INTRODUCTION,

—AND—

DESCRIPTION OF SYSTEM OF SURVEY.

IN this work will be found several new features which will render the Atlas more valuable, as well as more attractive than similar works heretofore published.

An Atlas should indicate clearly and at a glance, the correct location of a piece of land in Section, Town and Range. In this work each Section is plainly numbered, and its boundary shown by colored lines. On the margin of the map are given the numbers of the Town and Range, and each Town and Range line is indicated by heavier coloring. Several Civil Townships of Butler County contain parts of different Congressional Towns, and this make-up of the Civil Townships is clearly shown by the system of coloring. Where there are two Sections of the same number in a Civil Township, the map shows why it is so, and gives at a glance the distinctive Town and Range numbers of the Sections.

Upon the Township Maps the highways are represented by full black lines which show them as they are, the prominent landmarks. Woodland and hills are represented by conventional shading, giving an idea of the landscape and character of farms.

In the Corporation and Village Plats the minute figures show dimensions of lots, width of streets, etc. The additions are separately colored, and the name of the dedicator given.

The Scale of the Township Maps is 32 chains to the inch. One-sixteenth inch on an ordinary foot rule will set off 2 chains, or 8 rods; except, the Townships of Madison and Lemon, and St. Clair and Fairfield, which are on a smaller scale, to enable showing them together—giving the relative position of lands on opposite sides of the river, which will be found a valuable feature. On the latter Maps the Scale is given.

The U. S. Rectangular Survey.

That part of Butler County lying west of the Great Miami River is practically a part of the United States Rectangular Survey, first used in the Northwest Territory. This plan, arranged by James Mansfield, Surveyor-General of the Northwest Territory, and adopted by Congress in 1802, may be briefly described as follows:

First, a North and South line is run through the tract determined upon to be surveyed. This line begins at some prominent or easily distinguished point, and is designated as a "Principal Meridian." Then a line running East and West at right angles with the first line, is run through the tract, called the "Base Line."

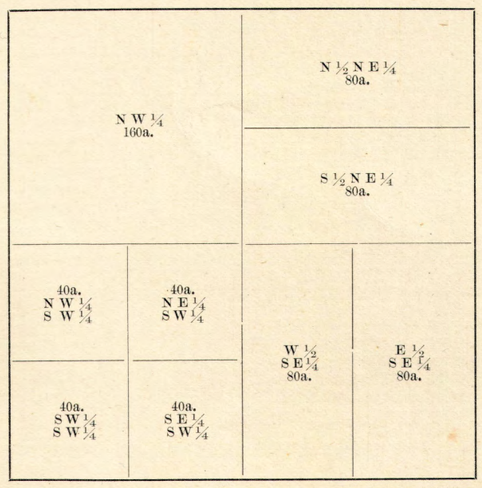
The first Principal Meridian west of Washington is the west boundary of Ohio, which was run north from the mouth of the Great Miami River. It is 80° 51′ longitude west from Greenwich.

Lines are run north and south parallel to the Principal Meridian, and six miles apart, which divide the territory into long north and south strips, called Ranges, which are numbered in their order, 1, 2, etc., East of the Meridian, also the same West of it. Across these are run lines six miles apart, parallel to the Base Line, cutting the territory into long east and west strips called Towns, and these are numbered North and South from the Base Line.

By this "cross lining" the territory is divided into squares, six miles on a side. Each of these squares is a Congressional Town. Such "Towns" sometimes, but often do not, correspond to the Civil Townships, which are known by popular names. The only designation of Congressional Towns is their Range and Town numbers.

For the survey including Butler County west of the River, the Principal Meridian was the West State Line, the Base Line the Great Miami River, and Towns are numbered north from the River.

After the tract is surveyed into Towns six miles square, the Towns are divided into thirty-six tracts, called "Sections," each containing one square mile, or 640 acres, more or less.



The Sections are run off very much as were the Towns, using each Town's east range line and south town line as bases. Commencing one mile west of the southeast corner of the Town, the Surveyor runs north a mile, then east a mile to the east range line and corrects back the northwest corner of the section. He sets a quarter post (or half-mile post) on the west line of the section at forty chains north of the starting point, and sets the quarter post on the north line of each section half way between the northwest and northeast section corners. The Surveyor proceeds to run off the remaining sections on the east tier, up to the north line of the Town, placing the last section corner where his north and south line intersects that north Town Line, whether this point is east or west of the section corner previously established in the Town survey. The distance between the two corners, if any, is called the "jog," and is recorded.

The Government sub-divisions of the section (although they are not actually surveyed by the Government Surveyor), by which the lands are sold, are "quarter" sections or 160 acres; "half-quarter" sections, or 80 acres; and "quarter-quarter" sections, or 40 acres. The section is divided into quarters by running a straight line north and south, and one east and west between the quarter posts on the sides of the section. The quarter sections are "halved" by running a straight line north and south or east and west, (whichever way it is wished to divide it), from points midway by measurement of opposite sides. The quarter sections are quartered by running lines north and south and east and west between points at the center of each side of the quarter section.

It will be seen from this that if a section is perfectly square and contains the exact number of acres, that this method would sub-divide into tracts of equal areas, but it hardly ever occurs that a section is exactly square or contains the exact number of acres. Consequently the sub-divisions will differ more or less in quantity.

The sub-divisions of the section in the preceding diagram, as it is divided into the "Government descriptions," are each described in brief on the diagram. The sections are described as No. —, Town — North, Range — East (of the First Principal Meridian.)

The Symmes Purchase Lands.

In 1787 John Cleves Symmes, Chief Justice of Delaware, formed a Land Company, and purchased from Congress all the land between the Miami Rivers, south of a westward extension of the Ohio Company's purchase (about Marietta.) This was supposed to contain one million acres, but the north line as decided by subsequent legislation, and shown on the map of Lemon Township, cuts off much less acreage. This was surveyed in a very imperfect manner. An east and west base line was established, running on the present south side of Cumminsville, and from the mile posts on this line the Surveyors ran lines fifteen miles north by the needle. Mile posts were set on these lines, but each line was run independently. The north lines and south lines of the sections were not run at the time, and when they were run it was found that no section corners lay due east and west of each other. The maps of Fairfield and Union Townships illustrate this. The fifteen miles took the surveyors to the third or Military range, so called because the land there was to be paid for in soldiers' land warrants. This was not surveyed at first. Five years later, to correct the irregular sections, the "Standard Line," the east boundary of Fairfield Township, was resurveyed north from the base line, and Judge Symmes directed that all section lines east of that should be run at right angles to the mile posts. This was only partly complied with, and was finally abandoned. Much litigation resulted before the lines were settled as they now are. The north line of the military range was finally settled by a survey by Col. Ludlow. In the Symmes survey Towns and Ranges are used in reverse order to the plan above described. The towns are the north-south tiers, numbered eastward from the Great Miami, and the Ranges are the east-west rows, numbered northward. The Sections are also numbered differently, beginning at the southeast corner running north to six, and the successive tiers westward are numbered in the same order. Lands are described as in Section —, Town — East, Range — North, between the Miami Rivers. Quarter section lines cannot be depended on, as no half-mile posts were set at time of the original survey.

Changes of River.

The changes in the course of the River since the original survey have thrown some of the western survey east of its new channel. This is most important just north of Hamilton.

Miami Rivers Survey.

The land between the Miami Rivers, north of Symmes' Purchase, including part of Lemon Township, was surveyed (1802 and prior) as Government land, by Col. Israel Ludlow, who first platted Cincinnati and Dayton. This survey was in six mile townships, which Col. Ludlow divided into squares of two miles, and which were afterward sub-divided into sections one mile square, "more or less." The Towns and Ranges and numbering of Sections are the same as in the Symmes Purchase, and land is described in the same way.

The University Lands.

All of Oxford Township, Town 5 North, Range 1 East, except Section 25 and the west halves of Section 11, 14 and 24, which had been sold previous to the dedication to university support, is the property of Miami University. To make up for the above exceptions the University also owns Sections 30 and 31 in Milford Township, and Section 6 in Hanover. The total is 23,106 acres. This land was surveyed in 1809, and each section was divided into six lots, as shown by dotted lines in this Atlas. Tracts are held by the occupants, whose names are given, on 99-year leases.

Table of Measurements.

LINEAR.

16½ Feet=1 Rod.	7.92 Inches=1 Link.
80 Rods=¼ Mile.	100 Links } =1 Chain.
160 Rods=½ Mile.	66 Feet }
320 Rods=1 Mile.	4 Rods }
5280 Feet=1 Mile.	80 Chains=1 Mile.

SQUARE.

272¼ Square Feet=1 Square Rod.
160 Square Rods=43,560 Square Feet=1 Acre.
640 Acres=1 Square Mile=1 Section.

1 Square Acre is { 12.65 Rods Square.
208 Feet, 8½ Inches Square.
3 Chains, 16¼ Links Square. }