goes to prove that it was the practice to place the iron door behind the wooden one.

A general description of the iron door has already been given. The dimensions of the bars are $1\frac{1}{8}$ inch in breadth and $\frac{6}{8}$ inch in depth, widening to 2 inches at the *eyes* or piercings in the bars.

The arrangement of the hinges is peculiar. They are placed in recesses of the frame, in the somewhat complicated manner shown in the engraving.

The mode of fastening is also peculiar. It is done not by a bolt, but simply, as shown in the drawing, by a ponderous chain $2\frac{1}{2}$ feet in length (fig. 3), consisting of four spectacle-shaped links and a final oblong loop. This chain is suspended from a staple which projects inwards from a little below the middle of the perpendicular bar furthest from the hinges. To close the gate the final loop of the chain was fastened to a staple in the wall of the staircase. It is not easy to conjecture the use of a crook which projects outwards from the fifth horizontal bar, close to the end furthest from the hinges.

In three respects—the recessing of the hinges, the absence of bolts, and the fastening by means of a chain—the Barns door differs from all others of which I have drawings or descriptions, and I am inclined, therefore, to believe that it is the most ancient of them all.¹

¹ In the upper chamber of Barns there is preserved, besides the two stones of a quern, a curious iron pot (fig. 4), supported by a tripod, attached to a couple of rings which girdle the pot. One leg of the tripod is missing. The pot is of the form represented here, and measures 18 inches in length by $8\frac{1}{2}$ in breadth at the top and 4 at the bottom, which is rounded, and pierced in the middle by a square hole, about $\frac{3}{4}$ of an inch in diameter. An iron cylinder, about 4 inches long, pierced throughout its length by a similar hole, fits into the bottom. Near the top of the outer surface of the pot are sunk the letter N and figures 4867 with 0-1-6 below them. From their style I am assured by Messrs Sim and Carfrae, that they cannot be older than the beginning of last century. All knowledge of the purpose of this vessel seems to be lost. It is said that many other iron relics were given, some years ago, to a passing tinker.

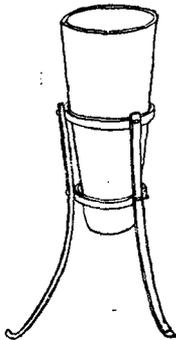


Fig. 4.

Isle, Dumfriesshire.—This little tower, smaller even than Barns, as it measures externally only 23 feet by 20, is one of the few in Scotland which has in a great degree escaped destruction alike from violence in warlike ages, and from the more fatal decay produced by neglect or spoliation in recent times. The walls and two flanking turrets are in good preservation, the modern slated roof appears to be constructed on the old lines, and the stone roof of the basement and oak beams of the roof of the first floor still remain. Although incorporated with the

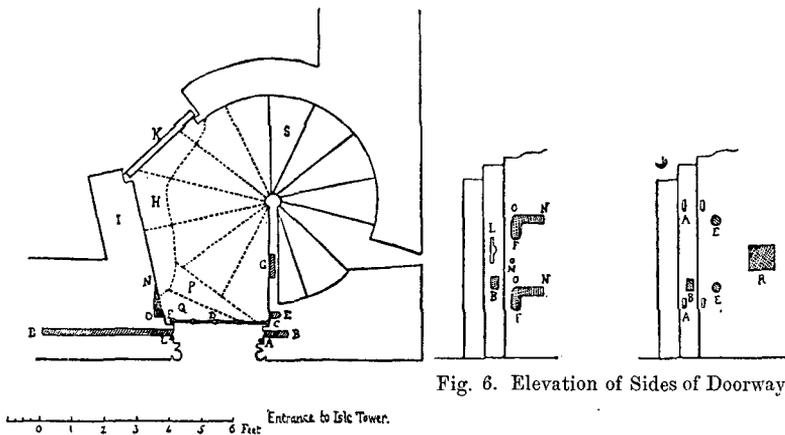


Fig. 6. Elevation of Sides of Doorway.

Fig. 5. Ground Plan.

modern house, and fitted up for residence, the tower retains ancient details of interest, which are carefully preserved by Mr Gillon Ferguson, the representative of the family, whose arms, with the date 1587, are carved on a stone above the entrance. To his kindness, and the great trouble he took to make sketches and measurements for me, I am indebted for the plan and elevation here given (figs. 5 and 6). These are of peculiar value, as the system of defence in this doorway was either more elaborate originally, or has been better preserved than in any other example with which I am acquainted.

The wooden door has disappeared, but hinges and a staple, marked

AA and L in the ground plan and elevation, remain to show that it was swung in the outer rebate in front of the iron door. Immediately behind the position of the wooden door are the holes BB, pierced in the wall, to receive the strengthening bar which stretched from side to side when in use, and at other times was run into the deeper hole on the left, to be out of the way. Next comes the iron door D, fastened by a strong bolt running into the hole N. Close behind it, on the hinge side of the wall, are the holes EE, one about 21 inches above the other. These were evidently intended to receive the ends of two bars, which were placed in position by slipping their other ends along the slots NO, and then dropping them down to FF. When in position these bars were not horizontal, the ends at EE being 5 inches higher than at FF. There are no tunnels to receive these bars, probably because, unlike the bar behind the wooden door, they were not used in ordinary times, but only when an attack was apprehended.

Thus the defences of the entrance comprised—first, a wooden door, with its hinges protected by a rebate; secondly, a bar stretching across from wall to wall; thirdly, in an inner rebate, the iron grate; and lastly, two bars, stretched behind it from wall to wall—all four lines of defence resting, or almost resting, on each other. Probably this was the full arrangement in Scottish fortified doorways; but except in this instance it was rarely, if ever, complete. In many cases apparently only one of the doors had been strengthened by a bar; in others no bar holes now remain, perhaps owing to alterations made in the doorways in comparatively modern times.

A full description of this interesting little tower would be beyond the scope of this paper; but, in connection with the doorway, the plan shows the little vestibule beyond, bounded by the grated door D, the wall I, dungeon door K, and the foot of the circular stair. The roof of this vestibule is formed by the upper half of the first circle of the stair, the steps of which it is composed being shown by dotted lines. To support the stair above, a coarse cornice or buttress H, is thrown out from the upper part of the wall I, aided by subsidiary step-like buttresses R and

Q, which run from it to rest on the lintel of the door. In the staircase above the door, and about 7 or 8 feet from the ground, there is a loop-hole specially intended for the defence of the entrance. It is not shown in the plan.

In addition to these particulars, I must be content with mentioning that one of several small square cupboards in the substance of the walls seems specially intended for the concealment of valuables. At first sight it appears not to differ from the others, but the hand can be passed through a little hole in its roof into a similar space above, and it is obvious that if valuables were placed there, and the hole closed with a well-fitted stone, it would require no ordinary search to find them.

The iron door has the usual arrangement of the bars. The hinges are almost buried in the wall, and the top of the door is so near the roof of the doorway that it could not possibly be lifted off its hinges.

There is only one bolt, of the kind which is cylindrical throughout. Its total length is 19 inches. It slides through two circular staples $2\frac{3}{4}$ inches in diameter, one welded into the frame, and the other into the next perpendicular bar. The hasp passes through a slightly expanded part of the bolt, to which it is welded, an inch nearer the outer than the inner end; it is 10 inches long, and closes on a staple, which projects 4 inches from a horizontal bar, and is 3 inches wide.

Comlongan Castle, Dumfriesshire.—This ancient seat of the Murrays of Cockpool, although little is known of its history, must have been an important border fortress. It is a large and lofty square block, which still produces an impressive effect from its stern and massive simplicity. Few Scottish castles of the fifteenth century—for such from its style appears to be the date of its erection—are so well preserved. The wood-work indeed is gone, but the masonry is almost perfect, from the vaulted basement to the parapets, chimneys, and other structures on the top. Comlongan is also remarkable among Scottish castles in possessing machicolations, which, although in some places concealed by modern roofing, appear to run along the whole parapet on all sides. Other

interesting details survive, such as the aperture for the admission of air to the dungeon, a small chamber adjoining the large stone-roofed basement, and entered from a hole in the floor of a passage above. This air aperture turns twice at a right angle before reaching the outside, so as to

exclude light, and prevent the passing of anything from without to a captive within.

I am indebted to Mr Hutton, factor on the estate, not only for showing me the points of interest in the castle, but for measurements and detailed descriptions of the fine iron grate, which still hangs in position in the doorway. The accompanying view of it (fig. 7) is from a sketch taken by myself. This yett is of considerable size, measuring 7 feet 6 inches by 4 feet $1\frac{1}{2}$ inch. The upper part, which is round-headed, is concealed in the sketch by the corresponding arch of the doorway. The bars are of unusual strength, averaging $1\frac{3}{4}$ inch in breadth and 1 inch to $1\frac{3}{4}$ inch in

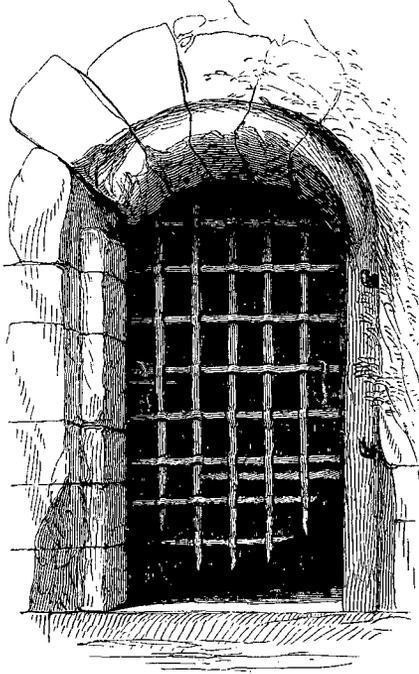


Fig. 7. Grated Iron Door, Comlongan Castle.

depth, expanding to $2\frac{3}{4}$ inches at the *eyes*. Within the frame there are five perpendicular and eight horizontal bars. The lower part of the door is much worn away, and the original lower hinge has been replaced by another, also apparently of great age, furnished with a band, which is shown in the drawing. This is the only one of these iron grated doors in which I have met with a hinge-band, and in this instance it is evi-

dently not original. A couple of iron links or bracelets hang one at each end of the fourth horizontal bar, counting from the top, as shown in the drawing. So far as I know they are the only examples of the kind remaining in Scotland. They are of a squarish form, but with the angles slightly rounded, and measure 8 inches in length by 5 inches in breadth at the widest part, contracting to 4 inches at about a third of the distance from one end. Their girth, which is not round but rectangular in form, measures 1 inch. As they are on a level with the holes in the wall for the strengthening bar immediately behind the door, there can be little doubt they were intended to receive the bar, and thus bind it to the grated door.

The details of the jambs are much obscured by the wear of centuries, but it does not seem possible that there could have been a wooden door in the usual place, because, although there are two rebates in the wall on the bolt-side of the iron door, there is only one on the hinge side, and the hinges of the iron door do not leave space for other hinges in the rebate. But in front of the rebate, as shown in the sketch, two hinges, the lower of which is much worn away, probably indicate the place where a wooden door formerly hung, although the situation is unusual and exposed. The door is closed by a single bolt, cylindrical throughout, $16\frac{1}{2}$ inches in length, with a hasp 9 inches long. The original hinge is of the ordinary type. No loopholes specially protect the doorway, but it could be effectually defended from the machicolations on the rampart at the top of the castle.

Drumlanrig Castle, Dumfriesshire, has no less than three iron yetts. On the ground floor there is a narrow passage running parallel with the front of the castle, and terminating at each end by turning forward into projecting wings. Each of these ends is protected by an old oaken door, and a few inches behind it by an iron yett, measuring 6 feet 8 inches by 4 feet 2 inches, constructed in the usual way. The main entrance, on the first floor, is likewise defended by a wooden door, which however is modern,—occupying no doubt the place of an older one in the first rebate,—and, a few inches behind it, by an iron yett in the inner

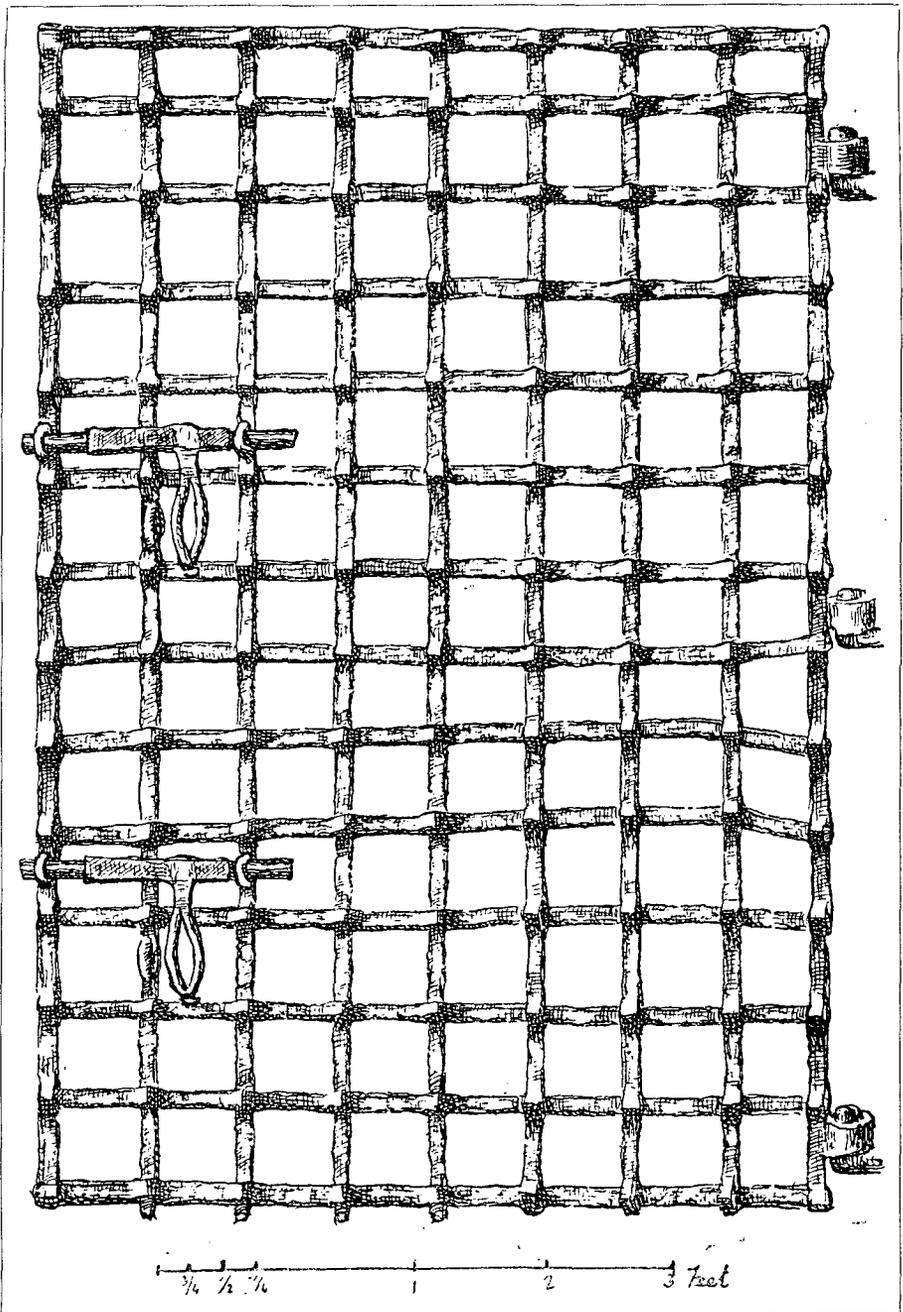


Fig. 8. Grated Iron Door, Drumlanrig Castle.

rebate. There are no traces of holes in the wall for strengthening bars behind either the large or small doors and yetts.

Mr Dickson, chamberlain to the Duke of Buccleuch, procured for me good plans of the three yetts made by James Letham, a workman at the castle. I give here a representation of the large one (fig. 8), from sketches made by myself, aided by the plan. The irregularity in the placing of the bars, which characterises all these Scottish yetts, is nowhere more manifest than in this instance. The upper horizontal bar is much nearer the top of the frame than it should be, if equality of arrangement were aimed at; and marked irregularities occur in the three bars below the middle hinge. The uppermost descends in the first space, and is slightly curved in the rest of its course. The two below it ascend at a considerable angle in their first spaces, and are by no means horizontal afterwards.

The great iron door of Drumlanrig is a fine specimen of hammered iron work, and is the largest of my examples. It measures 9 feet 1 inch by 6 feet $1\frac{1}{2}$ inch, and consists of seven upright and twelve horizontal bars, which vary somewhat in dimensions, the largest approaching $1\frac{1}{2}$ inch by 1 inch, expanding to nearly 3 inches at the eyes. The three hinges, of which the crooks are $2\frac{1}{4}$ inches in diameter, are contained in recesses in the wall. The two bolts are of the type which is rectangular in the middle third. Fig. 9 gives a half-side view of one of them, with its hasp and staples.

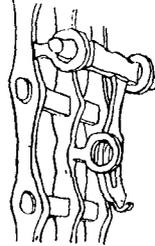


Fig. 9.

Great as the size of this yett is at present, I think there can be little doubt that it has suffered mutilation below, for the following reasons:—

1. The perpendicular bars project in an unfinished manner below the present lowest bar, as if they had been roughly cut off.
2. The lower bar shares in the system of alternate piercing, which never happens in an undoubtedly perfect yett.
3. The horizontal bars in the lower alternating division bear to those in the upper division the proportion of five to seven, but in all perfect yetts that proportion is such that one division is either equal to the other, or only exceeds it by one.

There can be little

doubt, therefore, that the present lowest bar was originally a contained bar, and that the lower bar of the frame is missing. Perhaps this mutilation took place to suit some alteration in the doorway, in which process holes in the wall for bars may also have disappeared.

Dunlop, Ayrshire.—The history of an iron yett which lies in a wood here is unknown. It is much decayed, and the upper bar is entirely gone. It measures 5 feet 11 inches by 3 feet 10 inches, and has five upright and nine horizontal bars. It has three hinges, and of two bolts only one remains.

Gordon, Berwickshire.—In this fortress, which bears the date 1581, there is an iron yett, 6 feet $1\frac{1}{2}$ inch in height and 4 feet 2 inches in width, containing five upright and eight horizontal bars. The arrangement for the strengthening bar, which stretched behind it, is peculiar.

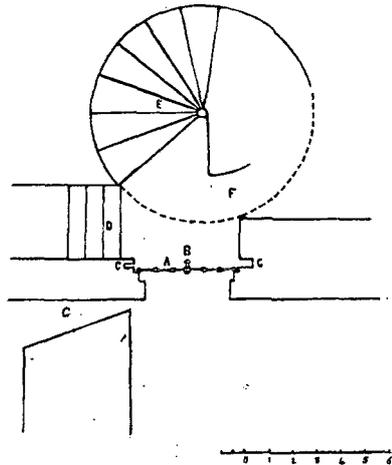


Fig. 10.

The bar is gone, but it evidently pivotted round an iron pin (B in plan, fig. 10) which still remains, and which pierces the middle of the central perpendicular bar. This bar is a little stouter than its fellows throughout, and at this particular part is further strengthened by expanding in all directions into a rounded form. The pin is $6\frac{1}{2}$ inches long, has a head $1\frac{1}{2}$ inch in diameter on its outer end, and a nut on its inner end, by means of which the bar could be screwed tight to the iron door. The ends of this revolving bar were received in perpen-

pendicular slots, of unequal width, CC, set the reverse way to each other, in the jambs of the doorway. The slot on the right, entering 1 foot 8 inches from the ground, gradually penetrates the wall *upwards*, to a depth

of 6 inches, at a height from the ground of 3 feet 2 inches. The slot on the left, entering 4 feet 9 inches from the ground, penetrates the wall *downwards* to a depth of 5 inches, ending at a height of 3 feet 6 inches from the ground. Thus when fairly in position one end of the bar would be 4 inches higher than the other. There is no trace of this peculiar arrangement in connection with any of the other yetts.

The position of the yett is the usual one, in a rebate a few inches in rear of a rebate for a wooden door, of which the hinges still remain. The doorway is situated close to a re-entering angle of the house, and could be defended by missiles or spear thrusts from a flanking loophole G, splayed inwards on one side only, 2 feet in height and only 2 feet from the ground. The rough ground plan, prepared from measurements kindly taken for me by Mr Stobbs, the minister of the parish, also shows the stairs D to the kitchen, and the entrance F to a chamber under the circular staircase.

Lennoxlove, East Lothian.—Lennoxlove “originally consisted of a square tower or fortalice eighty feet high, built by one of the powerful family of Gifford, and in ancient times must have been a place of considerable strength, the walls being throughout ten to thirteen feet thick.” “A ponderous grated door at what appears to have been the original entrance of the tower remains, to add to the proofs of the strength of the fortalice.”—*Mansions of the Lothians.*

Edinburgh Castle.—The room containing the Scottish Regalia is still fittingly defended by an ancient iron grated door of the national type. It is a strong and well-preserved specimen, measuring 6 feet 3 inches by 3 feet 3½ inches, and consists of four perpendicular and eight horizontal bars within the frame. The bars are unusually thick for a door of its size. They vary slightly in dimensions, but to no greater degree than the eighth of an inch, their average width being very nearly 1½ inch and the depth 1 inch, expanding to fully 2½ at the “eyes.” In the frame these expansions are exceptional, being only present on the inner or bolt side.

The hinges, two in number, are of the usual form.

The door is closed by a single bolt, of which, as it is a fine example, I

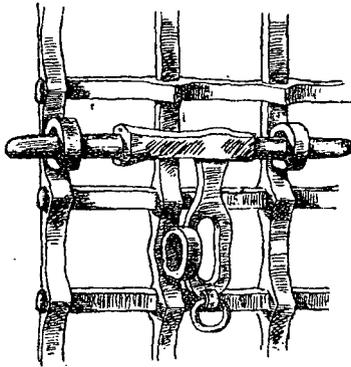


Fig. 11.

give a drawing (fig. 11) taken by Miss Barbara Peddie. The bolt is placed midway between the top and bottom of the door. It belongs to the type which is rectangular in the middle and cylindrical at both ends. The hasp is placed much nearer the inner than the outer end of the central division. Attached to the curled-up extremity of the hasp there is an iron ring, evidently to aid in moving it. The two staples through which the bolt slides, and the staple on which the hasp is fastened, are nearly circular in form, without visible necks, but they pass through slightly expanded portions of the bars to which they are welded.

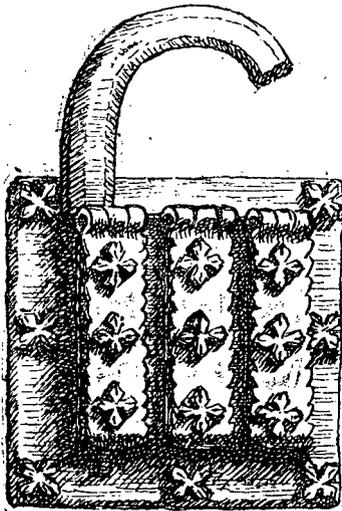


Fig. 12.

Miss Peddie has also drawn the padlock (fig. 12), perhaps the only one which still remains beside its grated door, although no longer used. It is made of iron, and measures $7\frac{1}{2}$ inches square in front. The central portion, an inch within the outer margin, is raised one inch. The central ornamental button turns and allows the middle band to be raised, displaying the keyhole within. A small piece of iron projects from the interior, below one of the lateral bands, and there is a hole for a similar piece below the other. The curved clasp is octagonal; about a third

of it is gone, having doubtless been broken off when the crown room was forced in 1794. This operation was necessary, as it was not known where the keys had been deposited when the crown room was shut up eighty-seven years previously.

Antiquarian Museum, Edinburgh.—The only specimen of an iron yett in our Museum is the door of "Haddo's Hole," the prison formerly so strangely placed in St Giles' Church. It measures 5 feet 3 inches by 3 feet, and has three upright and seven horizontal bars, which are remarkable for the bevelled external edges of their eyes. The marks of two bolts remain, and a modern chain of six ordinary links hangs from one of the bars.

Dundas Castle, West Lothian.—From observations taken by my brother, Mr Christison, the iron yett here measures 7 feet 3 inches by 4 feet 7 inches, has six upright and ten horizontal bars, and is slightly arched at the top. It has only one hinge, situated about 20 inches from the top. There is a hole in the wall opposite the usual position for a lower hinge, but it is not used, and the bar of the frame is prolonged with a bend so as to pivot on the floor perpendicularly below the hinge. There are two cylindrical bolts, with hasps of a peculiar form. They have a lop-sided appearance, as the holes for the staples are considerably to one side of the middle line. This was necessary to enable the hasps to close on the staples, as the latter are nearly underneath the bolt-staples. The lower hasp-staple, which is broken off, was fixed on the portion of a bar which fits close alongside of the frame bar, as shown in the sketch (fig. 13). Probably the object of this arrangement was to bring the fastenings well within the shelter of the rebate. As the yett closes so as to be parallel with the flat surface of a wall, the bolts cannot run into the wall; but there are apparently the remains of a provision for receiving them in a suitable iron projection, as in each case there is a pair of holes in the wall about $2\frac{1}{2}$ inches square and a foot apart, one above, the other below the level of the bolt. Some of these holes still contain remnants of iron.

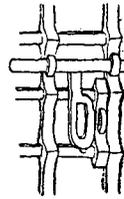


Fig. 13.

The position of the Dundas yett is unique among my examples. The rough ground plan (fig. 14) shows that, when shut, it is at right angles to a wall ten feet in thickness, while on the bolt side it rests, as already explained, on the flat surface of a wall. This wall is only about a foot thick, and forms the outer side of the commence-

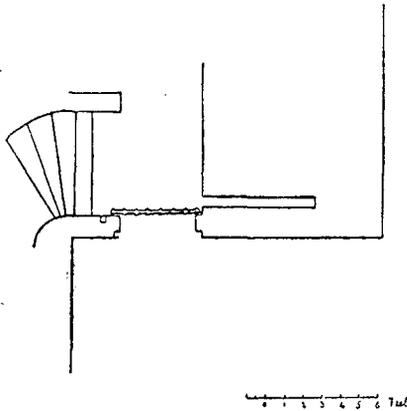


Fig. 14.

ment of the stair, which is on the right hand of the entrance. This stair has no door proper to itself. A few feet within the iron yett and parallel with it, a modern wooden door gives access to the vaulted basement chamber. But there is no reliable sign of a wooden door having been placed in front of the iron yett. Immediately behind the latter, in the ten foot wall, there is a tunnel 5 inches square and 6 feet deep for a strengthening bar; but

there are no remains of any provision for fixing such a bar on the other side, where, from what we have already said, it is evidently impossible that it could have been run into the wall. There can be little doubt from these peculiarities, that the doorway must have undergone great alterations, and of this we have further proof in the fact that the arch of the doorway in no way conforms to the arch of the yett.

Pitfirrane House, Fifeshire.—This handsome grate, measuring 6 feet 4½ inches by 4 feet 7 inches, and comprising five upright and eight horizontal bars, with two hinges and two bolts of the ordinary type, now stands between pillars in the park. It was placed there for preservation by Sir Arthur Halkett, who has given me the following interesting account of it:—“The iron gate formerly hung at the entrance to a large vaulted apartment on the ground floor of Pitfirrane House; the ‘dooks’ on

which it was hung, and the holes in the stones for receiving the massive bolts, still remain. I fancy this large dungeon, as it was once, with an earthen floor and only a small orifice for light, was used to drive the cattle into at night for safety. Before an addition was made to the house, about 200 years ago, the entrance to the apartment was outside the house; now it is inside, opening on a corridor. I had been told of the existence of this gate by an old servant of the family, and finally discovered it, used as the covering of an old disused well in the park, with some boards over it, and covered with weeds. Being anxious to preserve so interesting a relic, I put it in its present position." Sir Arthur also informs me that the iron door was hung quite at the outside of the entrance to the vaulted basement, and that there is no sign of a door having been outside it. The wall is 9 feet 6 inches thick, and he thinks that there was probably another door at the inner end of the entrance, but there was no sign of such in

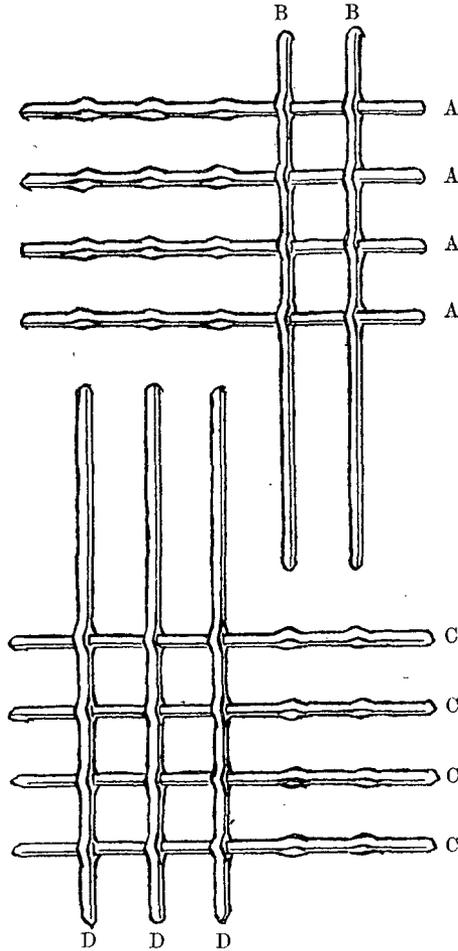


Fig. 15.

door at the inner end of the entrance, but there was no sign of such in

his time, and the entrance has undergone many alterations. To Sir Arthur Halkett I am also indebted for an explanation of the way in which these iron doors were put together, which has been a puzzle to many people. Let us take the Pitfirrane gate as an example (fig. 15). First let the four upper horizontals AAAA be passed through the two right hand perpendiculars BB, into the position they are ultimately to hold with regard to them. Then pass the four lower horizontals CCCC, in the same manner through the three left hand perpendiculars DDD. Then place the two half gates thus formed opposite each other, and it is evident that they can be driven into position. If the perpendiculars BB are driven through the holes in CCCC, the perpendicular DDD will at the same time pass through the holes in AAAA, or *vice versa*. The framework, which does not share in the system of alternation, can then be hammered on to the ends of the bars on all sides.

Fordell, Fifeshire.—From information obtained for me by Mr James Turnbull, St Colme House, I learn that the yett at Fordell is in good preservation, and that the bars, hinges, and bolt are constructed on the usual principles. One unusual detail, however, is the insertion of small arched iron struts in the angles of the frame to strengthen the corners; and another, that the bolt is prevented by collars from moving too far either way. The dimensions of the yett are 6 feet by 4 feet 2 inches, and it has four perpendicular and nine horizontal bars. There is a wooden door 6 inches in front of it, and there are holes in the wall for a strengthening bar behind the wooden door.

Glamis Castle, Forfarshire.—In this splendid edifice the old iron grate is preserved in good condition. From plans and measurements made by Mr Stevenson, the minister of the parish, I give the accompanying representation of it (fig. 16). Its height is 6 feet 8 inches and breadth 4 feet 8 inches, smaller dimensions than one might expect in the yett of so large a castle. It has six perpendicular and nine horizontal bars within the frame. Each bar, in the half which pierces other bars, measures $1\frac{1}{2}$ inch in breadth by $\frac{5}{8}$ ths of an inch in depth, but in the half which contains the eyes is $1\frac{1}{8}$ inch square in section. It has two hinges of the

ordinary type, and two bolts $14\frac{1}{2}$ inches in length, $1\frac{3}{8}$ inch in diameter,

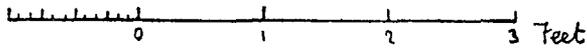
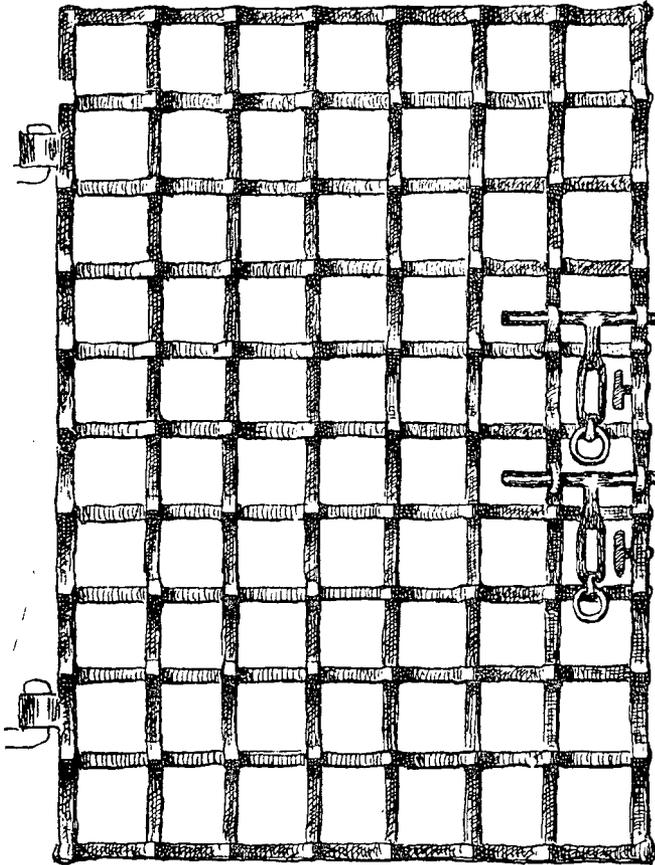


Fig. 16. Grated Iron Door, Glamis Castle.

and cylindrical in form throughout. Each hasp is a foot in length, and

has a hook at the bottom from which hangs a ring. The staple does not, as usual, spring directly forward from a bar, so as to be protected by it, but from a neck which penetrates the bar of the frame sideways, and is then directed forward. The iron door is $4\frac{1}{2}$ inches behind an oaken one, of which the wood is modern, but the iron ancient, including hinges, bars, and square-headed nails with which it is strengthened, and an iron knocker with the date 1687. Each door is protected by a rebate. A single hole in the wall is the only evidence that strengthening bars may have been in use formerly.

Drum Castle, Aberdeenshire.—I am indebted to Mrs Forbes Irvine for drawings and a description of the yett at Drum. It measures 5 feet 6 inches by 3 feet 9 inches, and consists of six upright and nine horizontal bars, besides the frame. The upright bars, however, bear distinct evidence of having been roughly broken over, where they project awkwardly above the present top of the gate (fig. 17); and from other evidence, precisely similar to that which has been adduced in the case of the Drumlanrig grate, there can be no doubt that the Drum yett has lost a horizontal bar, besides the top bar of the frame.

The hinges of the Drum yett differ entirely from all my other examples. The knuckles encircle the bar of the frame, which forms the pivot on which they turn, and is protected from friction by collars inserted between it and the knuckles. The hinge-bar is also prolonged so as to pivot on the floor. The only other example of this is at Dundas Castle. The bolt, which is $21\frac{1}{2}$ inches long and $1\frac{1}{2}$ inch in diameter, and cylindrical in form, in place of a hasp has a handle consisting of a short bar with a knob at the end, and it does not appear how the bolt was fastened.

The yett occupies the usual position, a few inches in rear of the place for a wooden door, of which the hinge-crooks still remain. There is a small rebate for the wooden door, but none for the yett, and there are no holes for bars in the wall.

The bars of the yett measure from $1\frac{1}{8}$ inch to $1\frac{1}{2}$ inch in diameter, but lumps of rust are constantly scaling off, so that they do not now retain their original thickness and strength. The same gradual loss of substance has evidently taken place in most if not all of the other yetts.

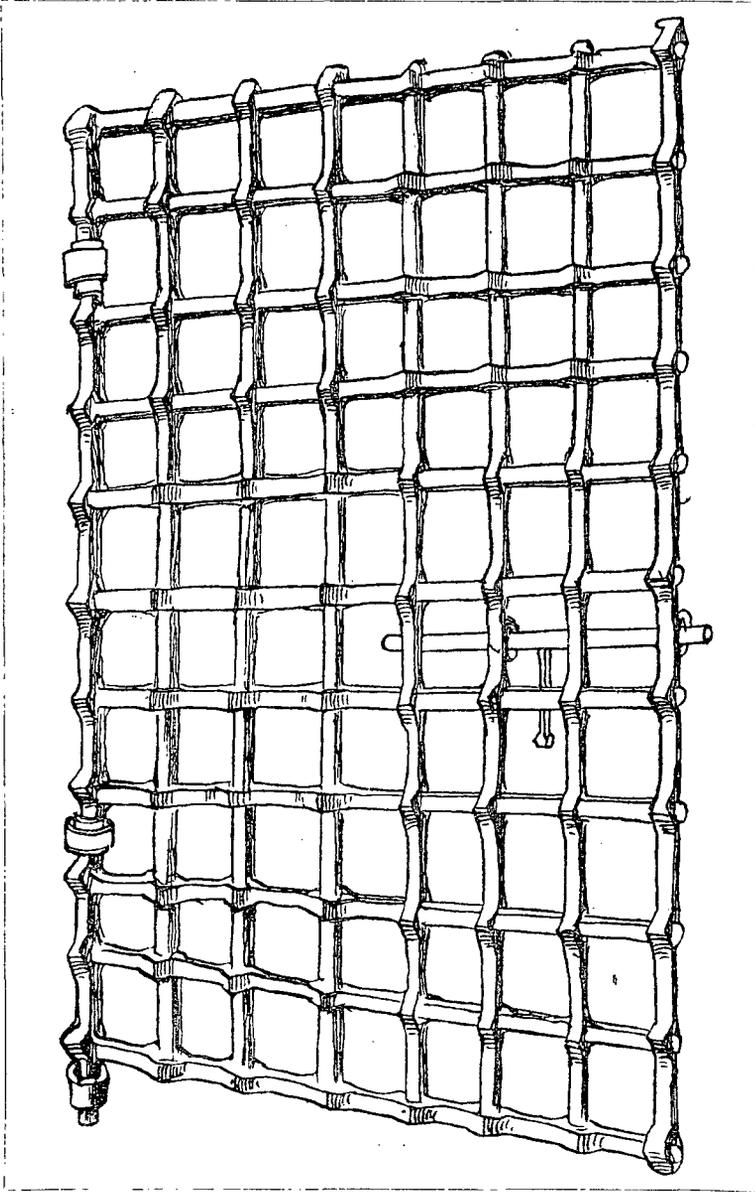


Fig. 17. Grated Iron Door, Drum Castle.

Crathes Castle, Aberdeenshire.—I am informed by Mrs Forbes Irvine, that there is a small iron yett here with four upright and eight horizontal bars, two hinges of the ordinary form, and two bolts. The latter are remarkable for the zigzag form of their hasps. They are thus fashioned to enable them to close on their staples, which are situated on the frame-bar, directly below the bolt-staples. One of these hasps is much worn, the other looks modern. This yett was originally in the usual position, behind a wooden door, but is now placed in front of it, hinged and bolted on the outside of the wall, that it may be better seen by visitors.

Fyvie Castle, Aberdeenshire.—This handsome castle, which rivals Glamis itself in dignity, has an iron yett of the first rank. My description of it is entirely derived from Dr Milne, the minister of the parish, and the illustration (fig. 18) is from an accurate drawing made by his son, Mr Leslie Milne. This elegant gate is arched at the top, and measures 9 feet in height by 5 feet $4\frac{1}{2}$ inches in breadth. It consists of seven perpendicular and twelve horizontal bars, besides the frame. The perpendiculars are much wasted between the lowest horizontal bar and the frame. The bars, like those of Glamis, alter their dimensions in the two divisions of their length; where pierced they are about $1\frac{1}{2}$ inch square, expanding at the eyes to $2\frac{5}{8}$ inches, but in the penetrating division they are $1\frac{1}{2}$ inch by 1 inch. In the frame the bars are rather larger. The three hinges are of the usual form, and are contained in recesses of the wall. The three bolts are squared in the middle, and are the most massive I have met with. They differ in size, the upper one being 25 inches in length, and the two lower ones 29 inches, and each has a different maker's mark upon it. The hasps are of the same form as those at Glamis, ending in a small hook and ring.

The position of the grated door is quite peculiar. I therefore reproduce Mr Leslie Milne's ground plan (fig. 19) of the defences to the entrance of the castle, from which it will be seen that the iron door B is 6 feet 8 inches behind the wooden one A. In no other instance have I found evidence of the two doors being separated by more than a few

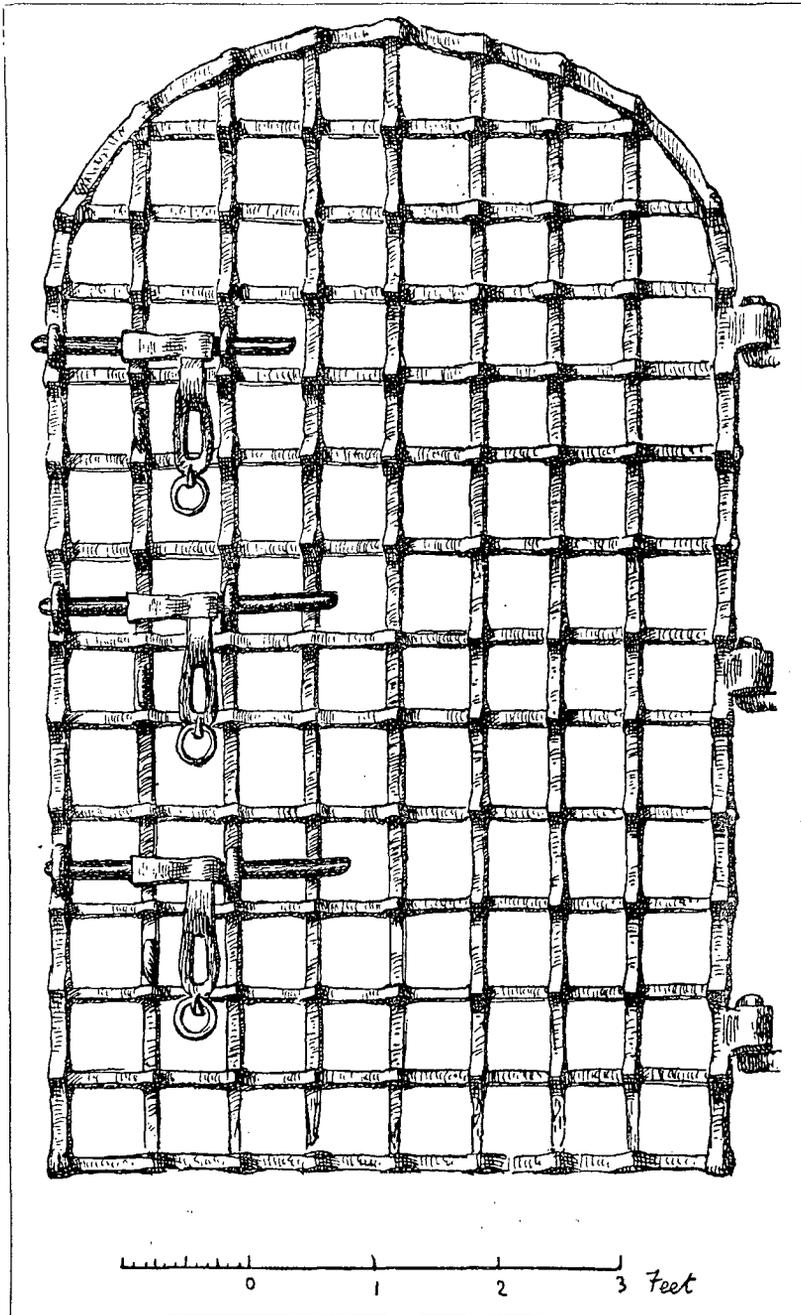


Fig. 18. Grated Iron Door, Fyvie Castle.

inches; but Sir Walter Scott may have seen a similar arrangement to that at Fyvie, because, in *The Black Dwarf*, he describes the iron and

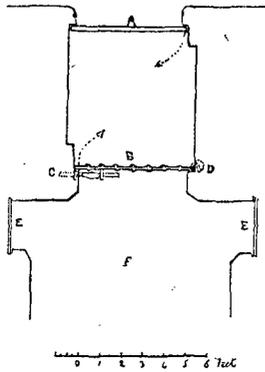


Fig. 19.

wooden doors at Westburnflat as being separated by a distance of 9 feet. He also places the iron door in front of the wooden one, but there is no clear evidence that this was the case in any of the examples known to me. It may be doubted whether the arrangements at Fyvie are precisely what they were originally, as the iron grate, for instance, is placed *in front* of a rebate, and the irregularities of the wall suggest that the doorway may have undergone alterations in the remodellings of the building which took place in 1596 and 1777, or at some other time.

Castle of Craig, Aberdeenshire.—An iron yett here is figured but not described by Mr A. Jervise, in the *Proceedings of the Scottish Antiquarian Society*, vol. viii. p. 324.

Coxton, Morayshire.—This is perhaps the most remarkable tower in Scotland. It is fire-proof, all the chambers being vaulted with stone, and no wood used in its construction. It dates from 1550, and was in perfect preservation when Mr Billings first drew attention to it in *The Baronial Antiquities of Scotland*. He mentions having seen two iron doors in it, but I am assured by Mr Hay, the tenant, that there is only one now. He informs me that it measures 6 feet by 3 feet 3 inches, and has four upright and seven horizontal bars, besides the frame. There are two hinges of the ordinary type, and a cylindrical bolt with hasp and lifting ring of the usual form;— $4\frac{1}{2}$ inches in front of the yett there is a wooden door.

Castle Menzies, Perthshire.—The iron door at Castle Menzies might at first sight be supposed to be in its original position. As seen in the engraving (fig. 20), taken from a photograph by permission of Sir Robert Menzies, it seems to be quite naturally situated, protected by a rebate in

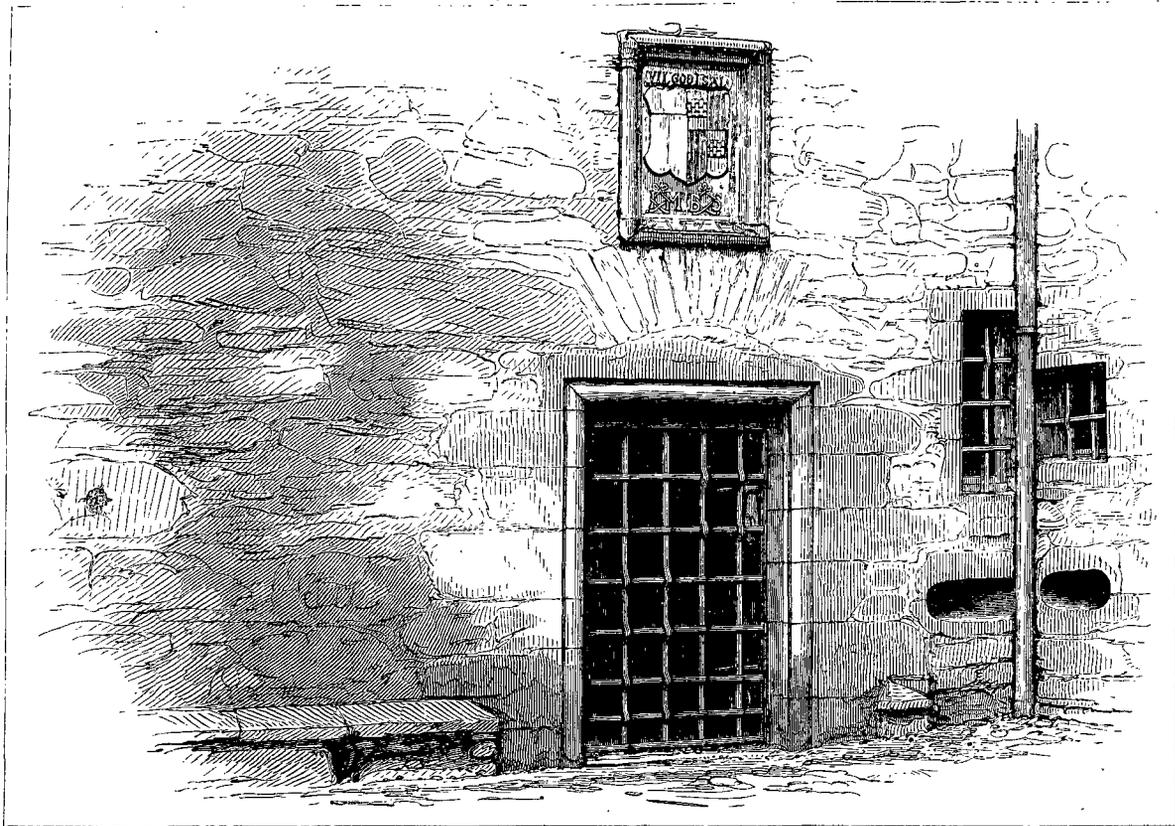


Fig. 20. Old Entrance and Grated Iron Door, Castle Menzies.

the doorway, and in front of the wooden door; nevertheless, such was not the primitive arrangement, and the following history of the changes made, given to me by Sir Robert, affords an instructive warning to antiquaries to avoid drawing conclusions too hastily from the present aspect of things:—"Formerly there was a wooden door of oak, studded with large-headed iron nails, situated outside the iron door, opening inwards, and having hinges on the right. The iron door, a few inches further in, also opened inwards, with hinges on the left, and was closed with two bolts of similar construction to those now used in field gates, with a loop for a padlock; also by an iron bar stretching right across from holes in the wall. The two doors were as close to each other as the working of the hinges would allow; in fact, the iron door must have almost pressed against the wooden one, so as to support it and prevent it from being forced inwards. Some years before 1840, the ancient doorway was built up, and the iron door was left leaning against the wall. In that year, the doorway was re-opened and the iron door replaced, but not in the old position. In order that it might be seen by visitors arriving at the new entrance to the castle, the architect, Mr Burn, reversed its position with regard to the wooden door, so that it is now before instead of behind the latter."

There is nothing particular to note in the structure of the door itself. The representation shows all the bars, but three sides of the outer frame are concealed by the rebate.

The doorway is remarkable, however, as being, so far as I can learn, the only one which retains a strengthening bar. This is of iron, and is put in position, as Sir R. Menzies informs me, by first passing one end into the right hand hole in the wall, then passing the other into the left hand hole, until it can be dropped over a staple which projects from the floor of the hole, some distance within. The staple passes through an eye in the bar, which is thus prevented from moving horizontally, and it was no doubt restrained from being lifted upwards by a pin passed through the staple. The dimensions of the bar are 5 feet 3 inches, $2\frac{1}{4}$ inches, and $1\frac{1}{2}$ inch. The eye is $2\frac{3}{4}$ inches by $1\frac{1}{4}$ inch. The staple stands

4 inches high, and is 2 inches by 1 inch in its other dimensions. The circular hole in it is $\frac{3}{4}$ inch in diameter. The holes in the wall are $5\frac{1}{2}$ inches high and $2\frac{3}{4}$ inches wide.

Two loopholes specially intended for the defence of the doorway are shown in the photograph; and at some distance to the left a round aperture may be seen, of which Sir Robert gives the following curious account:—"This was a kind of punishment 'branks.' The hole penetrates the wall, of equal diameter throughout; the arm of a culprit was put through it and secured by a bracelet and chain, leaving him standing outside." The photograph also shows the windows on the ground-floor, defended by grilles constructed on the same principle as the door.

Doune Castle, Perthshire.—An iron yett is now fitted up at Darnick Tower, Roxburghshire, which, I am informed, originally came from Doune. There is still at Doune a very large iron grated door, with a wicket in it, which, from a drawing in Billing's *Baronial Antiquities*, seems to be of a more modern construction than those which I have been describing.

Barcaldine Castle, Argyleshire.—The iron door here is much decayed. It still hangs in a forlorn-looking manner from the upper hinge; not only is the lower hinge gone, but the lower third of the gate itself has disappeared. Within the frame it has five perpendicular bars, and the horizontal ones must have numbered eight if not nine, of which only five and the greater part of the sixth remain. The bolt is also gone. As this door is so imperfect, I do not reproduce the drawing kindly made for me by Mr Anderson Smith; but it shows that here in the Western Highlands an iron cross-barred door of precisely the same construction as the Lowland examples was in use. Mr Anderson Smith's drawing and description also prove that the other defensive arrangements were similar. The iron door occupies the inner rebate, and in the wall behind are the hole and tunnel for a strengthening bar. A remaining hinge shows where a wooden door, no doubt, had swung in the outer rebate, but there are no holes in the wall for a bar behind it. Mr Smith adds—"The gate does not appear to be of as elegant workmanship as the numerous windows, all defended by interlaced ironwork of a more systematic but equally strong

character. All the ironwork about the castle has been of most substantial character, and affords good solid examples of smith work."

Moy Castle, Argyllshire.—At the request of Mr Maclaine of Lochbuy, Mr Lindsay Bury has sent me a drawing and description of the iron door at Moy Castle in Mull. This door is much worn, especially at the bottom, where it has lost the lower hinge and two lower horizontal bars. The five upright and six remaining horizontal bars interpenetrate in the characteristic manner. Some ring-shaped staples survive to show that the door had been fastened by a couple of bolts. The door is placed in an inner rebate close behind a modern wooden door, which has replaced an ancient one, said to be still in existence. Behind the iron door are holes in the walls for receiving a wooden bar about five inches in diameter.

I have now concluded my description of Scottish grated iron doors. To notice at any length other kinds of mediæval Scottish iron work would be beyond the scope of this paper, but a few remarks on window gratings may not be out of place. In the olden time the amount of iron work of this kind in Scottish castles must have been enormous. From the holes left in the masonry, it is evident that in many cases from top to bottom every window was barred with iron. The following extract from the accounts of Innes House, referring to a shipment of iron for windows, &c., has been published by the Spalding Club:—"The compt of the yron maid in crookis and windows, that come from Leith, extending to aughten stainis and six poundis, and ten restis of the yron being ane hundred stein and two stais, four score three stais and ten pound—this 19th of Janii 1641." Comparatively few Scottish window grilles remain, but enough to show that the principle of construction which was universal in the yetts was also extensively applied to them. They were of two kinds. In one the stanchions stretched across between the jambs of the window. In the other the stanchions were fixed into the outer surface of the wall, and formed a cage projecting in front of the window. In both the principle of alternate penetration by groups of bars was used. Examples of the first are shown in the photograph of Castle Menzies. A fine example of the second—at Talquhon Castle, Aberdeenshire—is engraved in *The Baronial and Ecclesiastical Antiquities of Scotland*.

An interesting question remains to be discussed. Is the principle of construction used in the Scottish grilles of native origin? Turning first to our English neighbours, it is a striking proof of how little the one nation borrowed from the other in arts or manufactures, as long as they were at deadly feud, that the moment the border is crossed a totally different construction is found in the defensive grilles. I expected to have illustrated this by plans and drawings of several grated doors in the neighbourhood of Carlisle kindly made for me by Mr Ferguson,

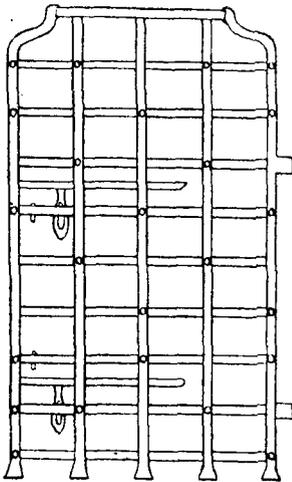


Fig. 21.

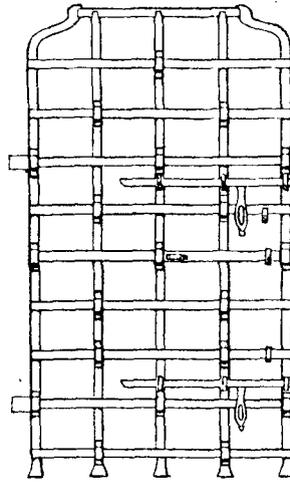


Fig. 22.

F.S.A., F.S.A. Scot., Mayor of that city. Most unfortunately, these drawings were lost in transit by post, and their place is but poorly supplied by rough plans of my own, intended merely to show by views from the front (fig. 21) and back (fig. 22) the principle of construction of an iron door in the tower of the church at Burgh-on-Sands. On the eastern side of the English Border I have been more fortunate, having safely received from the Rev. Mr Dwaris, Vicar of St Peters, Stockfield, hasty but graphic sketches (figs. 23, 24) by Lieutenant Archdale

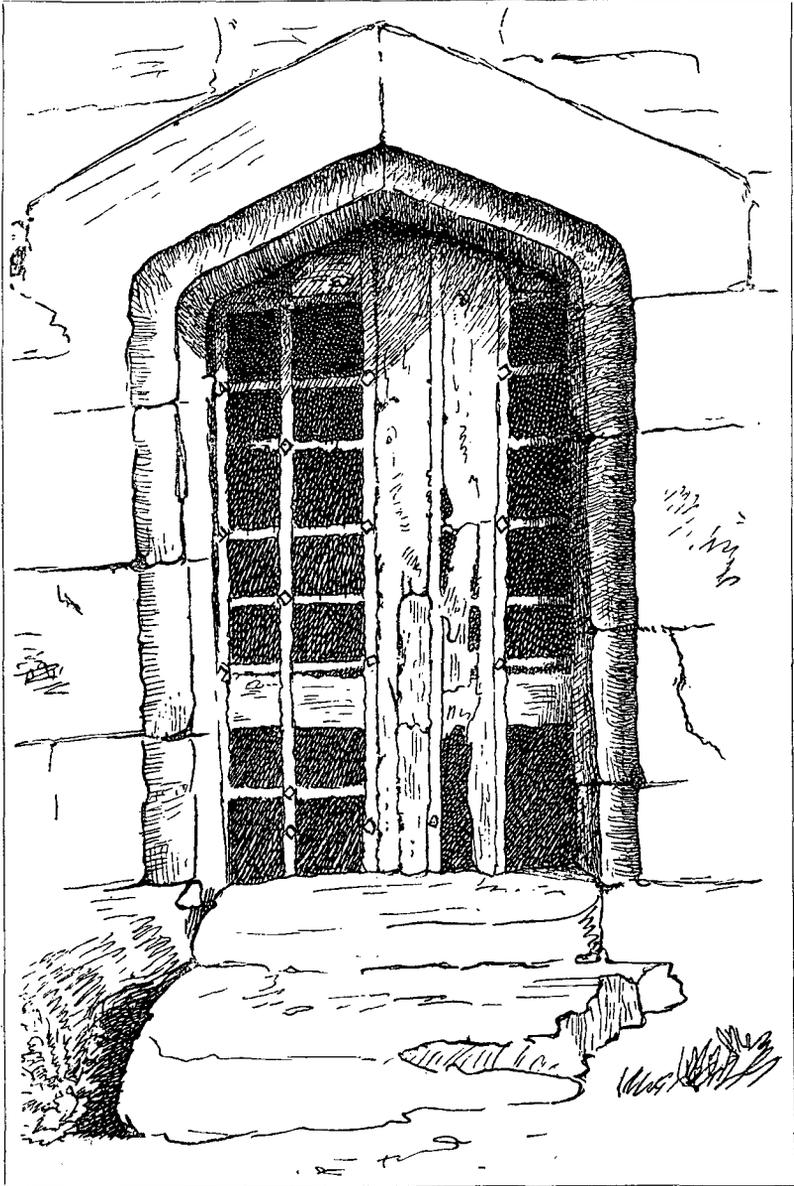


Fig. 23. Grated and Planked Door, Bywell-on-Tyne, Northumberland.

Wilson, Royal Irish Regiment, of a much-worn grated door at Bywell

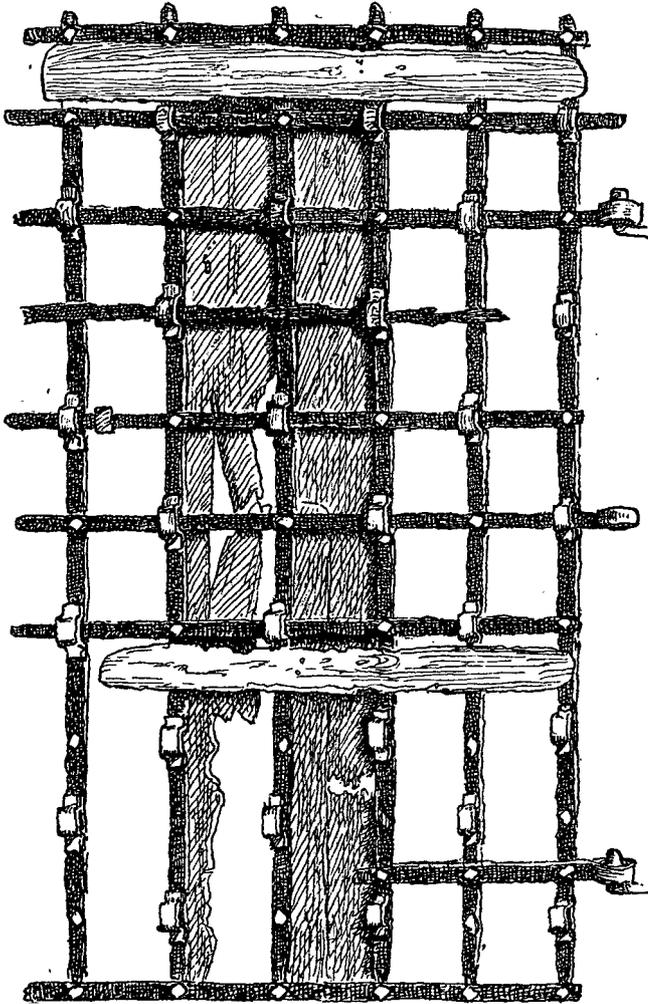


Fig. 24. Door at Bywell-on-Tyne, seen from the inside.

Castle, on Tyne. The principle of construction in both the Burgh

and Bywell examples, as well as in three others at Naworth Castle, which I visited under the guidance of Mr Charles J. Ferguson, and in one at Dalston, near Carlisle, is identical. As shown in the plans and drawings, the bars do not penetrate each other; the uprights are all in front of the horizontals; at their intersections they are fixed to each other by rivets, and at every alternate intersection by clasps welded on behind. Another marked distinction of these English doors is that they were boarded with oaken planks. In most instances these have disappeared, but in the great arched and wicketed entrance door at Naworth Castle they are still entire, and they remain partially in the door at Bywell (see figs. 23, 24). This system of planking was easily carried out in the English grilles, because, from their structure, the spaces between the perpendicular bars in front could be filled by planks of the full height of the gate, and the spaces between the horizontals behind by planks of the full width. Thus in fact a level surface of wood and iron was produced before and behind. I did not see any signs at Burgh, Dalston, or Naworth of wooden doors having been used in addition to these composite doors, and hence it would appear that the iron and wooden doors, which were separate on the Scottish side of the border were united into one, as it were, on the English side. I have met with no evidence of planking having been used in Scottish yetts.

It may be noticed in the plan (fig. 22) of the iron door at Burgh-on-Sands that there are two staples on one of the horizontal bars—one fixed perpendicularly, the other horizontally. As they are on a level with the holes in the wall for a strengthening bar, there can be little doubt they were designed for fastening the bar to the gate. I have seen no trace of this particular arrangement in Scotland.

It does not appear likely that the Scottish grille, after disappearing so suddenly on the Borders, should crop up again in any other part of England; but all that I can say from my own knowledge is, that I could see nothing like it in the window grilles of several cathedrals and ruined castles in the west of England, or of the Oxford colleges.

Did Scotland then derive the principle of its iron yetts from the

Continent, more especially from France, its close ally for so many centuries? In the few books bearing upon the subject which I have been able to consult, I could find no evidence of the Scottish system having been of French origin. In Viollet le Duc's *Military Architecture* grilles are mentioned as having been in common use to defend the passages of mediæval castles in France; but there are no descriptions or drawings of them, and it is not clear from the text whether any of them remain. In the *Dictionnaire de l'Architecture* the following passage about window grilles occurs:—"Les mesures de precaution étaient même poussées si loin que, dans certains cas, les montants et traverses étaient assemblés de telle façon qu'il devenait impossible soit de faire couler les montants dans les œils des traverses, soit les traverses dans les œils des montants. Il fallait être fort habile forgeron pour fabriquer des pareilles grilles, car chaque œil renflé devait être forgé à mesure que l'on assemblait les traverses et les montants, c'est-à-dire que la grille devait être forgée tout brandie, ce qui devait occasionner un travail considerable. L'ouvrier devait ainsi mettre au feu chaque maille de grille un certain nombre de fois. Mais ces hommes semblaient se jouer avec les difficultés de main-d'œuvre, qui aujourd'hui nous paraissent insurmontables. On trouve des grilles de ce genre, c'est-à-dire à œils alternés à Troyes, à Strasbourg et dans beaucoup de localités du Nord et de l'Est. Elles datent des xiv., xv., et xvi. siècles." An illustration is given from a grille in Constance, which shows that the alternations in the penetrations take place at every intersection of the bars, as described in the text.

Apparently this is the nearest approach in France to the Scottish system. But I am informed by Dr Caton of Liverpool that grilles, constructed exactly like our Scottish examples, still exist in the Tyrol and North Italy. Dr Caton gives a drawing which proves this, and adds—"These grilles were not gates but fixed window gratings. The first I saw was in the church of Cortina in the Tyrol. Subsequently I saw many at Venice, all in very old buildings. None of these grilles were later, I should think, than the sixteenth century, and many were probably much older. They were very numerous in the prison adjoining the ducal palace."