About two miles north from the estuary of the River Tay and the church of Monifieth, in Forfarshire, there is a collection of hills called "Laws," forming one of the terminations of the Sidlaw range. The highest and most remarkable one is that on which the ancient walls have been discovered; its summit is 500 feet above the level of the sea, of an oval form, measuring from east to west 500 feet, the breadth being about 200 feet. From this hill the views are very extensive. To the west, the prospect is bounded by the mountains of Argyle; while nearer may
be seen the Sidlaw Hills, Dunsinnain, Norman's Law, the Lomonds, the River Tay, part of the town and "Law" of Dundee; on the south, Largo and North Berwick "Laws," Isle of May light, St Andrews, and the hills of Lothian; eastward, the town of Arbroath, and the wide expanse of the German Ocean. The country round is very fertile.

In the Statistical Account of 1842, it is stated that "persons then alive remember older people telling them they knew when the walls were five feet higher than the present surface." The writer has ample proof, from conversing with workmen, that for a long period previous to 1834 the top of the hill has been generally resorted to when stones were required for dykes, drains, &c., on the estate; and David Rennie, land-steward, who died in 1856 in his 103d year, and who had resided in the neighbourhood for upwards of eighty years, told him that his plan was, first to discover a wall, and then to work it out, so far as the stones were suitable for his purpose, leaving the large stones lower down. During these workings, rude stone graves were found, lined and covered with flag stones, containing human skeletons.

In 1834, when Mr Colvill bought the property, the summit of the hill was broken up by hollows and masses of rubbish, that had been thrown up when the stones were removed. Soon after this period, the surface was levelled, portions of walls thrown over, near the east end, and the whole planted with trees. A tradition about a spring on the top of the hill led to a digging through the surface in search of water; and a cairn of stones then thrown out remained on the hill when the writer became proprietor. Amongst these he found two fragments of stone, with rude concentric circles cut on them; and in a hole of a water-worn sandstone, some small sea-shells were found.

While digging in search of water, pieces of wood were found, one of which the writer still possesses. It is of oak, split up as if for a couple, having a rudely morticed hole in one end.

Amongst the stones thrown over about this time, was found a rounded one, hollowed out, with markings on the outside, as if to retain cords to hang it by. This is supposed to have been a lamp. About 1836, a garden was formed at the south base of the hill; and in bringing back the level, an extended mass of bones was found, both human and of the lower animals, the horse, ox, &c. This continued as far as was levelled.
Amongst these were found several spear-heads of iron, and one was found in forming a road on the north of the hill.

The Statistical Account of 1842 states, that "about fifty years ago, two workmen came upon the foundation of a building at the bottom of the cone, and found a considerable treasure of gold coin. They concealed their prize, went to London and sold it as bullion. The circumstance came to light by the jealousy of one of the finders, who accused his comrade of cheating him, as he had received only fifty pounds.”

In the plain to the east, about a mile distant, on the farm of Carlungie, the present tenant has dug out a considerable extent of walls, similar to those on the hill; and on the same farm, in knolls called "Curr Hills," were found all round slab-stone coffins containing skeletons. The tenant’s brother, a medical student, and his companions, used to amuse themselves by digging for them.

On the neighbouring farms of Omachie, Kingennie, Ardownie, and Ethiebeaton, many graves of a like kind have been dug up; amber beads, &c., were found in them. Report also speaks of treasure having been found by a person still alive. Within a quarter of a mile south-east from the Hill of Laws, is the Gallows Hill of Ethiebeaton.

In a field immediately south from the Hill of Laws, formerly stood a very large natural block of stone, called the "Tod’s Stane." It was broken up thirty years ago. On the top of a knoll in Kingennie, a mile north-west, is a circle of stones, large blocks outside and smaller ones within, 60 feet in diameter; there is an entrance on the east side, and many large blocks were found in the dell below.

EXPLANATORY NOTES OF PLAN FROM SURVEY OF THE LAWS HILL, MADE BY MR JAMES SALMOND IN DECEMBER 1859. (PLATE XXXIV.)

a. This space has the face of the wall to the inside all round.

The rock declines on the west and south, which has rendered it necessary to carry the foundations in some places seven or eight feet below the present surface, while on the east side of the enclosure, the wall is built upon rubbish, and not deeper than was required for the level of the floor.
PLAN OF ANCIENT WALLS ON THE TOP OF LAWS HILL,
IN THE PARISH OF MONIFIETH FORFARSHIRE.

Surveyed by James D'Abernon, Esq. 1820.
No wall beyond the outer one shown has been found, but that has a broad backing of large boulder stones. The enclosure was found filled with stones, mostly burnt, apparently the debris of some other work, the greatest appearance of fire being at "a." Under and amongst the debris were found bones of the ox, &c. Sea and snail shells, one cowrie shell, a large iron axe (the handle had been of wood), very much oxidised; one copper coin, with a dot in the centre on one side, the edge notched one-fourth round—the other side has some faint appearance of a head on it.

Nearer the surface a quantity of small iron chain, apparently modern.

b. The foundation of the outer wall here, at the angle where the two walls join, is about 8 feet below the ground, but appears to have been filled up to the lowest of the four rude steps shown at $b$; betwixt the upper step and the fragment of wall to the north there are strata of ashes, about two inches thick, two feet under the present surface. To the north of the fragment of wall there is deep black earth, in pitting which animal bones were found, and a rudely formed stone cup.

c. This wall is well built with flat stones, but has not been excavated to the foundation.

d. The portion of pavement here shown is of good flags, but not very level on the surface; these have not been lifted; but to the south there were lots of animal bones—two ox-ribs had been obliquely cut across with a saw.

e. This space, like that at "a," has the wall all round facing the inside. At the bottom, on the rock, quantities of bones were found, amongst them an iron axe, smaller than that found at "a;" also shells.

f. This wall is strongly backed with large stones, but no retaining-wall to the north has been found.

g. This space has not been excavated; but on sinking a pit in the earth, charred wheat was found on the natural surface. From G to the north wall is the highest natural surface of the hill.

h. The filling here is the debris of burnt sandstone, to a depth of five or six feet, mixed with charcoal.

i. The rampart round the circle is filled in with land stones.

The foundation of the inner wall is on the rock, while that of the outer, except at the south, adapts itself to the rise of the ground.

In tracing the face of the latter to the east, a broken iron axe was
found, of a different shape from those at "a" and "c." Outside the circle, and south-west from i, human bones were found near the surface amongst rubbish (with some large flags near), apparently the remains of two persons.

k. This round floor is well paved with flag-stones; several layers one above the other, with not much more soil betwixt than was necessary for bedding. On lifting one flag, the upper stone of a rude quern was found supporting it.

The small centre space had likewise several flags one above the other, but more soil betwixt two of them, say five or six inches, amongst which there was a very small portion of a human skull, and a smooth rounded stone. On the top there was a course of stones that had been burnt. Betwixt the lower course of pavement and the rock, the bones of the wild ox, boar, &c.

A bronze armlet of thin plates was got crushed betwixt the flags; it is of very pretty workmanship, composed of three thin plates, the middle one being pierced, showing an open pattern; the other two are stamped with a waving pattern, and overlap the edges of the middle one. A large iron nail was found beside it, bent at the point. Several large vitrified masses were found amongst the loose stones that filled the enclosure, but the latter had little appearance of fire, while some of the stones in the wall have been exposed to the action of fire, before being so applied.

l. This entrance to the circular space is also paved, and has two projecting curb-stones rising about four inches; the first is immediately within the circle, and the other two-thirds down. On each side of the latter there are wrought projecting stones, formed as if for a door, and on the floor to the inside grooves worn in circles, as if the markings of a door.

The side where the door had been supported was examined, but no stone to contain a pivot was found; it may have been removed, as the wall is broken up close by.

m. This space was paved over debris, five or six feet deep, with stones, which had mostly been exposed to the action of fire before being so used. In some places were stones on edge, rising a few inches, but not forming any design that could be ascertained. On removing this pavement, there was a rich black soil to the depth of five or six inches, and then another causewaying; small portions of bones all through, and several flat querns
which seemed to have been used as pavement; also many smooth rounded sea stones, two small pieces of rock crystal, a round piece of lead, with iron rust on it, an iron tool like a weed-hook; a piece of iron turned at one end, while the other is cut away; an iron pin with a loose ring in the top, a small iron bodkin or large needle, a piece of bone, a bronze spiral ring of four turns. The rock suddenly dips from the south wall of the circle, which is firmly supported by projecting boulder stones. At “m,” there is black earth and stones, to a depth of eight feet below the present surface; at the lowest point, a row of large boulders running east and west, as if the foundation of an older wall.

n. This space is filled between the retaining walls with burnt sandstones, red and clean, as if newly taken out of a kiln.

No appearance of fire on the walls.

o. This appears to have been the approach from the outside to meet the walled entrance at “u;” it was the road used to cart off the stones from the walls as required for dykes, drains, &c.

p. This space has been almost quarried out, unfortunately breaking the lines of walls shown to the south.

q. The walls of this enclosure are inferior to any others; have been built with old material; the foundations are laid upon eighteen inches of soil, mostly ashes of wood. The inside was full of rich black mould mixed with stones, amongst which were found part of a two-edged iron sword, and a bronze pin, enamelled, about 4 inches in length. South from “q,” was found a considerable quantity of barley, charred, which appeared to have been burnt in the husk; it was not upon any formed floor.

r. The dotted lines here are the only walls that have been rebuilt; they were distinct at each end, the north one being constructed through the adjoining one to the east; single stones, as if foundations, were found as near as possible to those dotted out. Several holes in the rock, here and elsewhere, were found neatly fitted in with pavement, to make a level surface.

s. This space was filled with stones and earth. On the rock near “s,” lay a block of stone 4 feet by 2. In a hole of the rock filled with water, there were got two wooden wedges like those used to retain the roofing of old thatched cottages; also several pieces of birch or hazel.

t. The west boundary wall is well built with flat stones, like that at
"c," and goes down five feet under the present surface; it is wrought into the other walls at both angles.

u. This space, with a faced wall on each side, built with large stones, which appear to have been gathered off the land, and are still smooth from former exposure to the weather. Some of them, however, are water-worn and from the sea-shore.

This has evidently been the inner entrance leading from the outer road at "a."

v. This seems to have been the outer rampart on the east, which is the most accessible side of the hill; the walls have been carefully built with large stones; the filling is also stones. At present there is a mound outside, but this was formed of the debris thrown over when the hill was levelled about 1834 and after.

w. This space was, like other places, filled in with burnt stones. It was near w where the charred barley was found.

x. This has not been dug out, as it appears to be filled in with stones.

y. On each side here there are some large boulder stones, built up, as if the remains of a barrier to narrow the entrance.

z. This is where the rubbish was thrown over when the hill was levelled, and the highest part of the walls on the east thrown over.

**Articles—where found. See Plan by James Salmond, surveyed 1859.**

Plates xxxiv.


d. Bones. e. Bones, axe, shells. g. Charred wheat. i. Axe, human bones. k. Querns, bones, armlet, iron nail. m. Querns, iron pin, piece of iron, rock crystals, lead, iron tool, ring, cut bone, iron needle. q. Iron sword and enamelled pin. s. Wooden wedges and pieces of hazel rod. w. Charred barley.

**GENERAL REMARKS.**

All over the summit of the hill, animal bones were found, so far as ascertained, of the ox, horse, boar, deer, &c.; these were got in greatest numbers at the bottom of the walls.

Smooth round small stones from the sea-beach were also found everywhere; also, sea and snail shells, the former being of the kinds still found
on the neighbouring coast; but oyster shells were also got, and one small "cowrie." Pieces of charred wood, vitrified masses, were found all through amongst the ruins, and often as if used for backing up the walls, but never as if the walls had been vitrified. Many of these fragments have distinct impressions of the wood which had been burned. A small piece of pottery was found adhering to a portion of vitreous matter, like the neck of an earthen bottle.

Except the rock itself, and the portions of pavement mentioned, no distinct floors were found, although the writer thinks other pavements had existed, from some of the walls not being founded so deep as others.

Wherever the rock was approached, there was found twelve or eighteen inches of black, dirty-looking soil, mixed with small stone chips, bones and charcoal. Considerable quantities of fine clay were found, which, from the small transparent pebbles in it, appears to have been brought from the sea beach. At the foot of the rock, on the west end of the hill, single courses of stones, forming similar spaces to those on the top of the hill, have been found; also, near the base, on the south-west, stones on edge, placed in half circles; these have the appearance of having formed terraces.

In the small valley to the north there are numerous traces of buildings. On the north-east, near the outside road at O, there is a hole in the rock that retains water all the year, but no great supply could be got from it. On the west, near the foot of the rock, there is an excellent spring of water, which now supplies the mansion-house.

NOTE ON MR NEISH'S PAPER. By JOHN STUART, Esq., F.S.A. Scot.

It is greatly to be regretted that the predecessors of Mr Neish were not more conservative in their treatment of the curious structure on the Laws, as the ruinous state in which we now find it makes it hopeless for us to speak with any degree of certainty as to its original design and arrangement. I have twice carefully examined the remains, and have found it difficult to form any feasible opinion as to their original shape, or to account for the arrangements of those walls which still remain. It seems obvious, however, from what we hear of the great quantities of stones which have been carried away from the hill, and the enormous
masses of ruined walls still scattered over its top, that the buildings, when complete, must have been of great size and height. In their present ruinous state we cannot closely compare the remains with any other structure known to us. At first sight, the strong curving walls at the east end suggested to me the possibility of their having formed the walls of a congeries of weems; and I was led to conjecture that the central circular space might have been covered with some domical roof, as in all respects, except its greater size, it reminded me of the chambered cairns at Clava on Nairnside, which had in their centre a circular dome-shaped chamber, approached by a narrow passage.

It seems obvious that the buildings on the Laws had formed the abode of man for a long period; and it is somewhat remarkable that so few traces of warlike weapons occur, while those which have been found are of iron.

It may be well to compare even what still remains of the ruins at Laws, with those chambered cairns which have been explored in Caithness and Orkney. The remarkable one at Kettleburn, in the county of Caithness, described by Mr Rhind, even in the dilapidated state in which he found it, had a diameter of about 120 feet. In plan it appeared to have been a huge circular cairn, with long passages from the outside, leading to a congeries of vaulted apartments, of various sizes and shapes, in the centre. A few feet from the external limits of the cairn, a wall had circumscribed it, which in some places yet stood to the height of about three feet, in this respect resembling the outer wall at the Laws.

A person who was a servant to Mr Millar of Balumbie, the proprietor of “Laws” in 1818, states that during the winter of that year he assisted in removing from the top of the hill 2400 cart-loads of stones for drainage purposes; that he was so employed during the three succeeding winters, during each of which he thinks as many were taken away—say 9600 loads in four years. He describes the portion removed as conical, 13 feet high in the centre; the stones as all burnt and mixed with bones. Human teeth were very abundant. The stones were so loose that it only required the lowest ones moved to make those above tumble down. He had no idea of anything like walls. He only remembers seeing one cist enclosed with slabs; it was very near the edge of the cone, and contained human remains. When the stones tumbled down, mixed with bones, there were also found many portions of tobacco-pipes made of clay, and not differing much from the modern shape: they were clumsier and thicker.
Another boundary wall was carried round the chambers in the centre; and in the space between the two walls, various remains of building were discovered. At one point the walls so discovered were parallel to each other, and both were faced to the outside, as in the case of the perplexing circular walls on the east end of the Laws, without any appearance of intervening buildings. In one of the chambers also a wall appeared within the boundary wall, without any obvious reason for the arrangement. The portion of the cairn at Kettleburn, between the chambers and the outside of it, was in a state of ruin and dilapidation; but that there had been occupied buildings seemed plain, from the remains of bones and shells which were found all over the place. The objects discovered at Kettleburn were in most respects similar to those found in the ruins of the Laws. No weapons were seen except the point of an iron instrument, but some articles for domestic use, formed of bronze and bone. Stone disks, querns, stones hollowed out, water-worn pebbles from the sea-beach, human remains, bones of horses, deer, oxen, sheep, goats, pigs, tusks of boars, bones of the whale; also masses of ferruginous matter. Specimens of all these were also found at Laws.

The building at Quanterness, in Orkney, had a similar design, being a congeries of apartments in the centre of a cairn, approached by a long passage, barely two feet square in size. The largest apartment was 21 feet long by 6$\frac{1}{2}$ in breadth, and 11$\frac{1}{2}$ in height. Here were found the bones of men, birds, and some of the domestic animals.

May we suppose that the walls at the Laws are remains of abodes also covered over with stones?

It is remarkable, that in the great sepulchral cairn at Dowth, in Ireland, there should have been found so many remains corresponding with those discovered at the Laws, which we must regard as an abode of the living. Recent examination has revealed at Dowth a series of chambers throughout the cairn, connected by passages of small size. In one of the chambers was found a large quantity of the bones of men and animals in a half burned state, and mixed with small shells. A pin of bronze, and two small knives of iron, were also discovered. Among the animals whose bones were found in the structure, were horses, pigs, deer, and birds; portions of the heads of the short-horned variety of the ox, and the head of a fox, also appeared. There were also found a ring of
jet, several beads, and some bones fashioned like pins. Among the stones of the upper part of the cairn were discovered a number of globular balls of stone, of the size of small eggs. As at the great adjoining cairn of New Grange, some of the stones have figures carved on them; and of these figures some present concentric circles, resembling those found on two fragments in the ruins at Laws, and on stones in a Pict’s house at Papa Westray, figured in our Transactions, and at Pickaquay, near Kirkwall.¹

The occurrence of human remains, in so-called Picts’ houses, is frequent, as at Burgher, in Evie, where the remains were accompanied by a comb, part of a deer’s horn, and some bracelets.

The connection between British strengths and sepulchral deposits has been pointed out by Chalmers in his “Caledonia;” and the practice of such interments seems to have continued into later times. The old castle of Kindder, in the parish of Drainie, in Morayshire, probably occupies the site of an earlier strength. It was surrounded by ditches and ramparts, and under the latter were found a very large quantity of stone cists, urns, and fragments of human bones.

It will be observed, that while the curious weem-shaped walls at Laws have only been remarked on the east end of the structure, it is quite possible that they may be yet found in the unexplored portion lying to the west of the central apartment. Those who carried off the stones for building purposes found the facing-stones of the walls largest and most suitable for their purpose; and they seem to have followed them out to their termination. It would not, therefore, now be safe to conclude, that the circular walls had been confined to the east end, even if they should not now be discovered elsewhere.²

The sections which Mr Neish has made in various spots have brought to light portions of faced walls, indicative of building arrangements; and unless this the western portion of the ruin be completely explored, we cannot say what these arrangements may have been. The enormous quantity of stones which result from the explorations, and the difficulty of storing them on the confined

¹A stone from a “Pict’s house,” in the island of Eday, has incised concentric circles and spiral ornaments, like those on the stones of New Grange. It is now in our Museum.

²The circular walls at the base of the hill, and at Carslogie, are probably the foundations of houses.
area of the hill, form the chief obstacles to Mr Neish's zeal in accomplish-
ing the survey; and this circumstance may show, that when the stones now carried off had been in their original position, the structure must have been of considerable height, especially when it is considered that the spaces between the upright walls have, in the process of level-
ing the surface, been filled up with stones, which had originally been parts of the walls themselves. The circumstance has been noticed by Mr Neish, that the greatest quantities of bones appeared at the base of the upright walls. Were these thrown down from some higher inhabited building? or did the walls form the sides of chambers or galleries, where the occupants lived, and deposited their refuse, as at Kettleburn?

I have noted the effects of fire in some of the contents of a weem in Cromar, where lumps of ferruginous matter appeared, similar to that found by Mr Rhind; and the effects of fire appear in the charred sub-
stances so frequently found in underground apartments. The charred grain, lumps of vitrified matter, and masses of fired stones, all show that fire must have been a powerful agent at Laws, either in its construction or ruin.

We shall probably never be able now to speak positively as to the precise plan of the structure on the Laws. We need not doubt that it formed the shelter of an early people, although I would hardly be disposed to assign its erection and use to a period so remote as that assumed in the case of some analogous structures. If Mr Neish should be enabled to overcome the difficulties attending farther exploration, and should find the plan of the western end more definite than I expect it to be, we may yet obtain information which will enable us to speak in less hesitating accents than those which our present circumstances demand. In any event, we must feel greatly indebted to Mr Neish for the labour already bestowed by him in excavating this structure; and for so readily acceding to my request that he would furnish us with an account of his discoveries, and a ground plan of the walls. We are obliged to Mr Robert Chambers for the careful drawings which he got made of the most curious parts of the structure, and has kindly allowed us to copy (see Plate XXXV.), and which serve to illustrate Mr Neish's observations.

Since the foregoing note was written, in the spring of 1860, my friend,
Mr W. F. Skene, has drawn my attention to a paper by the late Dr John Jamieson, "On the Vitrified Forts of Scotland," which is printed in the second volume of the "Transactions of the Royal Society of Literature." The paper is dated in 1827; but it records the writer's observations of the fort at the Laws, made nearly forty years before. Although the work of demolition had even then begun, still the remains were greatly more complete than they now are; and the following extract from Dr Jamieson's paper, which contains his description of the ruin, is of great value:—

"This fort consists of two walls of vitrified matter, which surround the hill. The outer wall runs along its slope, and forms a kind of circle, although by no means perfect; for on the east side, where the access is easiest, it keeps pretty near the bottom of the hill; and then, although its traces are less distinct, it seems to take a slanting direction upwards, according to the change of the ground, which here becomes very steep, till it extends half-way between the summit and the brink of the precipice on the south. Thus it continues to proceed along the declivity to the north-east corner, towards which it gradually ascends. It is evident that the principal gate was here, in whatever manner it was defended. The circumference of this outer wall, including the angular part, is, according to my measurement, five hundred paces. From this wall there are others which run in parallel lines towards the brink of the precipice. Two are discernible on the east side, and there are some marks of one on the north. These are formed of the same materials with the outer wall, and cannot be supposed to have had their origin from the fall of the inner one, because of the regularity of their form.

"The inner wall surrounds the summit of the hill, at the distance of several spaces from the outer. This varies, however, according to the nature of the ground. At the north-east corner, and round in that direction towards the north-west, are seen the foundations of several houses within the inner wall, which here seems to have formed the back wall to these houses. On the west side of the hill, the interstice between the two

1 Williams has remarked the same appearance at Knock-farril. "Immediately," he says, "on the inside of this surrounding wall, there are ruins of vitrified buildings. I imagine these inner works have been a range of habitations, reared against or under the shade of the outer wall." (Account, p. 12.)
circular walls has been filled up by buildings of a small size. A wall runs nearly through the middle of the fort, extending from the south to the north side of the inner wall. The design of this has undoubtedly been to form a separation between the defenders and their cattle; for in the eastern division we observe no foundations of buildings, except a few on the wall itself. There was, it is said, a well here some years ago; but it has probably been choked with rubbish, as the foundations of many of the houses have been barbarously dug up for enclosing the adjoining lands. The hill has, however, had an abundant supply of water, there being a fine spring at the north-east gate, and another a little further east, on the brow of the hill, although without the walls.

"The greatest part of the western division of the fort has been occupied by buildings, the most of which have been small, like those resting on the walls. But in one place I observed the foundations of some of larger dimensions. All the buildings have been as regularly vitrified as the walls, for the stones, as far as can be judged, retain their original foundations, and have no appearance of having been collected from fallen masses, huddled together in haste, on the spur of the occasion.

"Besides the gate formerly noticed, there seems to have been one on the west side. The vitrification here is as perfect as that of the fort of Finhaven, and assumes the very same appearance. Here, as well as there, the stones have been so completely fused, as in many places to seem as if they had been connected by some cement resembling melted ore; but this can be viewed only as the scoriae forced from the stones themselves when in a state of fusion." 1

I may add, that while in Orkney, in the course of the present summer (1861), I saw at Borrowstoun, in the island of Shapinshay, a ruined fort, which reminded me of some parts of the remains at the Laws. At first sight there was little appearance of anything except a grass-covered mound, surrounded by a ditch; but some excavations made by the owner, Mr Balfour of Balfour and Trenabie, brought to light the character of the original structure. From these it appeared that the mound was formed by the ruined walls of one of those circular towers or burghs so common

in Orkney, and that it had been surrounded by various defensive walls, which at one point seemed quite of the same character as the converging lines of wall which appear on the east end of the hill at Laws.

It may therefore well be that the central circular wall at Laws is the foundation of what had been a great tower or burgh, and that all the surrounding walls are vestiges of the habitations of the inhabitants, which were reared under the shelter of the central fort, although they are now so dislocated as to make it impossible to understand the relation which the fragments bore to the whole.