OBSERVATIONS

ON THE USES OF THE

MOUNDS OF THE WEST,

WITH AN ATTEMPT AT THEIR CLASSIFICATION.

BY

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From the American Journal of Science and Arts, Second Series, Vol. III.

NEW HAVEN:
PRINTED BY B. L. HAMLEN,
Printer to Yale College.
1847.

OBSERVATIONS, &c.

The monuments of the Mississippi valley, are divisible into two grand classes, viz. the Enclosures, familiarly known as "Forts," and the Tumuli, or Mounds ;* together they constitute a single system of remains, and are the work of the same people.

The enclosures, from their magnitude and other obvious reasons, have attracted, by far, the largest share of attention ; and the character of some of them, with their walls and ditches and guarded ways, is manifest, and may be regarded as settled. Of the mounds, however, little has been hitherto said or known.—The popular opinion, based, in a great degree, upon the well ascertained purposes of the barrows and tumuli occurring in certain parts of Europe and Asia, is, that they are simple monuments, marking the last resting place of some great chief or distinguished individual, among the tribes of the builders. Some have supposed them to be the cemeteries, in which were deposited the dead of a tribe or a village, for a certain period, and that the size of the mound is an indication of the number inhumed! Others that they mark the sites of great battles, and contain the bones of the slain. On all hands the opinion has been entertained, that they were devoted to sepulture alone. This received opinion is not, however, sustained by the investigations set on foot by the writer and his associate, Dr. E. H. Davis, of Chillicothe, Ohio. Nearly one hundred and fifty mounds, embracing those of every size and description, within enclosures and out of them, in groups and isolated, have been carefully excavated under their personal supervision, and every fact of importance respecting them carefully noted. The conclusion, to which these observations have led, is, that the mounds were constructed for several grand and dissimilar purposes, or rather, that they are of different classes ;—the conditions upon which the classification is founded being three in number—namely : position, structure, and contents. In this classification, we distinguish—

1st. Those mounds which occur in, or in the immediate vicinity of, enclosures, which are stratified and contain altars of burned clay or stone, and which were places of sacrifice, or in some way connected with religious rites and ceremonies.

2d. Those which stand isolated, or in groups, more or less remote from the enclosures, which are not stratified, which contain human remains, and which were the burial places and monuments of the dead.

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* The term *Mound* is used, in this paper, in a technical sense as synonymous with *tumulus* and in opposition to embankment, rampart, *etc.*

3d. Those which contain neither altars nor human remains, and which were places of observation or the sites of structures.

These classes are broadly marked in the aggregate; but, in some instances, they seem to run into each other. Mounds of this mixed character, as well as those which, under our present condition of knowledge respecting them, do not seem to indicate any clear purpose, have been denominated *anomalous*. Of one hundred mounds excavated, sixty were altar or sacrificial mounds, twenty sepulchral, and twenty either places of observation or *anomalous* in their character. Such however, is not the proportion in which they occur. From the fact that the mounds of sacrifice, are most interesting and most productive in relics, the largest number excavated were of that class. In the Scioto valley the mounds are distributed, between the three classes specified, in very nearly equal proportions; the mounds of observation and the anomalous mounds constituting, together, about one third of the whole number.

Mounds of Sacrifice.—The general characteristics of this class of mounds are,—

1st. That they occur only within, or in the immediate vicinity of, enclosures, or sacred places.

2d. That they are stratified.

3d. That they contain symmetrical altars of burned clay or stone, on which are deposited various remains, which, in all cases, have been more or less subjected to the action of fire.

Of the whole number of mounds of this class, which were examined, *four* only were found to be exterior to the walls of enclosures, and these were but a few rods distant from the ramparts.

The fact of stratification, in these mounds, is one of great interest and importance. The feature has heretofore been remarked but not described with proper accuracy, and has consequently proved an impediment to the recognition of the artificial origin of the mounds, by those who have never seen them. The stratification, so far as observed, is not horizontal, but always conforms to the convex outline of the mound.* Nor does it resemble the stratification produced by the action of water, where the layers run into each other, but is defined with the utmost distinctness, and always terminates upon reaching the level of the surrounding earth. That it is artificial will, however, need no argument to prove, after an examination of one of the mounds in which the feature occurs; for, it would be difficult to explain, by what singular combination of "igneous and aqueous" action,

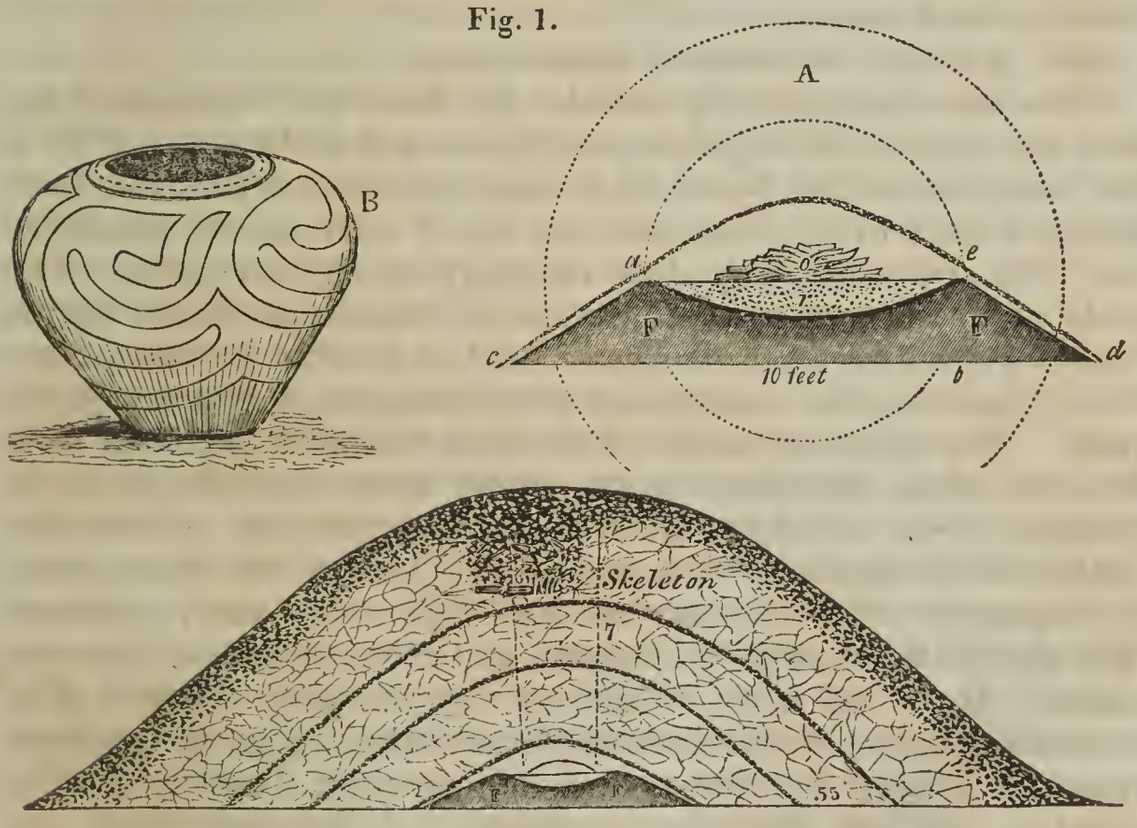
* Some of the mounds, on the lower Mississippi, are horizontally stratified, exhibiting alternate layers, from base to summit. These mounds differ in form from the conical structures here referred to, and were, doubtless, constructed for a different purpose. Prof. Forshey has described one which had layers of coarse bricks, at intervals, throughout its entire height.

stratified mounds were always raised over symmetrical monuments of burned clay or of stone.

The altars, or basins, found in these mounds, are almost invariably of burned clay, though one or two of stone have been discovered. They are symmetrical, but not of uniform size, and shape. Some are round, others elliptical, and others square, or parallelograms. Some are small, measuring barely two feet across, while others are fifty feet long by twelve and fifteen wide. The usual dimensions are from five to eight feet. All appear to have been modelled of fine clay, brought to the spot from a distance, and rest upon the original surface of the earth. In a few instances, a layer or small elevation of sand had been laid down, upon which the altar was formed. The elevation of the altars, nevertheless, seldom exceeds a foot or twenty inches, above the adjacent level. The clay of which they are composed is usually burned hard, sometimes to the depth of ten, fifteen, and even twenty inches. This is hardly to be explained, by any degree or continuance of heat, though it is manifest that, in some cases, the heat was intense. On the other hand, a number of these altars have been noticed, which are very slightly burned, and such, it is a remarkable fact, are destitute of remains.

The characteristics of this class of mounds will be best explained, by reference to the accompanying illustrations. It should be remarked however, that no two are alike in all their details.

Fig. 1.



The mound, a section of which is here given,* occurs in "Mound City," a name given to a group of *twenty-six* mounds,

* Horizontal scale of section *fifteen* feet, and the vertical *six* feet, to the inch.

embraced in one enclosure, on the banks of the Scioto river, three miles above the town of Chillicothe. It is seven feet high by fifty-five feet base. A shaft, five feet square, was sunk from its apex, with the following results:—

1st. Occurred a layer of coarse gravel and pebbles, which appeared to have been taken from deep pits, surrounding the enclosure, or from the bank of the river. This layer was one foot in thickness.

2d. Beneath this layer of gravel and pebbles, to the depth of two feet, the earth was homogeneous, though slightly mottled, as if taken up and deposited in small loads, from different localities. In one place appeared a deposit of dark colored, surface loam, and by its side, or covering it, there was a mass of the clayey soil of greater depth. The outlines of these various deposits could be distinctly traced.

3d. Below this deposit of earth, occurred a thin and even layer of fine sand, a little over an inch in thickness.

4th. A deposit of earth, as above, eighteen inches in depth.

5th. Another stratum of sand, somewhat thinner than the one above mentioned.

6th. Another deposit of earth, one foot thick, beneath which was—

7th. A third stratum of sand, below which was—

8th. Still another layer of earth, a few inches in thickness, which rested on—

9th. An altar, or basin, of burned clay.

This altar was perfectly round. Its form and dimensions are best shown by the supplementary plan, and section A. F F, is the altar, measuring from *c* to *d*, nine feet; from *a* to *e*, five feet; height from *b* to *e*, twenty inches; dip of curve *a r e*, nine inches. The sides *c a*, *e d*, slope regularly, at a given angle. The body of the altar is burned throughout, though in greater degree within the basin, where it was so hard as to resist the blows of a heavy hatchet, the instrument rebounding as if struck upon a rock. The basin, or hollow of the altar, was filled even full with fine dry ashes, intermixed with which were some fragments of pottery, of an excellent finish and elegant model, ornamented with tasteful carvings on the exterior. One of the vases, taken in fragments from this mound, has been very nearly restored. The sketch B, presents its outlines, and the character of its ornaments. Its height is six, its greatest diameter eight, inches. The material is hardly distinguishable from that composing the pottery of the ancient Peruvians, and in respect of finish, it is fully equal to the best Peruvian specimens. A few convex copper discs, much resembling the bosses used upon harnesses, were also found.

Above the deposit of ashes, and covering the entire basin, was a layer of silvery, or opaque mica, in sheets, overlapping each other; and, immediately over the centre of the basin, was heaped a quantity of burned human bones, probably the amount of a single skeleton, in fragments. The position of these is indicated by *o* in the section. The layer of mica and calcined bones, it should be remarked to prevent misapprehension, were peculiar to this individual mound, and were not found in any other of the class.

It will be seen, by the section, that, at a point about three feet below the surface of the mound, a human skeleton was found. It was placed a little to the left of the centre, with the head to the east, and was so much decayed as to render it impossible to extract a single bone entire. Above the skeleton, as shown in the section, the earth and outer layer of gravel and pebbles, were broken up and intermixed. Thus while, on one side of the shaft, the strata were clearly marked, on the other they were confused. And, as this was the first mound of the class excavated, it was supposed, from this circumstance, that it had previously been opened, by some explorer, and it had been decided to abandon it when the skeleton was discovered. Afterwards the matter came to be fully understood. No relics were found with this skeleton.

It is a fact well known, that the modern Indians, though possessing no knowledge of the origin or objects of the mounds, were accustomed to regard them with some degree of veneration. It is also known, that they sometimes buried their dead in them, in accordance with the almost invariable custom which leads them to select elevated points, and the brows of hills, as their cemeteries. That their remains should be found in the mounds, is therefore a matter of no surprise. They are never discovered at any great depth, not often more than eighteen inches or three feet below the surface. Their position varies in almost every case;—most are extended at length, others have a sitting posture, and others still seem to have been rudely thrust into their shallow graves, without care or arrangement. Rude implements of bone and stone, and coarse vessels of pottery, such as are known to have been in use among the Indians, at the period of the earliest European intercourse, occur with some of them, particularly with those of a more ancient date; while modern implements and ornaments, in some cases of European origin, are found with the recent burials. The necessity therefore of a careful and rigid discrimination, between these deposits and those of the mound builders, will be apparent. From the lack of such discrimination, much misapprehension and confusion have resulted. Silver crosses, gun barrels and French dial plates, have been found with skeletons in the mounds, yet it is not to be concluded that the mound builders were Catholics, or used fire-arms, or understood

French. Such a conclusion would, nevertheless, be quite as well warranted, as some which have been deduced from the absolute identity of certain relics, taken from the mounds, with articles known to be common among the existing tribes of Indians. The fact of remains occurring in the mounds, is in itself, hardly presumptive evidence that they pertained to the builders. The conditions attending them can alone determine their true character. As a general rule, to which there are few exceptions, the only authentic and undoubted remains of the mound builders, are found directly beneath the apex of the mound, on a level with the original surface of the earth; and it may be safely assumed, that whatever deposits occur near the exterior surface are of a date subsequent to their erection.

In the class of mounds now under consideration, we have data which will admit of no doubt, whereby to judge of the origin, as well as the relative periods, of the various deposits found in them. If the stratification already mentioned as characterizing them, is unbroken and undisturbed, if the strata are regular and entire, it is certain that whatever occurs beneath them, was placed there at the period of the construction of the mound. And if, on the other hand, these strata are broken up, it is equally certain, that the mound had been disturbed, and new deposits made, subsequent to its erection. It is in this view, that the fact of stratification is seen to be important, as well as interesting: for it will serve to fix, beyond all dispute, the origin of many singular relics, having a decisive bearing on some of the leading questions connected with American Archæology. The thickness of the exterior layer of gravel, etc., in mounds of this class, varies with the dimensions of the mound, from eight to twenty inches. In a very few instances, the layer, which may have been designed to protect the form of the mound, and which purpose it admirably subserves, is entirely wanting. The number and relative position of the sand strata are variable; in some of the larger mounds, there are as many as six of them, in no case less than one, most usually two or three.

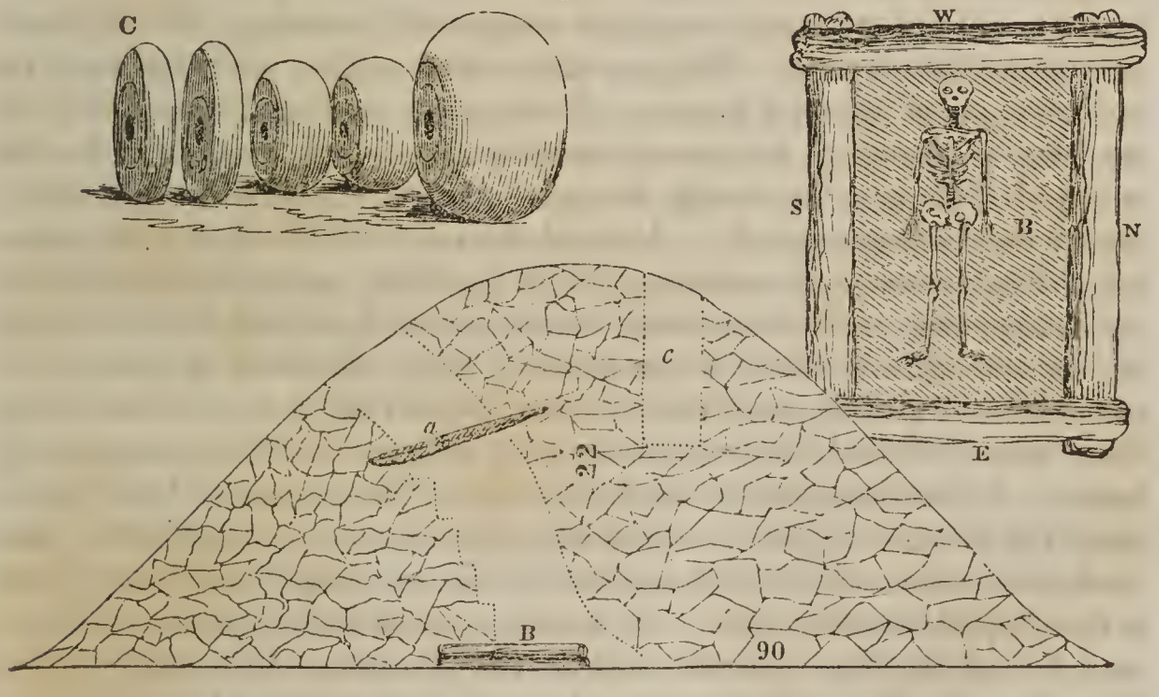
In one case which fell under our observation, and in another, of which we have an account from the person who discovered it, the altar was of stone. This altar was elevated two and one half feet above the original surface of the earth, and was five feet long by four broad. It was a simple elevation of earth packed hard, and was faced, on every side and on top, with slabs of stone of regular form, and nearly uniform thickness. They were laid evenly, and, as a mason would say, "with close joints," and though uncut by any instrument, the edges were straight and smooth. The stone is "the Waverly sandstone," underlying the coal series, thin strata of which cap every hill. This stone breaks readily, with a rectangular fracture, and hence the regularity of

the slabs is not so much a matter of surprise. This altar bears the marks of fire, and fragments of the mound builders' ornaments were found on and around it. What had originally been deposited there was probably removed by the modern Indians, who had opened the mound and buried one of their dead on the altar.

Mounds of this class are most fruitful in relics of the builders. On the altars have been found, though much injured and broken up by the action of fire, instruments and ornaments of *silver*, *copper*, *stone* and *ivory;* beads of silver, copper, *pearls* and shell; spear and arrow-heads of flint, quartz, garnet and *obsidian;* fossil teeth of the shark; teeth of the alligator; marine shells; galena; sculptures of the human head, and of numerous animals; pottery of various kinds, and a large number of interesting articles, some of which evince great skill in art. No description of these can be given here.

Mounds of Sepulture.—The mounds of sepulture stand apart from the enclosures, and, in their average dimensions, greatly exceed those of the first class. The celebrated mound at Grave creek was of this class. They lack the gravel and sand strata, which characterize those already described, and are destitute of "altars." They invariably cover a skeleton, (sometimes more than one, as at Grave creek,) which, at the time of its interment, was enclosed in a rude framework of timber, or enveloped in bark or coarse matting, the traces, in some instances the very *casts* of which, remain. The structure of one mound of this class, will serve to exhibit their peculiarities.

Fig. 2.



The mound, of which the above is a section,* stands on the third "bottom" or terrace of the Scioto river, six miles below the

* Horizontal scale *thirty* feet, and vertical *fifteen* feet, to the inch.

town of Chillicothe. There are no enclosures nearer than a mile, though there are three or four other mounds, of smaller size, on the same terrace, within a few hundred yards. The mound is twenty-two feet high, by ninety feet base. The principal excavation was made, (as represented by the dotted lines in the section,) from the west side, commencing at about one-third of the height of the mound from the top. At ten feet below the surface, occurred a layer of charcoal, (*a*,) not far from ten feet square, and from two to six inches in thickness, slightly inclined from the horizontal, and lying mostly to the left of the centre of the mound. The coal was coarse and clear, and seemed to have been formed by the sudden covering up of the wood, while burning, inasmuch as the trunks and branches retained their form, though entirely carbonized, and the earth immediately above, as well as below, was burned of a reddish color. Below this layer, the earth became much more compact and difficult of excavation. At the depth of twenty-two feet, and on a level with the original surface, immediately underneath the charcoal layer, and, like that, somewhat to one side of the centre of the mound, was a rude timber framework, (B,) now reduced to an almost impalpable powder, but the *cast* of which was still retained in the hard earth. This enclosure of timber, measured from outside to outside, was nine feet long by seven wide, and twenty inches high. It had been constructed of logs laid one on the other, and had evidently been covered with other timbers, which had sunk under the superincumbent earth, as they decayed. The bottom had also been covered with bark, matting, or thin slabs,—at any rate, a whitish stratum of decomposed material remained, covering the bottom of the parallelogram. Within this rude coffin, with its head to the west, was found a human skeleton, or rather the remains of one, for scarcely a fragment as long as one's finger could be recovered. It was so much decayed that it crumbled to powder, under the lightest touch. Around the neck of the skeleton, forming a triple row, and retaining their position, as originally strung and deposited with the dead, were several hundred beads, made of ivory, or the tusks of some animal, (C.) Several of these still retain their polish, and bear marks which seem to indicate that they were turned in some machine, instead of being carved by hand. A few laminæ of mica were also discovered, which complete the list of articles found with this skeleton. The foot of the skeleton was nearly in the centre of the mound. A drift beyond it developed nothing new, nor was a corresponding layer of charcoal found, on the opposite side of the mound. It is clear therefore, that the tumulus was raised over this single skeleton. In the case of a mound of this class, opened at Gallipolis, on the Ohio river, the chamber enclosing the skeleton was found just below the original surface,—a fact which can always be detected

by a strongly marked line, and the uniform drab color of the earth beneath it.

The layer of charcoal is not uniformly found in mounds of this class, though it is a feature of frequent occurrence. It would seem to indicate that sacrifices were made for the dead, or that funeral rites of some kind were celebrated. The fire, in every case, was kept burning for a very brief space, as is shown by the lack of ashes, and the slight traces of its action left on the adjacent earth. That it was suddenly heaped over, is also proved by the facts already presented.

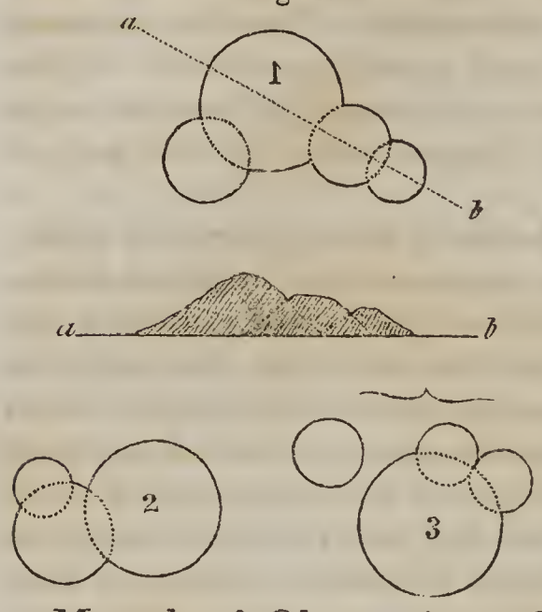
Bracelets of copper and silver; beads of bone, ivory and shell; mica plates and ornaments; stone instruments of various kinds, some of which are identical with those found in mounds of the first class, etc. etc., are found with the skeletons. In every instance falling within our observation, the skeleton has been so much decayed, that any attempt to restore the skull, or indeed any portion of it, was hopeless. Considering that the earth around these skeletons is wonderfully compact and dry, and that the conditions for their preservation were exceedingly favorable, while, in fact, they are so much decayed, we may form some estimate of their remote antiquity. In the barrows and cromlechs of the ancient Britons, entire and well preserved skeletons are found, although having an undoubted antiquity of 1500 years.

In some of the sepulchral mounds, as has already been stated, the sarcophagus, if we so please to term it, was omitted by the builders, the dead body having been simply enveloped in bark or matting. Perhaps this course was most frequently pursued. In these cases, the original surface appears to have been carefully smoothed and leveled, for a space ten or twenty feet square, which space was covered with bark. Upon this was deposited the dead body, and, by its side, such personal ornaments or implements as were deemed proper, the whole being covered over with another layer of bark, and the tumulus raised above. Instances have occurred in which it is clear that burial by *incremation* was made, but these are comparatively rare.* In the celebrated mound at Grave creek, *two* sepulchral chambers were discovered, one at the base, another at a higher point. The lower one contained a single skeleton, and the upper two. This mound, in this respect, is somewhat extraordinary. It may be conjectured, with some appearance of reason, that it contained the bones of the family of a chieftain, or distinguished individual, among the builders. It is common to find two or three, sometimes four or five, sepulchral mounds, in a group. In such cases, it is always to be remarked, that one

* Did the scope or limits of this paper permit, the facts bearing upon this point would be here presented. As it is, the reader is respectfully referred to certain publications which are shortly to appear, under the auspices of the New York Ethnological Society.

of the group is much the largest, twice or three times the dimensions of any of the others, and that the smaller ones are arranged around its base, generally joining it, thus evincing an intended dependence and close connection between them. Plans of three groups of this description are given in the annexed figures. May we not conclude that such a group is the tomb of a family—the principal mound covering the head of the same, the smaller ones its various members? In the Grave creek mound, it is possible that, instead of building a new mound, an additional chamber was constructed upon the summit of the one already raised—a single mound being thus made to occupy the place of a group.

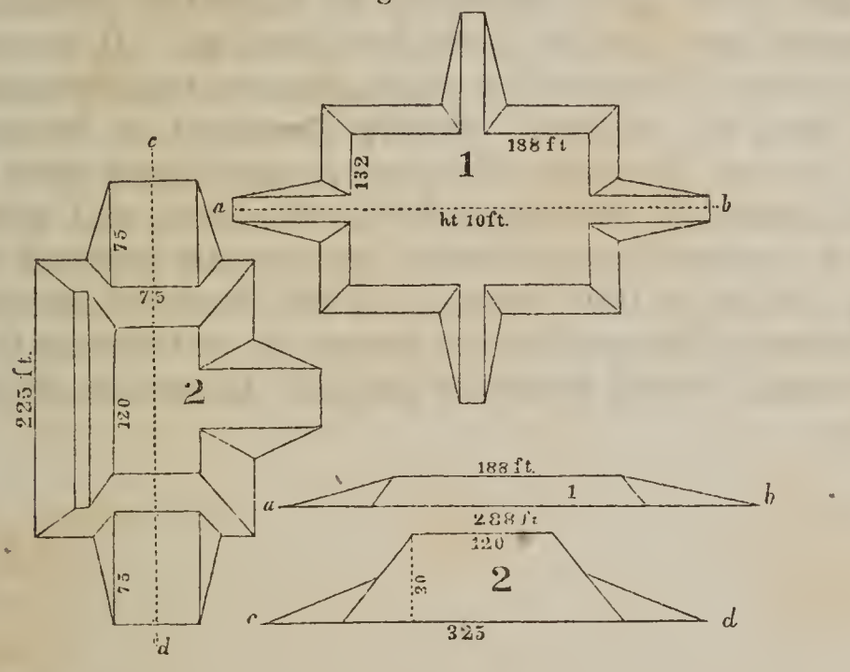
Fig. 3.



Mounds of Observation.—On the tops of the hills and on the jutting points of the table lands, bordering the vallies in which the earthworks of the West are found, mounds occur in considerable numbers. The most elevated and commanding positions are frequently crowned with them, suggesting at once the same use to which the cairns of the Celts were applied—that of signal or alarm posts. On a high hill, opposite Chillicothe, 600 feet in height, the loftiest in the whole region, one of these mounds is placed. A fire built upon it would be visible for a distance of fifteen or twenty miles up and down the river, as well as for a number of miles up the valley of Paint creek,—a broad and fertile valley, abounding in ancient monuments. Between Chillicothe and Columbus, a distance of 45 miles, there are about twenty mounds, so placed that, it is believed, if the country were cleared of forests, signals by fire could be transmitted, along the whole line, in a few minutes. Our examination of this description of mounds, from a variety of causes, has been comparatively limited. So far as our personal observation goes, they contain none of the remains found in the two classes of mounds, just described; and, although there are traces of fire around most of them, the marks are not sufficiently strong to justify fully, the inferences that they were *lookouts* and fires used as the signals. Indeed, it is certain that, in some cases, they contain human remains, undoubtedly those of the mound builders. It is possible that a portion were devoted to sepulture, another portion to observation, or that some answered a double purpose. This is a point which remains to be settled, by more extended observation.

There is another description of mounds which should properly be here mentioned. Their purposes admit of no doubt. They consist of pyramidal structures, or "elevated squares," and are found almost invariably within enclosures. They are sometimes of large dimensions. Those at Marietta are fair examples of the class, and No. 1, Fig. 4, exhibits their structure and dimensions.

Fig. 4.



No. 2, is an elevation of a similar mound, on the banks of Walnut Bayou, Madison Parish, Louisiana, and is introduced, incidentally, to show the connection between the monuments of the lower Mississippi and Mexico, and those of the Ohio valley. None of these, so far as examined, contain remains. They were obviously designed as the sites of temples or structures which have passed away, or as "high places" for the performance of certain ceremonies. Perhaps they deserve to occupy a place by themselves, in the classification here attempted.

Anomalous Mounds.—It will be impossible, within the compass of this paper, to enter into the details which a proper notice of these mounds would require. Such a notice would necessarily involve a description of almost every one thus characterized. A single mound was examined which contained an altar and also a skeleton with its rude enclosure of wood. It was elliptical in shape, measuring 160 feet in length, 60 in width, and 25 in height. The altar occupied one centre of the ellipse, the chamber of the skeleton the other. Of the twenty-six mounds embraced in "Mound City," *six* are of very small dimensions, not exceeding three feet in height. Within each of these was deposited a quantity of burned human bones, in fragments, not exceeding, in any case, the amount of a single skeleton. No relics were found with these, though in one instance a fragment of an altar, a couple of inches

square, was observed with the bones, leading to the conclusion that they were taken up from the altars, in the adjacent larger mounds, and afterwards finally deposited here.

General Observations.—Whether these classes are maintained throughout the West, is a question which a systematic examination, carried on over a wide field, alone can determine. In almost every case, falling within our knowledge, when mounds have been thoroughly examined by competent persons, some of the features here marked, have been noticed. It is conjectured, that the "brick hearths," of which mention has occasionally been made, were the "altars," already described as belonging to a certain class of mounds. Nothing is more likely than that some of them were left uncovered by the builders, and subsequently hidden by natural accumulations, to be again exposed by the invading plough or the recession of the banks of streams. The indentations occasioned by the passage of roots across them, or by other causes, would naturally suggest the notion of rude brick hearths.