KENTUCKY RESOURCES.

KENTUCKY TOWNS & COUNTIES.

BEING REPORTS OF THEIR GROWTH, NATURAL RESOURCES AND INDUSTRIAL IMPROVEMENT.
MADE TO THE STATE INDUSTRIAL
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REPORTS FROM COUNTIES.

DETAILED PAPERS ON THE RESOURCES OF PARTICULAR COUNTIES.

ALLEN COUNTY.

Allen county is situated on the Kentucky and Tennessee State line. Scottville, the county seat, is a flourishing town of about 600 to 1,000 inhabitants, is twenty-five miles south-east of Bowling Green, Ky., twenty-five miles west of Glasgow, Ky., and sixty miles north-east of Nashville, Tenn., and was established in 1815. It is located in the center of the county, which is nearly square, being about twenty miles wide and twenty-three miles long The Chesapeake & Nashville Railroad, which is now completed to Scottville from Gallatin, runs through the center of the county, north and south, while Barren river is the boundary line on the north and east. Several good sized streams traverse the county.

The county abounds in fresh forests of fine timber, consisting principally of the hard woods, such as beech, white oak, hickory, walnut, ash, black maple or sugar tree, poplar, sweet gum and chestnut. We have thousands of acres of valuable timber which, in the development of the various resources of the county, will find a ready market at remunerative prices, and, as the railroad will be in operation in a very short time, parties desiring to locate planing mills, saw mills, stave, spoke or axe-handle factories, should come at once.

Allen county is naturally adapted for fruit-growing, being on a line between the extremes of cold and heat. The apple, peach, plum, pear, and grape all flourish here. The wild plum and grape grow in abundance, showing the adaptability of the climate. As easy transportation is now assured, this section is destined to become a fruit-growing center.

The people of Allen county are almost exclusively engaged

in farming—corn is the leading staple. Wheat grows well here, but has not been largely cultivated for market; dark tobacco is raised extensively, and has proved a paying business, and, as transportation by rail is now assured, the culture will be increased. Vegetables of all kinds flourish here. We have earlier vegetables than other parts of the State, on account of our southern location, and the mildness of the climate affords them late in the season. While the soil on some of our uplands is not as strong as the fertile plains of the far West, yet a great deal of the bottom lands along our creeks and rivers is remarkably fertile, and we boast that we can raise as great a variety of crops as any section on the globe.

Stock-raising in Allen county has already assumed great activity and prominence, and much interest is felt in rearing horses, mules, cattle, sheep, and hogs, and the character and quality of the stock has been much improved. As all kinds of grasses grow here luxuriantly, our stock can have grass nearly the year round, and, being well supplied with pure, running water, our stock is free from disease Hog-raising has been attended with great success, sometimes becoming fat enough for use from eating the mast alone.

Some years since it was discovered that heavy lubricating coal oil existed in several parts of the county in great abundance, but for the lack of transportation the work was abandoned; but with a great trunk line railroad, such as the Chesapeake and Nashville, running through our county, this business will again come to the front and prove a profitable investment for capital.

Allen county can boast of as fine water power as any part of the country. Barren river, a stream of considerable volume, courses along its eastern boundary, while Long creek, a good-sized stream, with its banks lined with the finest of timber, runs through the county. Besides these, Big Trammel, Little Trammel, Bays Fork and Middle Fork, all streams that might be utilized in operating saw mills. Fine timber and stone are being found along all these streams, so that mills can be established at little expense.

There is a salt well within about seven miles of Scottville

that formerly supplied a large area of country with a superior quality of salt, which has not recently been worked.

There is a fine sulphur spring about five miles from Scottville, at which point a hotel is now in process of erection.

There is an inexhaustible supply of clay for making brick near the county site, also the finest clay for potter's work, of light color.

THE PEOPLE.

The people, as a rule, are honest, sober and industrious, and all who come to Allen county meet a kind reception. There is not a saloon in the county, and the consequence is that our jail is empty nearly half the time. We have no politicians or tramps. The laws are strictly enforced, the people and their rights are protected, and universal peace and good order prevail.

Persons desiring information may address J. W. Ham, E. G. Walker, E. Scott Brown, A. M. Alexander, Dr. W. R. Shapard, Scottville, Kentucky.

BATH COUNTY.

The county of Bath is bounded on the north and east by the Licking river for 40 miles. It has an area of 400 square miles, about equally divided, the northern and western portion blue grass lands, and the eastern and southern poor lands. Population 12,000.

The good lands, like all Kentucky blue grass, produces all the cereals and Burley tobacco; and Bath is an average county with the blue grass counties, but in corn ranks among the very first in the State. The southern and eastern half has timber and iron ore, but is not productive, except on the Licking river bottoms, which are about equal to any lands for the cereals.

Owingsville, the county seat, near the center of the county, has a population of about 1,000, is 130 miles from Cincinnati, and 140 miles from Louisville, and is on the dividing line between the poor and rich lands, and near Slate creek, which runs through the county for 20 miles, and is a confluent of the Licking.

The iron belt lies south and east of Slate Creek, and covers about one-half of the county. The old Slate ore banks, perhaps the largest deposit of iron ore in the Ohio valley, lies in this section and in sight of the county seat. The furnace has not been in blast for about fifty years, but the bank is now under lease to a Boston company, who take daily thirty car-loads of the ore to Ashland, Kentucky, by the Chesapeake and Ohio Railroad, on contract with the furnaces there.

There are two kinds of the ore, oxide of iron and blue ore. Two other furnaces, the Caney and Clear Creek, are in this region, neither now in blast. The ore from which car-wheel iron is made is near the Clear Creek mines.

The only vein of coal in Bath is about twenty inches thick, but difficult to mine, and is not worked. It is bituminous. Bath has fine timber. The county is pretty well checkered by turnpikes, made principally by a road order, by which the county court pays $750 per mile in aid of them (and $1,250 and $1,800 respectively); and two roads are now being built from Owingsville, south and east, to the county line. Toll is collected on all.

The Lexington and Big Sandy Railroad, now leased to the Newport News and Mississippi Valley Railroad, passes for twenty-two miles through the southern part of Bath where the iron ore lies, and four and one-half miles south of county seat. On the 4th of November next the county votes on a subscription of $150,000 to the Paris, Georgetown and Frankfort Railroad Company.* This road, it is contemplated, will pass for thirty miles through the centre of Bath, thence up Licking to the timber and coal fields on the upper Licking and Big Sandy, to connect with the Virginia system of railroads.

Bath, for all the cereals, vegetables, horses, mules, hogs and sheep, will compare with any of the counties. It produces about three hundred hogsheads of Burley tobacco, the most of which is sold in Louisville; a little goes to Richmond, Va., some to Baltimore, Md., and the balance to Cincinnati.

Bath produces cattle in which she will not lose in comparison with any county in the State. Bath has the largest, if not the finest, herd of Short-horns in the Mississippi Valley.

* The subscription was voted by a majority of nearly one thousand.

Bath needs flouring mills, and will have them.

In the southern and eastern portion, and near the Newport News and Mississippi Valley Railroad, there are sulphur springs—salt sulphur and chalybeate.

B. D. LACY,
For the Bath Delegation.

BELL COUNTY.

This county was the one hundred and twelfth in order of formation; was organized in May, 1867, and is bounded north by Clay county, east by Harlan, south by Lee county, Virginia, and Claiborne county, Tennessee, and west by Whitley and Knox counties, Kentucky.

The county is very mountainous. The river and creek bottoms, the coves, and north side of the mountains, afford very rich and productive soils. The finest cereals are produced in these lands. The soil on the ridges and south side of the mountains is very thin. The products of the county are corn, wheat, rye, oats, and small quantities of tobacco. The county abounds in timber of all kinds. Here can be seen the forest in its virgin state. The kinds of timber most abundant are white oak, black oak, poplar, sugar tree, maple, black walnut, white walnut, beech, linn, sycamore, dogwood, elm, chestnut, and chestnut oak. On the south side of Pine Mountain large quantities of yellow and black pine are found. Within the last year or two large quantities of the poplar and walnut timber have been cut and floated off down the Cumberland river, to Williamsburg, where large mills have been erected, and there it has been sawed and shipped to various parts of the United States. The lumber made from this timber is pronounced by experts to be of the very finest quality.

The mountains afford good grazing for cattle and sheep. They do well without feeding all winter, subsisting on the wild grasses, herbs, and acorns. Hogs nearly always become fattened on the mast.

Bell county is watered by Cumberland river and by small streams emptying into it. A few of the creeks which empty into the Cumberland river, and afford ample water for float-

ing purposes, are Yellow, Clear, Straight, Greasy, Turkey, Harrison, Four-mile, Browning's and others.

This county is also noted for its inexhaustible supply of the different kinds of stone-coal. The veins are in every hill, and range in thickness from eighteen inches up to fourteen feet. This fourteen-foot vein of coal is on Hignit's creek, a branch of Yellow, and the lower half is said to be equal to any coking coal in existence. In the same locality is found cannel coal, one vein of which is four feet thick. A number of other veins range all the way down to twenty-four inches in thickness. Six or seven different veins of coal have been found in one mountain.

From the Geological Survey of Kentucky, "Chemical Analysis A.," by Robert Peter, M. D., made in 1875, page 206, we take the following, which may be of interest here: "These coals are all good, and some of them would rank among the very best, and might be made available in the smelting of some ores without the preliminary process of coking, like the so-called 'Block Coal' of Indiana, which they resemble. The proportion of sulphur, it will be seen, is generally sufficiently low, but varies in the different samples from 42 per cent. in No. 1671 up to 2672 in No. 1674. It must be understood that these proportions given in the table represent the *total sulphur* of the coals, in whatever form it may exist in them, and that in the practical use of the coal for smelting or manufacturing purposes a considerable proportion of this total sulphur is removed in the preliminary heating in the upper part of the furnace, or in the coking of the coals, or is in such a state of combination in them as to be harmless. As shown in Volume 1, New Series, of these Reports (page 287), some of this sulphur is in the fine or uncombined condition, especially in the fibrous coal or mineral charcoal, which is found between the laminæ.

"When in this state this injurious element is quite easily removable. Indeed, it is continually undergoing oxidation, when the coal is exposed to the air, even at the ordinary temperature, forming, with the atmospheric oxygen and moisture, sulphurous acid, which, being gaseous, is constantly escaping, causing the well-known sulphurous odor of the coal mine or

coal heap, and enabling us to understand how it is that coals gradually become less sulphurous on exposure to the air. * * * That portion of the sulphur of coals which is not removed by the process of coking or preliminary heating is either in combination with iron, as iron proto-sulphide, which may injure the quality of the metal smelted with it, or it is most probably in combination with calcium, magnesium, or the alkaline metals, in which form it probably exerts little or no injurious action. * * * Bell county is undoubtedly endowed with great wealth of coal of every good quality, as well as of iron ores, etc., which only await development."

Pine Mountain extends through the county from east to west, and at its highest point is 1,330 feet above the sea level. Cumberland river runs down the south side of the mountain for a long distance, probably twenty or thirty miles, and cuts through the mountain almost at right-angles. The cliffs on either side of the river at this gap are nearly perpendicular, and rise to the height of 1,100 or 1,200 feet. Pineville, the county seat, is built in this gap; the spot is indeed a picturesque one. The town contains about 250 or 300 inhabitants.

A company of Louisville gentlemen have recently purchased a large body of land surrounding the north and west side of town, and will have a new court-house and jail, fine hotel, and banking house erected. An effort is also being made to build a bridge across the river to the railroad, which is now near completion, to this point. The Cumberland Valley Branch of the Louisville and Nashville Railroad has been under construction for about one year, and will be completed within the next few months as far as Pineville. The extension from Pineville to Cumberland Gap has been let, and work will be commenced soon. The tunnel through Cumberland Gap will will be about thirty-three hundred feet, and will require considerable time. When completed, this line will be a direct route from Louisville to Knoxville, and to the South and East.

Other railroads are projected through the county at various points, and in the near future we hope to see a perfect network of railroads through all parts of Eastern Kentucky. The increase in population has been very rapid for a mountainous

county so far from railroad communication. Since 1880, the population has been more than doubled. Values of property have increased more rapidly still. Land that sold from fifty cents to two dollars per acre ten years ago are now selling al the way from $10 to $50 per acre. A syndicate of English gentlemen have purchased about one hundred thousand acres of land in this county within the last twelve months, paying on an average about $15 per acre for it. Their purchases have been principally on Big and Little Yellow creeks, near Cumberland Gap. Other companies have bought land in other parts of the county. There is plenty of room for capitalists yet, and money invested in this county is sure to yield a handsome profit.

The citizens are principally native-born mountaineers, honest and sociable. We have a few rough characters, and now and then a "feud." A stranger is always treated kindly in the mountains. To people who seek health, to persons who are looking after wealth and seeking a place for profitable investment, we extend a cordial welcome.

BOYD COUNTY.—ASHLAND.

By Judge John M. Burns and Hon. J. F. Hager.

The town of Ashland is in Boyd county, on the Ohio river, five miles north-west from the confluence of the Big Sandy with the Ohio river. Population by census of 1870, 1,000; census of 1880, 3,500; present population (semi-official census, spring of 1887), 5,000.

The town is the southern terminus of the Scioto Valley Railway from Columbus, Ohio, cars being run through to a connection here with the Newport News & Mississippi Valley Company, by means of barge and steamboat transfer; also, northern terminus of the Chattaroi Railroad, which extends from Ashland south, by way of Catlettsburg, and thence up the valley of the Big Sandy, a total distance of sixty miles; also the terminus of the Ashland Coal and Iron Railway, running from Ashland to Denton, Carter county, Kentucky, a distance of twenty miles; and of the Maysville & Big Sandy Railroad, from its junction point with the Newport News &

Mississippi Valley Company, in Ashland, to Covington, Kentucky, the new river route of the Chesapeake & Ohio system to Cincinnati, rails being laid to Ashland 27th of September, 1887. Distance by river to Cincinnati is 146 miles; to Louisville, 283 miles. Western Union, Chesapeake & Ohio, and Chattaroi telegraph lines; Adams Express Company; Ashland National Bank, capital $350,000, surplus $60,000; established public graded school, three commodious buildings, twelve teachers, one thousand pupils; ten churches, viz: Presbyterian, Methodist Episcopal, Methodist Episcopal South, Baptist, Episcopalian, Catholic, Lutheran, Christian, Colored Methodist, Colored Baptist, and a newly established Collegiate Institute for education in the higher academic courses of study.

In 1854 a company was formed under the name of the Lexington & Big Sandy Railroad Company, for the purpose of constructing and operating a railroad from Lexington to the Big Sandy river. In anticipation of its completion, an association of capitalists purchased the present site of Ashland—then but farms—and issued bonds aggregating $200,000, in aid of the railroad enterprise. The site selected possesses great natural advantages, being upon a broad plateau sufficiently undulating to afford good natural drainage, and having as its entire front the finest deep-water harbor above Cincinnati. The survey of the town provided beautiful streets and avenues, those at right-angle from the river being eighty feet wide, and those parallel to it being one hundred feet in width. The name was given in honor of the home of Henry Clay, and to its avenues were given the names of the towns and counties through which it was proposed the road should run.

The advantages possessed by this newly located town, being in the very center of the Hanging Rock iron industries, in close proximity to coal, iron ores, limestone, fire-clay, and a large timber supply, were very soon recognized; so that within three years from the first sale of lots in 1854, there were established in Ashland two fire-brick factories, a factory for the manufacture of oil from cannel coal in retorts, a carriage factory, a saw and planing mill, a foundry and machine shop, and brewery. Here was also established the parent Bank of Ashland, an institution which, by prudent, conserv-

ative management, maintained the highest credit in financial circles, redeeming all notes of its issue in gold, a record yet characterizing its successor, the Ashland National Bank, which enjoys the highest position in the confidence of the business world.

The history of Ashland's growth is so intimately blended with the affairs of the old Lexington & Big Sandy Railroad Company, and its successor, that for a few years, at least, they may be treated as one. The old company built but ten miles of road, extending from Ashland in a south-westerly direction. Then followed bankruptcy and ruin of its affairs. This failure came in 1858, and was highly disastrous to the town, and from which it had not recovered at the beginning of the civil war, and this added disaster caused an abandonment of all manufacturing industries, and consequent stagnation. The commodious brick hotel of five stories, erected by the town company in 1855, served as a hospital for United States troops during the war.

At the close of the war, the Messrs. Means, Peebles, Butler, and others, bought, at public sale, the road and franchises of the Eastern Division of the Lexington & Big Sandy Railroad, and organized a new company, now known as the Ashland Coal and Iron Railway Company. They bought large tracts of mineral and timber lands, and extended their railroad to them; they developed what is now known to the coal and iron trade as Coalton coal (No. 7), and began coal operations on a large scale, employing 500 miners and maintaining an average output of 4,000,000 bushels, consumed by the steamboat trade and shipped in barges to Cincinnati and points below.

In 1869, this company built at Ashland a blast furnace, and introduced the Coalton coal as furnace fuel, not using a pound of coke, and so successful was this innovation upon the methods of iron production in the Hanging Rock iron region (where reputation for iron was established upon charcoal iron), that it has been continued since with a record not equalled by any furnace in the West. The average production of this furnace for eighteen years has been forty tons daily. It was this success, more than any other cause, that led to the

organization of the Norton Iron Works, which followed in 1872, representing a capital of one million dollars.

The A., C. & I. Railway Company represents an invested capital of $1,500,000. In the mining department, employment is furnished 600 persons; in the furnace department, 100; in the railroad department (operating thirty miles of railroad), 150 men. A new blast furnace, now nearly completed, and which will go in blast November 1st proximo, using Coalton coal as fuel, will produce seventy-five tons of iron per day. The company has extensive car and machine shops, and builds and maintains its locomotives, cars, and rolling stock.

Annual product in all branches	$800,000
Wages paid	350,000

The Norton Iron Works organized in 1872. Paid up capital, $800,000. Its works consist of a rolling-mill, nail factory, blast furnace, and keg factory. It also owns valuable coal and ore mines in Boyd, Carter and Greenup counties.

The blast furnace has a capacity of seventy-five tons per day, fuel used being Coalton, or No. 7 coal, worked from mines on the lands of the company. This coal is also used with excellent results in the puddling furnaces of the rolling mills. All iron produced is worked through the rolling mill into nail plate, and converted in the nail factory into nails. The factory has one hundred and twenty-eight nail machines, capable of turning out an average of seven thousand kegs per week. There is employed at the main plant in Ashland, and in the auxiliary departments in the country, one thousand persons, the larger proportion being skilled labor.

The wages paid annually reaches an average of $350,000, and for material consumed an equivalent sum. It is in contemplation by the management to erect next year a full-sized Bessemer steel plant, to be operated in connection with the present works, for the purpose of supplying not only this, but other companies, with the varied products of steel now so much in demand by reason of the altered conditions in the market of the country, with especial reference to the nail trade. An enterprise of such magnitude will be the most

important in the manufacturing annals of the town since the establishment of the Norton Iron Works, as it will represent in construction alone an outlay of $300,000.

The most cordial and kindly relations have ever existed between employers and employes in all branches of manufacturing industry. Strikes are rare. The wages have generally been much above the average in other parts of the country, and always paid either monthly or bi-monthly, in cash. Default in payment of wages, or passing a regular pay-day, has never been known.

The character of the labor is intelligent, thrifty, and contented. It may safely be stated that the working men of Ashland, in a larger proportion than elsewhere in the country, own their homes. There are five building and loan associations in successful operation here, which afford the members an easy method of acquiring a fund for the purchase of a home, by means of small payments, provided by a weekly saving. This accumulation of property conduces to better citizenship, and the intelligent, reliable quality of labor, and the body of our working men constitutes a citizenship of which any community may well be proud.

For the town may be claimed the distinction *that it owes not a cent.* The rate of taxation is very low. Twenty cents on the hundred goes to the support of a splendid system of graded schools, and fifteen cents has hitherto been sufficient for ordinary expenses of city government. A new city building has just been erected, at a cost of $10,000, and is paid for, with no debt over. All branches of trade are well represented and successfully conducted. Every branch of industry is running to full capacity, and is prosperous to a degree not known for years.

In these the town of Ashland is second to none, and has easily the advantage over any other Kentucky town, as a point for the acquisition of raw material for all manufacturing purposes and distribution in the markets of the world.

The town is immediately upon the line of the Newport News & Mississippi Valley Company, a transcontinental line east, west and south. By the Scioto valley it is but 130 miles to Columbus, Ohio, and a connection there with the

great trunk lines of the country. The Chattaroi Railroad places us in direct access to the wonderful coal deposits and timber supply of the Big Sandy Valley; and if the hope of the owners and managers of that line, and the gentlemen now controlling what is known as the Charleston, Cincinnati & Chicago Railway Company, shall be realized, we will have as tributary to the town, the famed iron and steel ores of North Carolina and South-western Virginia, and the celebrated coking coal of the Elkhorn district. With this not uncertain event assured, Ashland would have to pre-eminence an advantage in her manufactures over any locality in the United States. The valley of the Big Sandy has long been the source of timber supply to the markets of Cincinnati and Louisville, and next, perhaps, to the valley of the Upper Cumberland, has the largest supply of timber of original growth in the Commonwealth. It is rafted and floated to Catlettsburg, but five miles distant, and can be delivered here at the same price as there.

The Ashland Coal and Iron Railway transports to our factories, at merely nominal cost, a superior fuel coal, and from the country adjacent to its line every grade and quality of timber can be procured, and cheaply transported. The completion of the railroad from this point to Maysville and Covington places us within four hours of Cincinnati, and as the line of road is immediately upon the south bank of the Ohio river, and in competition with the established river transportation lines, cheapness of rates is assured. Then the advantages of river transportation to all points between Pittsburg and Cairo, St. Paul, and New Orleans, need but be mentioned to be appreciated.

The original proprietors of the town have, with singular judgment and foresight, reserved sites for manufacturing plants, and have ever been found liberal in negotiating terms for their acquisition by men who come prepared to establish any branch of manufacturing industry likely to redound to the general advantage of the town. Every inducement and encouragement, and a most hearty welcome and co-operation, will be extended to all persons coming here in good faith to add to our industries.

It may well be stated here that Ashland is above the flood tide of 1883.

It is beyond the scope of this communication to designate a particular branch of industry likely to succeed here; it has rather been the purpose to put fairly and without color the local surrounding and points of advantage with particular reference to low rates of taxation; advantages of schools and churches; cheapness and accessibility of raw material, and the exceptional advantages of the town in its facilities for transportation and distribution of manufactured product; believing these to be so much to the advantage of the place as to commend its locality to any person inclined to embark in any branch of manufacturing enterprise.

The following table is designed to show the number of manufacturing establishments in Ashland, Boyd county, and the capital of each; also the number of hands employed, annual product, and wages paid:*

NAME.	Capital invested.	No. of hands employed.	Annual wages paid.	Value product
Norton Iron Works	$800,000	1,000	$350,000	$900,000
Ashland C. & I. Railway . .	1,500,000	800	325,000	900,000
Hermann Furniture Company	100,000	65	36,000	100,000
Hub and Spoke Factory . . .	15,000	100	36,000	100,000
Ashland Fire Brick Company.	20,000	50	30,000	36,000
Red Brick Factories	5,000	30	20,000	30,000
Ashland F'dry & Ma'ne Shops	10,000	20	12,000	30,000
Saw and Planing Mill . . .	10,000	10	5,000	20,000
Dry Docks Company	6,000	15	7,000	15,000
Cigar Factories	1,000	10	6,000	9,000
Flour Mills	25,000	10	7,500	60,000
Local forces of C. & O., Scioto Valley, Chattarei, and A. C & I.	. . . . .	75	45,000	. . . . .
Totals	$2,492,000	2,185	$879,500	$2,200,000

BULLITT COUNTY.

Bullitt county lies south of the city of Louisville nine or ten miles, and was organized in the year 1796.

The soil is limestone, with some slate and soapstone, and generally adapted to the production of seed and grain of all

* Except Norton Iron Works and Ashland Coal and Iron Railway Company, others in this table established since 1880.

kinds; and abounds with good building stone, much of it convenient to shipment on railroad and river. Its lands are divided into hill land and bottom land, all of which is generally suitable for cultivation, and the hills unsurpassed for fruit and grazing; and is one of the very best fruit-growing counties throughout the State. It is traversed through the centre of the county from north to south by the Louisville and Nashville Railroad. The southern part of the county is also traversed by the Knoxville and Bardstown branches of said road. Salt river runs from east to west through the centre of the county, and is navigable from its mouth to the town of Shepherdsville, the county seat of Bullitt. Rolling Fork, on the south of Salt river, and Floyd's Fork on its north, empty into Salt river in the county. These streams, passing through the county, furnish abundant water power for milling and manufacturing purposes. The western portion of this county extends within a quarter of a mile of the Ohio river, and within less than a quarter of a mile of the Newport News and Mississippi Valley Railroad.

This county is abundantly supplied with valuable timber, such as poplar, pine, hickory, beech, sugar-tree, ash, black walnut, mulberry, and several species of oaks; and also well supplied with never-failing fresh water springs. Much salt water abounds in portions of the county, and it boasts of having the first works at which salt was manufactured west of the Allegheny mountains, known as Bullitt's Lick Salt Works, two miles west of the county seat. This Lick was first discovered by Capt. Thomas Bullitt in the year 1773.

In this county iron ore of the finest quality is found abundantly. In many portions tons of pure ore are found lying on the surface of the earth. Originally the manufacturing of pig and bar iron was carried on extensively at the town of Shepherdsville and Belmont, on the Louisville and Nashville Railroad. The indications for natural gas and oil are reported by experts as being very fine.

The county is exceedingly healthy, and many business men in the city of Louisville have established beautiful residences along the railroad within her borders. The world-famed Paroquette Springs is situated on the Louisville and Nashville

Railroad, one-half mile west from the town of Shepherdsville.

The county is well supplied with neat churches representing the various denominations of the Protestant and Catholic faith. The school facilities are very good throughout the county, and there are one or two seminaries, affording the best advantages for a good education.

The morals and society of Bullitt county are good. Life and property are as safe here as in any part of the United States. Her grand juries rarely return more than half a dozen indictments, and they are for minor offenses. But one homicide has occurred in this county during the past fourteen years.

There are several large stone quarries in the county that ship large quantities of building stone to Louisville and other markets. There are two turnpikes running through the county, and her public roads are good the greater portion of the year. The county has two flouring and merchant mills, and six large distilleries.

One or two new railroads are projected, and will probably be constructed through the county during the next year.

This county furnishes an inviting field for the profitable investment of capital and labor. Information can be obtained from Wm. R. Thompson, J. W. Croan, Phil. B. Thompson, or F. P. Straus, Taylorsville.

CALDWELL COUNTY.

This county is situated in the western part of the State, 180 miles west of Louisville and 45 miles east of Paducah. Princeton, its county seat, is well situated near the center of the county; has a population of about 2,500, and is one of the nicest and most promising county towns in the State.

Fully one-half of the county is in timber. The agricultural products are tobacco, corn, wheat, hay, oats, etc. It is a part of the "Clarksville District," wherein, it is claimed, is grown the best shipping tobacco in the world. The live stock business has been increasing steadily for a dozen years. The annual shipments of beef cattle, sheep, and pork hogs during

the past ten years have ranged from $200,000 to $400,000 per year. There are in the county several herds of Short-horns, Jerseys, and Holsteins, finely bred and presenting a handsome appearance.

The price of land depends almost entirely upon location, improvements, etc., that it is impossible to name a figure that would even approximate an average price. Near Princeton, and in close proximity to the railroads, lands are held at a higher price, ranging from $25 to $100 per acre. At a distance from town and the railroad, the best lands are held at $15 to $30 per acre, and from these figures, down to $5.00 per acre, lands may be had in various parts of the county.

The lands of this county are partly limestone and partly sandstone soil. The best limestone lands yield, under reasonably favorable seasons, from eight to twelve barrels of corn, and from 800 to 1,200 pounds of tobacco per acre. The sandstone lands do not yield so much. Clover, timothy and other grasses do finely in all parts of the county. The population of the county is between 12,000 and 13,000.

In point of business, Princeton is decidedly progressive. It has six or seven large dry goods and clothing houses, two large hardware houses, two furniture houses, four drug stores, four grocery stores, seven or eight churches of all denominations, two large flouring mills, whose combined capacity is fully 200 barrels of flour per day; three large tobacco stemmeries, from which are annually shipped from 1,000 to 1,200 hogsheads of strips, and an equal number of hogsheads of leaf; one wagon shop, one collegiate institute, one high school, one common school building, large and handsome, now being erected; two large and excellent hotels, two blacksmith shops, two planing mills, two butcher shops, one "marble shop," etc., etc.

There is another incorporated town in the county—Fredonia—with a population of a few hundred, situated in the far-famed Fredonia Valley, one of the best farming sections in the West. This village has churches and schools, and a population that mark it as a community of refinement and intelligence above the average. The Ohio Valley Railroad touches this town, and will prove to be, no doubt, a great benefit to the town and country.

The county roads are reasonably good. They are now being worked by the taxation system, and within the next three or four years this county will have extra good roads.

The Chesapeake and Ohio Railroad, running from the Atlantic to the Pacific Ocean, runs through this county, passing through Princeton. The Ohio Valley Railroad also runs through both town and county. The Clarksville and Princeton branch of the Louisville and Nashville Railroad also runs a distance of twelve or fourteen miles through the county to the town of Princeton. Thus it may be seen that the county has railroads connecting with the North and North-west at Henderson; with the East at Louisville; with the South at Clarksville, and at the southern terminus (not yet fixed) of the Ohio Valley, and with the South-west at Memphis.

A close inspection of a new railroad map will reveal the fact that Caldwell enjoys railroad facilities not to be had in any other county in the State, except Jefferson, in which the metropolis of the State is situated. The C. & O. and L. & N. are great systems, and the Ohio Valley, though yet an infant, gives abundant promise of soon becoming one of the great North and South trunk lines of the country. The timber resources of Caldwell county are great. Oak, hickory, ash, walnut, poplar, red gum, sycamore, maple, &c., &c., are abundant.

It is conceded by all that the following three necessary things constitute the basis, and the only safe basis, of manufacturing enterprises, viz:

1. Cheap coal.
2. Cheap raw material.
3. Competing transportation lines.

Near the town of Princeton, within a radius of fifteen miles, are found as good hard coal, as good coking coal, as good iron ore, as good hard wood timber, as can be found in the State; and these facts mark Princeton as one of the best points in the South for the establishment of factories and foundries of all kinds.

A subterranean stream passes under the town of Princeton, emerging from the earth on one side of the town, which affords water enough to supply a hundred steam engines. This stream

was never known to fail, or to slacken its flow but very little, even during the longest and severest drouths.

The farming country around Princeton is amply able to support a population of 50,000 operatives.

Besides the "Princeton High School" and the "Princeton Collegiate Institute," both of which are excellent schools, there are public (free) schools in all parts of the county, and a few private schools.

There are, near the town of Princeton, two or three quarries of fine building stone. State Geologist Procter has examined samples of stone from these quarries, and has given each sample his hearty indorsement. There is not a doubt that these quarries are exceedingly valuable, and need only a partial development to show their great value.

There is within a mile and a half of Princeton a spring of excellent chalybeate water, and several springs of excellent sulphur water in the county.

It is no exaggeration to say that there are thousands of acres of land in this county well adapted to the growth of all kinds of fruit, especially of grapes, and the great portion of these lands are near one of the railroads.

The town of Princeton, and the whole county, is noted for its good health.

There are also, within a mile or two, two inexhaustible banks of pure white sand.

Ample banking facilities are afforded by a national bank in a flourishing condition.

There are three papers published at Princeton. For further information address either of the following citizens at Princeton, Ky.: F. W. Darby, State Senator; H. F. McNary, Physician; W. S. Powell, Tobacconist; G. W. Duvall, Attorney-at-law; James S. Hawthorn, Real Estate Agent; C. T. Allen, County Judge.

CARTER COUNTY'S MINERAL WEALTH.

Carter county has for its mineral wealth iron ore, fire-clay, glass sand, marble, limestone, hydraulic lime, sandstone and coal.

The iron ore is in great abundance and fine quality, in veins of from a few inches to several feet thick. These ores have been in use since early in the century in the manufacture of iron, and known and classed as belonging to the "Hanging Rock Region." The product of these ores is well known and justly celebrated in the West and South. For analysis and classification, reference may be had to the several Geological Surveys of Kentucky.

Next in importance may be mentioned the fire-clays, "plastic and non-plastic." These clays have but recently come into notice by reason of the building of the Chesapeake and Ohio Railway through the southern portion of the county, where, in the vicinity of Olive Hill, large quantities have been mined and shipped to Pittsburg and elsewhere, where, in some cases, it has taken the place of the *German clay*, the best known in the United States among glass manufacturers. This fact has called pretty general attention to the fire-clay of Carter county as being, taking quantity and quality into consideration, the most important deposit yet discovered in this country. Hence capital is being attracted, and the question discussed as to the location of *plants* for the manufacture of fire-brick and fire-clay forms, to meet the growing demand. It is not deemed extravagant to say that this industry is destined to become of great importance, if, indeed, not the most, of any in the county.

This view seems justified, in that the wonderful deposits of iron ore in this and the States south of it, now being developed, require great quantities of fire-brick and other forms of fire-clay, which, by reason of contiguity and ease of transportation advantages, should be supplied from *Carter county clay banks;* at least so long as an equally good clay is not found nearer the points of consumption, which is not probable, since much effort has been made in that direction, without satisfactory results.

The non-plastic bed, as far as known, ranges from two to seven feet in thickness, dipping east from the outcrop near Olive Hill to Bull's Eye Springs, five miles west of Grayson, where it is found at drainage and mined by drifting. The plastic clay is here found of *good quality*, as proved by *fire-*

test, but the quantity is not known, it having attracted no attention for shipping to market, but will be found highly useful as a mixture with the non-plastic.

Next to be considered is the great bed of Subcarboniferous limestone, recently discovered to be of great economic value for building and other purposes. A company recently formed have opened a quarry, and are now producing blocks of stone that are marvels of beauty as to form and texture. This stone is classified by Professor Merrill, of "the Smithsonian" (National Museum), as "*Semi-Crystalline Oolitic Limestone*," showing the following results by analysis:

Carbonate of lime	97.84
Magnesia	1.13
Oxide of iron	.25
Silicious matter	.70
Specific gravity	2 708
Weight of cubic foot	169¼

A pressure of 57,000 pounds upon a two-inch cube failed to crush it—the full capacity of the machine applied. A section of the quarry as now opened shows several feet of bluish-grey limestone, resting on about two feet of hydraulic limestone, it resting on about five fet of blue limestone, the whole upon a bed of unknown thickness.

The above analysis represents an eight-foot stratum of this unknown quantity, it resting upon a bed of same quality, and *is a marble* of soft grayish color bearing a high polish; and pronounced by experts as well suited to statuary and monumental work, and not excelled for building purposes outside of granite. In proof of this, the Company have been offered the contract to furnish coping for the Cincinnati Bridge for the C. & O. Railway Company. Upon a branch of the "Eastern Kentucky Railway," terminating in the quarry, the Company are now shipping to the mills in Portsmouth and Columbus, Ohio, blocks of 96 cubic feet to be sawed into dimension stone.

In view of the foregoing, it may be assumed that no limit need be set to the output of this beautiful building stone, as

the demand will surely equal it in the rapidly growing cities of the Mississippi Valley, whose streets it will adorn in the distant future, instead of the marbles and granites of Maine. An interesting feature in preparing this stone for market is that it has no equal in this vicinity as a flux for iron, and certainly nothing superior for quick-lime of snow-white color, thus absorbing all the debris of the quarry at a profit.

We come next to *glass sand*, of which the finest quality, very white, in great abundance, and easily obtained, is found in our hills. This sand has been long known to exist in the county, but undisturbed for *want of transportation*. In some places it is in the form of a hard rock, in others a loose sand, with intermediate degrees of hardness. Transportation being now easy of access, it is to be hoped the attention of manufacturers may be drawn hither, thus enabling us to realize upon one more of our valuable resources.

Added to the above, we have cannel and bituminous coals distributed over the county in veins of from ten inches to four feet thick, assuring us of a supply for all local wants, if not for transportation, as against larger and better fields.

To the foregoing may be added the Waverly sandstone, too well known to require description, but of great importance in some localities. Upon this sandstone rests all the minerals above referred to, beginning with the Subcarboniferous limestone, one hundred feet thick, on the divide between Little Sandy and Tygart's creek, but thinning out in all directions, as would seem.

In the same hills, above the limestone, in successive strata, may be found six veins of iron ore, plastic and non-plastic fire-clay, three veins of coal, and one of glass sand. Such a variety of valuable minerals in the same hill is anomalous, and may not be found elsewhere. To all these may be added running streams and living springs, affording ample supplies of water for manufacturing and domestic uses at all seasons of the year.

CUMBERLAND COUNTY.

Cumberland river divides Cumberland county, running through the center, and is navigable for many miles above Cumberland county, about six months in the year, for large-

sized steamers. The county is about twenty-five miles wide from east to west, and about thirty miles from north to the southern line, which adjoins Tennessee.

The county abounds in poplar, walnut, pine, beech, sugar-tree, oak, hickory, maple and cedar. There is a vast number of logs run out every year, and a great deal of sawed lumber.

There is abundance of flagging stone, iron, lead, etc. There were large amounts of salt made years ago under the old processes.

The greatest wealth of the county consists in her petroleum interest. According to the best and most recent authorities, she is richer in oil and natural gas than any district in the United States of the same area. There has been sold, shipped, and refined and wasted for want of tankage and transportation, about five hundred thousand barrels of oil. Developments have demonstrated beyond a doubt that it exists here in vast quantities, with unlimited supplies of natural gas, which was utilized in its production and refining years ago. One of our citizens, Dr. R. M. Alexander, has a gas well, and for a time used it for illuminating his house.

School facilities are above the average for Southern Kentucky.

Alexander College will be rebuilt and opened in a few months.

Our church facilities are about on an average with other counties in this region.

There are several steam and water mills for sawing lumber and manufacturing flour, etc.

There are about 9,000 inhabitants in the county. Our hills abound in the finest red cedar, that furnish our farms with posts for fencing. Apples, peaches, plums and grapes grow to perfection in Cumberland county.

DAVIESS COUNTY AND OWENSBORO.

Owensboro, the county seat of Daviess, is situated on the south bank of the Ohio river, 160 miles below Louisville, and 40 miles above Evansville, Indiana, its two nearest business rivals. By an air-line it is not far from 90 miles west of

Louisville. The city lies on the south side of a horse-shoe bend or semicircle, about eight miles in extent, which affords abundant water front for the city's present or prospective needs. It lies on the edge of a broad and fertile plain, gently rising from the river until it reaches a plateau about a mile south of the city, and about 50 feet above its mean level. The lowest point of the city is about ten (10) feet above the highest water-mark known. Hence, there is no danger from floods or overflow.

GEOGRAPHICAL SITUATION.

The geographical situation of the city possesses many advantages. Owensboro is not only the center of a rich and prosperous county, but Daviess county is the center of a rich galaxy of sister counties, whose aggregate wealth comprises a large percentage of that of the entire State. North of Daviess lie the fertile and productive river bottoms of Southern Indiana. Immediately surrounding it lie Henderson, McLean, Ohio and Hancock. Contiguous to these counties lie Union, Webster, Hopkins, Muhlenberg, Christian, Logan, Butler, Grayson, Meade and others, a good share of whose trade reaches Owensboro by more or less direct routes.

The same arguments which may be adduced in behalf of Louisville, as the commercial center of an area of country with a radius of, say 150 miles, may be brought to bear in the case of Owensboro. Situated on the same great water-course, in the same latitude, and only ninety miles distant from the State's metropolis, Owensboro's favored location is becoming more manifest every year.

POPULATION.

Owensboro's population, including the suburbs, is between 12,000 and 15,000—probably a third of the residence portion of the city being beyond the municipal limits. A large proportion of the foreign population of the city belongs to the thrifty German element, though other nationalities are liberally represented.

In 1860 Daviess county stood fifteenth on the list of Ken-

tucy counties, with a total population of only 15,549. By 1870 she had moved up to seventh place, with a population of 20,714, thirty-three per cent. increase. By the close of another decade (in 1880) she had moved up to fifth place, with a population of 27,619, another increase of thirty-three per cent. Within the last seven years the ratio of increase in Daviess county's population has been greater than within any like period in the past, and, with a population of over 35,000 in 1887, there is every reason to believe that we will have a population exceeding 40,000 by the next census year, 1890.

Owensboro is one of the healthiest cities in the State, the rate of mortality being smaller than that of any other city of its size in the State. The natural drainage of the city is towards the river, and the excellent sewerage system established in recent years materially assists nature in her cleansing work.

Owensboro's streets are broad and airy, varying in width from sixty to ninety feet, and generally fringed with handsome shade trees. Main street, for two miles, Frederica, Walnut and Fourth streets, four of the city's leading thoroughfares, are well graveled, all connecting directly with graveled county roads. Owensboro has many miles of attractive streets, which afford ample room for future embellishment, in the shape of handsome business houses and residences.

The public school system of Owensboro furnishes good and free tuition to all children between six and twenty years. Three large and handsome buildings, one of which has just been completed at a cost of $25,000, have been provided. About one thousand pupils enjoy their benefits. One large Catholic Academy has flourished here for years, and a German Catholic school has recently been established, besides one or two other private institutions.

There are in Daviess county ninety-four white common schools and twenty colored common schools, and a number of flourishing private schools and academies.

Sixteen churches—good brick edifices—some of which are large and commodious, are occupied by the following denominations, viz.: First Baptist, Methodist, Catholic, Cumberland Presbyterian, Christian, Southern Presbyterian, Second Baptist, Northern Presbyterian, Episcopal, German Catholic,

Hebrew, German Lutheran, Colored Baptist and Colored Methodist.

The Owensboro and Nashville Railroad is now completed a distance of eighty five miles—from Owensboro to Adairville, on the Tennessee line. It runs through the counties of Daviess, McLean, Muhlenberg and Logan, and connects with the Huntington and the Louisville and Nashville systems in the South, intersecting the Chesapeake, Ohio and South-western Railroad at Central City, and the Memphis Division of the Louisville and Nashville at Russellville.

The Louisville, St. Louis and Texas Railroad—known as the "Ohio Valley" Railroad—is under construction, and when completed will place Owensboro within four hours' ride of Louisville. It traverses the counties of Henderson, Daviess, Hancock, Breckinridge, Meade, Hardin and Jefferson.

The Owensboro, Falls of Rough and Green River Railroad, to run from Owensboro to some point south-east via the Falls of Rough, is an organized corporation, now preparing for active work.

The same may be said of the Vincennes, Oakland, and Owensboro Railroad, which will afford the most direct rail route known from the South to Chicago.

At present a large passenger traffic is done between Owensboro and eastern and western points via Louisville and St. Louis, by way of Rockport, Indiana, and connections with the Louisville, Evansville and St. Louis Air Line.

There is a strong probability that the gap between Owensboro and Rockport, Indiana (ten miles), will be filled at no distant day by an extension of the Air Line road. This will give us direct connection with St. Louis, Chicago and Cincinnati, and by its proposed alliance with the Ohio and Nashville Road, a grand trunk line between the North and South. The Owensboro and Evansville, the Owensboro and Cannellton, the Louisville and Henderson, the Cincinnati and Memphis, and the Cincinnati and New Orleans Packet Companies, all of which make Owensboro an objective point, furnish abundant competition in traffic and travel the year round.

Owensboro has for many years been supplied with pure water by means of the Holly system, and fire plugs are located

on nearly every street corner. These safeguards against fire are supplemented by a steam engine and an efficient fire department, which occupies a large building, specially erected, next to City Hall.

There are also ample facilities for a full gas supply at reasonable rates.

Owensboro was one of the first cities in Kentucky to use the electric light for general purposes, and has four towers over one hundred feet high each, as well as a number of arches.

While there have been business failures in Owensboro, as there have been in every city, there has been no bank failure, and we have now six banks, each built on a solid foundation, backed by abundant capital, and managed by men of unquestioned integrity and business standing.

Their capital stock, surplus, undivided profits and deposits are as follows :

	Capital.	Surplus.	Undivided Profits.	Deposits.
Deposit.	$240,000 00	$45,000 00	$5,688 50	$399,667 32
First National . . .	137,900 00	24,132 50	. . . . .	217,201 76
Owensboro Savings.	50,000 00	5,000 00	181 18	299,021 79
Citizens' Savings . .	117,500 00	. . . . .	1,471 78	94,263 00
Citizens'	100,000 00	(Organized Sept. 1, 1887).		
Farmers & Traders'.	100,100 00	6,137 03	. . . . .	100,788 21
Capital Stock. . .	$745,500 00	$80,269 53	$7,341 46	$1,110,942 08
Surplus	80,269 53			
Undivided Profits. .	7,341 46			
Total	$833,110 99			

The 1886 report of Insurance Commissioner Norman showed that in the amount of premiums paid Owensboro ranked third among the Kentucky cities. A comparative statement of the amounts paid by several of the leading cities and towns shows :

Louisville . .	$551,595 00	Frankfort . .	$57,934 00	Henderson . .	$51,598 00
Lexington . .	90,086 00	Covington .	56,711 00	Paducah . . .	44,304 00
Owensboro. .	65,120 00	Shelbyville .	51,901 00	Hopkinsville..	28,820 00

Owensboro maintains handsomely a street railway. The lines now traverse Main, Frederica, Pearl, Fourth, and also run to the Daviess County Fair Company's grounds, two miles

south of the city. The service is unusually good, and the management of the company's business a model for larger cities.

Twenty-three tobacco stemmeries, some of which are among the largest in the world, prepare the tobacco of this region for home and European markets. Sixteen distilleries are engaged in the manufacture of sour-mash whisky.

Among the many successful manufactories may be mentioned two foundries and machine shops, a wagon factory, a tobacco manufactory, two cigar factories, a wheel and spoke factory, planing mills, flouring mills, and many lesser establishments. The field here for these enterprises is unlimited, as the supply of fuel and material is inexhaustible. Coal for manufacturing purposes can be had at from two to six cents per bushel.

The agricultural productions of the county consist chiefly of tobacco, corn, wheat, oats, rye, barley, sorghum, hay, &c. These, and all other products of the farm, garden and vineyard possible in this climate, grow in luxuriance. The uncleared land abounds in every variety of timber known to the latitude, including especially the various kinds of oak and hickory, walnut, ash, maple, gum, locust, and beech.

The conditions for cheap building are all present. In addition to the abundant timber, fine material for brick is found on all sides, and an abundance of first-class building stone is near at hand on the O. & N. Railroad, and the Ohio and Green rivers. The growth of the city, which had its first material population in 1850, has been steady and sure for the last fifteen years, and is now brisk. An estimate shows that over $250,000 have been expended in improvements during the past year. Owensboro contains many handsome residences, and its leading business houses cannot be surpassed in more pretentious cities, all of which are numbered on the celebrated Philadelphia plan of one hundred numbers to the block. A bill appropriating $50,000 for the erection of a public building in Owensboro has already passed the United States Senate.

THE CITY OF LEXINGTON.

By G. W. Ranck.

Among the many advantages which Lexington can claim, none is more striking or more important than the location of the city itself. It is situated in what Bancroft styles "the unrivaled valley of the Elkhorn," in the rich county of Fayette, of which it is the seat of justice, and is by rail ninety-four miles east of Louisville and eighty miles south of Cincinnati. It stands, therefore, in the heart of the Blue Grass Region, noted throughout the civilized world for its remarkable soil and splendid live stock, and as that favored region is itself in the centre of Kentucky, Lexington is surrounded on all sides by the vast and magnificent resources of the State, and is in the very position required to reach them by the shortest and quickest routes, and to make them easiest tributary to her growth and prosperity. In addition to this, her topographical situation makes her a focal point to which many railroads must inevitably tend. The advantage of location has already had much to do with the rapid advancement of the city, and foreshadows the commercial and industrial importance it is destined to attain. A word or two may be pertinent just here about the Blue Grass Region, of which Lexington is the capital. Strictly speaking, the "region" is quite extensive, but the term in its popular sense applies only to that singularly favored body of land which comprises six or eight counties surrounding Lexington. It is underlaid by a peculiar decomposable limestone, which imparts to the soil an unsurpassed fertility, and gives to the grass known to botanists as *Poa Pretensis* a richness and permanent luxuriance which it attains nowhere else, and combines in it qualities which bring the horses and other live-stock which feed upon it to the highest stage of development and superiority. With all her advantages of location, what may Lexington not become?

The population of Lexington, which has almost doubled in the past few years, is now between twenty-five thousand and thirty thousand. The streets are laid off at right-angles, are well paved, and are adorned with handsome business houses and private residences. Her public buildings are many and

imposing, and among them is a fine hotel, a large State college, one of the most complete opera houses in the South, and a beautiful court-house of stone, all new; an elegant Federal Building also is in course of construction.

Her railroad facilities, which have greatly increased lately, are especially mentioned elsewhere, as are also her twenty schools, numerous churches, and fine system of water-works. Lexington has ten newspapers, two of which are dailies, a chamber of commerce, eight banks, street railroads, electric lights, steam fire department, telephone system, free mail delivery, fire alarm, and all the conveniences of a live, progressive city. Among her manufactories are five great distilleries, five large flouring mills, five establishments for dressing hemp, six manufactories of tinware, three planing mills, three brick works, a foundry, two woolen mills, a large spoke and hub factory, two steam laundries, a furniture factory, establishments for the manufacture of plug tobacco, cigars, ice, saddles, carriages, wagons, soap, and a number of other things. But she needs a host of industries of every kind, and would gladly welcome their coming. Fortunately her advantages are such as to only require to be once fully made known to induce their location and to make her a flourishing manufacturing centre. Lexington is growing rapidly. The demand for houses and lots has never been anything like so great as now, and the outlook of the city is exceedingly encouraging. Stock yards, and many large stables, remind one that Lexington is the great live stock market of America, and the splendid macadamized roads, hard and smooth, which radiate from the city in all directions, are lined with extensive breeding establishments, where herds of fine cattle graze, and from whence have gone forth an army of the noted thorough-breds and trotters of the world.

The live stock interest is the leading thing in the business of Lexington, as will be at once inferred from what has already been stated. At the annual public sales alone of horses and cattle at and near the city, $500,000 worth of high bred animals are disposed of annually, while the sales, both public and private, of stock of all kinds in the Blue Grass market reaches up among the millions. Fine thorough-breds, as is well-known, have been sold here at $5,000, $10,000, and $15,000 each.

Lexington is the great central market for the sale of the fine whiskies of commerce, which are manufactured here by the tens of thousands of barrels annually. This industry alone employs an immense amount of capital, and necessitates the continual disbursement of heavy sums.

The grocery trade of the city has steadily increased with the increase of her railroad facilities, which are now so great that her wholesale grocery business is assuming heavy proportions, and she is easily and successfully competing with Louisville and Cincinnati in that line.

As regards American hemp, it is well known that she is by far the greatest market for that article in the whole United States. It is enough to say of this branch of her trade, that eighty per cent. of the American hemp disposed of in this country is sold right in Lexington.

The grain trade is heavy, enormous quantities raised about the city being required by her distilleries, malt-houses, and flouring mills, and for shipment. The wheat of the Blue Grass Region, especially, is of the quality most desired for the flour trade of South America, and is always in demand. Lexington, in fact, handles no small share of the $75,000,000 worth of agricultural products generally which Kentucky annually averages.

Owing to the increase in both her population and her manufacturing enterprises, the coal trade of the city has more than doubled during the past six years.

The dry goods trade is one of the most prominent branches of Lexington's business. It has always been a leading commercial feature, and no city of its size in the country has been more noted for dealing in a fine line of dress goods. The wholesale dry goods trade is heavy, and all departments of the business are growing. There are special inducements for investment of capital in real estate. Although there is no finer land to be had anywhere, and few places where it will at all compare with that of the Blue-grass region, and, although it is in the highest state of improvement, it sells ridiculously low, as compared with vastly inferior property in many other localities. Now is the time to buy real estate in and near Lexington, for with the steady and remarkable increase in the population and pros-

perity of this section of the country it is sure to appreciate immensely in value, and to command far different prices in the future. There is but one Blue-grass region, and real estate in it means something.

As for the banking facilities of Lexington, they are most abundant for all the transactions of business. There are eight prosperous banks in the city, representing a capital and surplus of between three and four millions of dollars.

AN EDUCATIONAL CENTRE.

No city in the South affords greater educational advantages than Lexington, which has been noted as a seat of learning for a hundred years. She has over twenty schools of various sizes, attended by several thousand pupils. The most prominent of these are Kentucky University, the successor of old Transylvania University; the State Agricultural and Mechanical College, and three female schools, viz: Sayre Institute, Hamilton College, and St. Catharine's Academy. These are institutions of genuine merit and high standard of scholarship, with strong corps of teachers. Their buildings are large and imposing, situated in park-like grounds, and are heated with steam and supplied with all the modern conveniences. A commercial college, one of the most flourishing in the country, is located here. A number of the private schools have attained an enviable reputation, and Lexington is justly proud of her public schools, which are in a high state of efficiency and prosperity, and constitute one of the strongest inducements to the intelligent and industrious to locate in the city.

AS A PLACE OF RESIDENCE.

Lexington's pre-eminence as a place to live in and to enjoy life in is universally acknowledged. It is beautiful, healthful, and rich in historic associations. It affords all the advantages of elegant and long-established society, while, at the same time, it is a wide-awake, progressive, and rapidly growing city. Its residence streets are lined with shade trees, and plentifully adorned with flowers and shrubbery, and the grass in the yards

is thick and green the whole year round. She has fine schools, and plenty of them, churches of all the leading sects, a public library. two parks, a beautiful opera-house, just completed, and provided with all the modern improvements, and several smaller amusement halls. A branch of the Chatauqua Organization is strong and flourishing, an agricultural association own handsome grounds and buildings, in which the finest fairs in the State are held, and her racing association is the oldest and one of the most famous and successful in the United States. There is probably not another equal body of land in the world which produces so many of the luxuries and substantials of life as the region around Lexington. A bill of fare of its products alone comprises beef, Southdown mutton, ham, turkey, chicken, milk, butter, cream, eggs, wheat-bread, corn-bread, rabbit, squirrel, hominy, roasting-ears, pumpkins, parsnips, turnips, tomatoes, cabbage, egg-plant, cucumbers, cymlings, radishes, mushrooms, potatoes, beans, peas, pepper, honey, blackberries, strawberries, raspberries, apples, peaches, pears, plums, melons, grapes, nuts, cider, wine, and other things, and all in perfection and of the very best quality. With a fine market, low-priced coal, good streets, gas, daily papers, street railroads, free mail delivery, stores of all kinds, telephones, electric lights, and all other modern conveniences, it offers the strongest inducements to persons desiring a comfortable or luxurious home. Improved places can be had at reasonable prices, and building lots, which are sure to appreciate greatly in value, are offered at low figures. Finely located property can be bought in Lexington for one-fourth the sum that inferior property sells for in the inflated paper towns of the West and South. And where on earth could one have a more elegant or desirable country home than in the highly cultivated and fertile region about Lexington, with every convenience of life, in the midst of a network of superb turnpikes, surrounded by woodlands and blue-grass pastures, teeming with blood horses, flocks and herds, by farms famous for their yields of corn, wheat, hemp, and tobacco, and by scenes of pastoral beauty that would lend a grace even to the noted landscapes of old England? Many Northern and Western capitalists have already bought country homes and suburban places here, and the number will continue

to increase as its great attractions and advantages become known.

It is evident, from what has already been stated, that Lexington offers remarkable advantages for the establishment of manufactories. These advantages, which have never attracted so much attention as they are now receiving, and which are destined to make her one of the great industrial centres of the Ohio valley, are easily enumerated. She has the *climate*, one especially favorable to continuous mechanical labor and its various productions; for it is temperate, signally exempt from extremes, storms and epidemics, and is pre-eminent for healthfulness, as reference to national statistics will show. Her *situation* for a manufacturing point is perfect.

It is stated on scientific authority that Kentucky lies in the center of the region now holding, and destined always to hold, the mass of American population. The location of Lexington in the very center of population makes it therefore practically certain that manufactures from this city will always command *the widest market with the least carriage.*

Her *food supply* is great. She can easily feed an immense swarm of mechanics and operatives, for she is the food depot of a veritable land of abundance. Her *water supply* is inexhaustible. In addition to her successful system of waterworks, which furnishes fifty gallons of water per capita daily, she has a great natural store of it.

The city rests upon extensive strata of cavernous limestone, which abound with underground lakes and streams, which are easily tapped, and large springs are numerous. From these her immense distilleries get their water supply, each of them using 200,000 gallons daily, to say nothing of the amount used by other industries.

Lexington's railroad system is continually growing. Already four great trunk lines, viz: The Louisville and Nashville, the Chesapeake and Ohio, the Cincinnati Southern, and the Kentucky Central afford her commercial intercourse in every direction and splendid shipping facilities, with freight rates lower South and East than either Louisville or Cincinnati, and as low from the North and West. Sixty or seventy freight and passenger trains arrive and depart daily, and she is to be especially

congratulated that she has three competing lines to the South, which is so rapidly advancing in population, wealth and enterprise, and is already one of the finest markets for manufactured articles in the world. The Kentucky Union Railway, which is to penetrate the magnificent coal fields right at her door, is partly finished; the Louisville Southern is in progress, and others are reaching toward her. She can not fail to become a great railroad centre, for she is in the finest practicable railroad territory west of the Atlantic seaboard, and being the natural point of passage of an immense area of country, must be the objective point of nearly every railroad projected from the Gulf to the lakes; from the lakes to the South Atlantic; from the Chesapeake to the West, and from the North-west to the South-west.

In addition to these splendid advantages, it must be remembered that Lexington has no rival city within a hundred miles of her, and that she proposes, in special cases, to exempt manufactories, and especially those employing skilled labor, from taxation for a term of years.

Immense resources of raw material for manufacturing come right from the soil of the rich agricultural region of which Lexington is the center. On this account, it would be hard to exaggerate the claims of the city as a location for tobacco factories. In the first place, she is in the very heart of the greatest tobacco-growing State in the Union. In 1880, out of a total of 473,107,573 pounds of tobacco, Kentucky produced 171,121,134 pounds, and the plant has been so extensively cultivated around this city that it is evident that this region furnishes the largest yield per acre of any part of the United States, showing that it is destined to be the leading tobacco district of the world. The White Burley, so successfully raised here, is especially adapted to plug and cutting manufacture, and thus strongly commends itself to enterprising men with an eye to business. There is no obstacle, of any kind whatever, to the successful establishment and profitable conduct of tobacco factories at this place.

Lexington presents an inviting field for the establishment of woolen mills, as she is the centre of a district which pro-

duces five or six million pounds of wool annually, and has but two factories, and they with limited capacity, devoted entirely to the production of jeans, yarns and hosiery. Our grades of wool are principally quarter blood, medium and Cotswold combings, with some fine Southdown, all of which, owing to the smoothness and culture of our lands and the large extent of clean, blue-grass pasturage, is generally in superior condition. The shrinkage of our wool is much less than that of many other localities, and in the important item of price brings about the average of good Ohio wool.

If there is a spot on the face of the earth where factories for the making of cheese, and also condensed milk, ought to succeed, it is Lexington. We have the finest cows in countless numbers, the best grass in the world, and green the whole year round, and for cooling purposes have cold spring water in unusual abundance, and an inexhaustible ice supply. Milk can be had here cheaper than in the famous cheese district of New York, and of a quality to produce the best cheese that can be made. With sufficient capital, an experienced management, and hands trained to the work, success is assured. The same may be said of condensed milk; and as the principal market for that article is the South, the advantages of Lexington as a distributing point will be at once perceived.

The wonderful capacity of Kentucky soil to produce hemp has made this State almost as noted in that respect in the markets of the world as Russia. How much that reputation is due to the county of Fayette, of which Lexington is the capital, may be judged from the fact that she has been known to produce a crop of nearly five million pounds of hemp, very largely over one-third of the amount produced by the entire State. Her advantages, then, as a site for the manufacture of hempen articles of all kinds is too plain to need argument. She has abundant labor of the character especially adapted to such manufacture, and twine, in particular, should be made here, from whence it could be so readily shipped to supply the multitude of binders in the harvest fields of the South and West.

In addition to the products of her own soil, Lexington has other supplies of cheap raw materials for manufacturing almost at her doors, for her railroads have opened up to her the won-

derful resources of the neighboring counties of Eastern Kentucky. The timber of this region is of the greatest extent and variety, is of inestimable value, and includes the finest virgin hard wood known in America. Old forest walnut that can not be surpassed, black birch, hickory, white oak, red maple, yellow poplar, chestnut, elms, lindens, locust and buckeyes abound. Lexington's great lumber advantages ought to make her the seat of the most extensive manufactories of furniture, wagons, agricultural implements, and like articles in this country, for she is the cheapest market in it for that kind of material. The best quality of clear butt-cut white oak needed for manufacturing purposes can be had here at $20 per thousand. It costs about double that price in Boston. Ash, such as is used in carriage making and farm machines, at like figures. Building oak, $14 per thousand. Upper grades of poplar, away below what is paid at Eastern points. Furniture, and particularly poplar furniture, can probably be made here cheaper than at any other place in the United States. Lexington offers immense advantages over Eastern and Northern cities in this line.

From the region above alluded to, Lexington's railroads bring her low-priced coal from a field whose area exceeds that of the coal fields of England, and whose seams are from three to eight feet in thickness, and the character of its iron resources is displayed in the celebrated Red River car-wheel iron, found on the Kentucky Union Railroad, only forty-five miles from Lexington. Nowhere in this country can iron be produced cheaper, and no ores of equal richness are to be found so convenient to pure, cheap coals.

Thousands of car loads of iron ore of the best quality annually pass through Lexington for distant points. Every pound of it ought to stop right here and be manufactured into locomotives, car wheels, boilers, store fronts, hollow-ware, castings, and every thing that is made of iron. She can furnish manufacturers with coal as cheap as it can be had at Louisville or Cincinnati, and our nearness to the mines cuts off a big item in the shape of freight charges and transportation.

In addition to the industries already named, it is evident from the character of her live stock, agricultural and mineral

resources, that Lexington also offers advantages for the manufacture of leather and leather goods, glue, combs, brushes, starch, brooms, candles, soap, cigars, snuff, cigarettes, crackers, woolen goods, pottery, terra cotta articles, wooden ware, watches, vehicles of all kinds, and a host of other things.

Competent and reliable mechanics are offered many and strong inducements to settle in Lexington. There is plenty of work to do and wages are good. Here industrious workmen are not compelled to crowd their families into the teeming upper stories of health-destroying hives, with neither privacy nor domestic liberty, to consort with disease and vice in a stifling atmosphere of foul courts and narrow streets. The miserable Eastern tenement house system is practically unknown and unnecessary. Here, where there is plenty of room for all, the mechanic can have his family in a one-story cottage, with yard and reasonabe conveniences, at as cheap a rate, every thing considered, as the rent asked for the inferior tenement homes abounding in crowded cities. Building lots in the suburbs can be bought cheap, and building lumber can be obtained at nearly half the price asked in Eastern markets.

The necessaries of life are abundant and sell at reasonable rates; the city schools, which are finely conducted, offer all their advantages free of charge; benevolent orders are numerous and in good condition, and the mild climate admits of open air labor throughout the year.

The thinking people of Lexington are warmly disposed in favor of skilled labor, and are inclined to welcome, with especial pleasure, the establishment of any and all manufactories employing such labor. They realize the fact that a large accession of skilled workmen would be one of the greatest blessings that could befall the city, not simply because they are necessary to the full development of our manufacturing interests, but because they make intelligent, law-abiding, valuable citizens, and are capable of instructing our boys and girls in the manifold branches of the most important mechanic arts. A cordial invitation to come and settle among us is extended to all such mechanics, no matter what their nationality, religious creed, or political opinions.

FLEMING COUNTY.

Fleming county is in the north-eastern part of the State, bounded by Mason, Lewis, Rowan, Bath, Nicholas and Robertson. Population in 1880, 15,221. Flemingsburg, the county seat, is 17 miles from the Ohio river at Maysville, and on the line of the Covington, Pound Gap and Flemingsburg Railroad, six miles from the Maysville branch of the Kentucky Central, which passes through some twelve miles of the county on the west. Railroad communication at the county seat is afforded by four trains each way daily. The county is in a rich agricultural section, on the eastern border of the blue-grass region. The climate is mild and healthful. It is neither excessively cold in winter, nor intensely hot in summer; and the country is sufficently elevated to be removed from malarial influences. The soil is rich, and yields bountifully to the labor of the intelligent farmer. Underlying the larger portion of the county is a strata of limestone, common to the blue-grass section, and the soil is of sufficient depth to render the effects of drouth less severe than in many parts of Central Kentucky. It is adapted to the cultivation of all the crops common in Kentucky, and all varieties of fruits grow readily, and yield well. Wheat, rye, oats, millet, hemp, tobacco, corn and clover are cultivated, and the yield in good seasons is abundant, and the quality of the best. Tobacco grown in the county commands the highest prices, and is classed in the market with "Mason County," which is second to none in the State.

Many of the Fleming farms are in blue-grass, and stock-raising is among the chiefest and most profitable occupations of the farmers. Mules, fat cattle and high-bred Short-horns are extensively bred and grazed. A number of the stock men of the county have connections in the South, where mules and horses are shipped for sale to the Southern planters.

The topography of the county is rolling and finely adapted to sheep and cattle-raising. Blue-grass grows as luxuriantly as in the most boasted part of Central Kentucky. The county is well watered by the Licking and its tributaries, fed by natural springs, which abound in all parts of it. In this respect Fleming is highly favored.

STATISTICS.

Total assessed value of property in Fleming county in 1887	$4,478,421
Against $3,788,296 in 1885.	
Assessed value of land, 204,652 acres	3,294,071
City and town lots, 629	432,015
Personal property	752,235
Personal property in detail:	
Horses, 5,130 head	275,821
Mules, jacks and jennets, 886 head	56,986
Cattle, 6,736 head	132,760
Sheep, 6,756 head	12,248
Hogs, 9,387 head	48,961
Cattle not subject to taxation, 3,851 head	75,157
Farm products:	
Tobacco, pounds	2,519,282
Hay, tons	6,496
Corn, bushels	621,942
Wheat, bushels	130,686
Oats, bushels	68,972
Barley, bushels	5,100
Clover and grass seeds, bushels	1,816
Number of acres in wheat	10,198
Number of acres in corn	17,028
Number of acres in meadow	6,301
Number of acres of woodland	40,673

Turkey, eggs, and chicken exports amount to about $30,000 per year.

The taxable rate for the year 1887 was 47½ cents on the $100. There are few in the county unable to pay their taxes promptly, and the delinquent list will be found to be below the average of other counties in the State. Fleming has few millionaires, and few very poor people. Industry and thrift yields ample reward, and the county offers the best inducements for the employment of capital and enterprise.

Flemingsburg contains something over 1,600 inhabitants, and the business of the place is such as is usual to the thriving country towns of the State. There are no land or business booms or schemes for the inflation of values, but there is a healthy, though, at present, rather slow growth. Turnpike roads of the best character permeate the county in all directions, nine of which center at Flemingsburg. Flouring mills are located at Flemingsburg and in other portions of the county, and there is ample capital at hand to purchase tobacco, stock, and the other products of the farms at fair market rates at home.

FLOYD COUNTY.

By Hon. R. S. Friend.

Floyd county is located in the extreme eastern end of the State. The Big Sandy river traverses it from south-east to north-west for a distance of twenty-five miles, and is navigable for from six to nine months in the year. Pikeville, in Pike county, twenty-five miles above Prestonsburg, the county seat of Floyd, is the head of steamboat navigation. Prestonsburg is located on the right bank of the Big Sandy river, 100 miles from its mouth. The surface of the country is mountainous, and each mountain contains from three to five veins of bituminous coal of the very finest quality for smelting and other purposes, a large portion of it being of the best coking quality. The veins are from eighteen inches to eight feet in thickness. There are also large veins of the very best quality of cannel coal in this county.

We have large and valuable forests, consisting of poplar, white, red, and chestnut oak, black and white walnut, beech and linn, beside other varieties of hard and soft woods.

Apples, peaches, pears and other fruits are produced in abundance. Wheat, rye, oats and corn are the principal products, and are produced in large and paying quantities. Our exports amount to $500,000 per annum. This includes exports of every kind.

Our common schools are well attended, and our teachers compare favorably with those in any other part of the State.

Local option has been adopted, and the law is rigorously enforced, consequently there is very little intoxicating liquor sold, and none legally. Our people are sober, industrious and honest, and are at all times ready to assist in enforcing the law, and to protect capital as well as labor. They stand ready to welcome all aids to prosperity and progression, and to protect men in all legal enterprise. They will generously and materially aid capital in the development of the wealth of their section of the State.

FRANKLIN COUNTY.

By Sam'l E. James, M. D.

Frankfort, the Capital of the State, is situated on both sides of the Kentucky river, about sixty-six miles from its mouth, in a beautiful valley inclosed on all sides by towering hills, securing for her an even temperature winter and summer. Indeed, there could be no more desirable health resort in the State, as a careful examination of her statistics will show. There is no more beautiful place in the world than Frankfort, and she is so compactly built that it is but a few minutes' walk in any direction to reach the beautiful ravines and thickly wooded hills.

In every direction there are macadamized pikes affording the most charming drives, and nature seems to have lavished her greatest charms on these public highways. Some may think these statements extravagant, but they have but to come and see to be convinced of their truth, and how meagre the English language is to convey any true conception of these natural beauties.

But as a manufacturing center Frankfort must look for her greatest glory.

Nature has been no less lavish with her power than she has with her beauty.

Here is the Kentucky river with a dam in one-half mile of the city proper, having water power enough to run hundreds of factories, saw mills or any kind of industries. Why is not this power utilized?

It will be but a short while till coal will be so cheap in Frankfort that fuel will cease to be an expensive item in manufacturing enterprises.

Now is the time for capital to come and secure these advantages. Later on there will be no property for sale. You men of capital, come and see what tremendous advantages our little city can offer. Land in and adjoining Frankfort is remarkably cheap, and out of all proportion to the benefits to be derived.

Frankfort lumber is shipped to all parts of the world, and this interest is rapidly growing. There are eight or ten active

saw-mills constantly in operation, and still the demand is not met. Logs of all varieties are brought down the river with each rise and sold at a very reasonable figure. The timber on the Kentucky river is simply inexhaustible, and Frankfort, with her new railroad, will offer the greatest possible inducements in the way of reaching the markets of the world. Freights will be cheapened by competition, and there can be no lack of demand for the manufactured article. Why should we seek the West or South to make investments when there are so many fortunes to be made in our midst? The Frankfort, Georgetown & Paris Railroad is a certainty. We already have the L. & N., and the Louisville Southern is about completed, and it is but a question of a little time as to when we will get a branch tapping that road. And, then, we have the river to compete with them all. What better shipping facilities could we ask than these? Our communication with North, South, East, and West is complete, thus placing us in easy reach of the markets of the whole world.

The time is rapidly approaching when the whole mountain district along the Kentucky river will be pouring its coal and iron in upon us, and iron foundries will be a necessity, as there is no town affording greater facilities for this line of industry.

The Frankfort water-works are equal to the best in the country, having a hydrant at almost every corner, capable of throwing a two-inch stream a height of 150 feet, reducing the danger from fire to a minimum.

There are two large basins, capable of supplying the wants of the city for ten years to come. We have churches for all shades of religious belief, and both private and public schools for black and white.

Our public school in South Frankfort is an institution of which our people are justly proud. It has about 800 pupils in attendance, and is most admirably conducted. The instruction is graded to the capacity of each scholar, and the teachers are not only willing to do their duty, but are very much in love with their work, and are very successful in arousing the pupils' ambition, and their final examination exhibits the fruit of their untiring labor.

The county is intersected in almost every direction by good

turnpikes, making it possible to bring produce from any farm to Frankfort almost all the way by pike.

The lands are good for farming purposes, raising all kinds of grain, hemp and tobacco. While it is not equal to some of its sister counties, it is above the average, and sells at $40 to $60 per acre.

Many of the residences in Frankfort are capacious brick mansions, and our public buildings are beautiful in design, and handsomely finished.

FULTON COUNTY AND HICKMAN.

Hickman, the county seat of Fulton, situated at the terminus of the Nashville, Chattanooga and St. Louis Railroad, and on the Mississippi, where navigation is never obstructed, is peculiarly adapted to the manufacture of any article of which wood is the chief part. The surrounding forests abound in large quantities of both hard and soft wood, which is very accessible. We have hickory and oaks of all varieties, fine gums, which make excellent furniture, elm, poplar, sycamore, ash, beech, maple and cottonwood. The manufacture of this latter wood is almost in its infancy. Until a very short time ago but little regard was paid to this class of timber here, but we have now in Hickman a large saw mill that runs the year round, and cuts nothing but cottonwood, which is dried and made into all kinds of boxes—cracker-boxes, candy-boxes, etc. It is claimed that boxes made of this wood never impart any taste, as is the case when other wood is used. Of this timber I can truthfully say that Fulton county and Mississippi county, Missouri, opposite Hickman, have an almost unlimited supply. It is of rapid growth, and, when manufactured into lumber, it will defy an expert to distinguish it from poplar. As the virtues of cottonwood have not long been known, and, for that reason, it is not extensively used, Hickman offers unusual inducements for manufacturers who would engage in this industry. The natural resources for manufacturing purposes are unusually good in Hickman, but, to a great extent, undeveloped. Our town has one box-factory which is running steadily and employs about thirty

hands; and, in addition, this firm is, perhaps, the largest lumber dealers in Southern Kentucky or West Tennessee, their shipments aggregating between five and six million feet annually. One wagon factory is running on full time, and gives steady employment to 100 hands. They ship large numbers of these wagons to Texas and other Southern and Western States. We have also a pump factory, about the sixth in size in the United States. They work on full time and employ yearly from 75 to 100 men, and make several varieties of wooden pumps, which have a national reputation.

We have in the vicinity of Hickman about twenty saw mills, running almost the year round. They manufacture into lumber almost all varieties of wood, and make shipments to the North and North-west, both by rail and the river. There is an excellent opening in Hickman for a furniture factory, in fact for any kind of a factory in which wood is used. It is also a fine point for the manufacture of fine brick and stone ware, as the hills of Hickman, and those adjacent thereto, furnish inexhaustible supplies of material for both. There is fine clay in our vicinity that could be successfully utilized in the manufacture of queensware.

Water supplies in Fulton county are abundant.

Hickman is the highest point in the county; higher than any of her sister towns in surrounding counties, being 480 feet above the level of the sea, and is very healthful.

The City Council exempts from city taxation all manufactories for from five to ten years.

Hickman is an old, substantial business town, with fine and cultivated citizens. It has seven churches, two public schools, two excellent select schools, one bank, which is doing a good business, and all the requisites for a model town. We have a good farming country around us, and to any one seeking a desirable location for farming, fine stock or cattle-raising, or to engage in the manufacturing business, no place, in our opinion, offers greater inducements than Fulton county.

GRAYSON COUNTY.

By James S. Wortham, W. J. Lewis, John E. Stone.

Grayson county, Kentucky, one of the central western counties of the State, is situated in latitude 47° 17' to 37° 37' N., and longitude 9° 5' to 9° 40' W. from the meridian at Washington, about thirty miles south of the Ohio river, and about fifteen miles north of Green river, Rough river being its northern boundary and Nolin its eastern, and divided into two nearly equal parts by the C., O. & S. W. R. R., which traverses its entire length from east to west, giving good transportation facilities to all parts of the county.

It was formed with a population of 2,301, in 1810, from parts of Ohio and Hardin counties, with an extreme length of about thirty miles from east to west, and a width of about twenty miles from north to south, and an area of about 300,000 acres, and bounded on the north by Breckinridge and Hardin counties, on the east by Hardin and Hart, on the south by Edmonson and Butler, and on the west by Ohio county.

Population in 1810, 2,301; 1820, 4,055; 1830, 3,880; 1840, 4,461; 1850, 6,837; 1860, 7,982; 1870, 11,580; 1880, 15,784; 1882, 16,682; 1884, 17,911.

The face of the country is generally level, or gently undulating or rolling, a series of low ridges running irregularly through the county, giving two water-sheds—one towards Nolin river and Bear creek on the south, and the other towards Rough river on the north. These streams, with their tributaries, give abundant drainage to every part of the county, and afford some of the finest sites for mills, furnaces, or factories, to be found in the State, with coal and iron ores, and timber without limit and easy of access. These ridges are generally spread out for miles in either direction, forming a somewhat elevated table-land of very fertile soil, and sloping gently to the lower lands, or breaking into high bluffs or cliffs, giving a very picturesque appearance to some portions of the county, especially near the rivers and streams.

The geological formation of the county is varied; one-half is based on the Subcarboniferous, the other half on the true coal measures. The Chester group outcrops in many places and

gives a peculiar character to the soil. In this formation occur the Leitchfield Marls, which are composed of calcareous shales, containing the mineral elements of plant food (lime, potash and phosphoric acid), and are found in almost inexhaustible quantities in a great many places in the county and in various colors—red, gray, greenish, etc. Scarcely too high an estimate can be placed on these marls. Recent tests seem to warrant the opinion that these marls, when mixed with the oolitic limestone, which is a pure carbonate of lime, will produce an excellent hydraulic cement.

Coal of excellent quality is found in the western and southern portions of the county, but has never been developed to any great extent.

Iron ores in great abundance are found in several parts of the county. The old Nolin furnace, which went out of blast many years ago, proved these ores to be excellent for making soft, tough iron, well suited for all shop purposes. The great drawback in making iron at this furnace was the cost of transportation, which is now greatly reduced by the railroad system, and a road will doubtless soon be built immediately through the principal ore fields, and they will certainly be of great value in the near future.

Building stone is abundant. Many of the limestones will make most excellent stone for strong, massive work, and a very fine oolitic, found in many places, is elegant for fine buildings, and is certainly one of the best building stones in the State. The soil is generally regarded as about second-rate for Kentucky; but the bottom land, along the rivers and creeks, is very rich, and the great body of the upland is level, or gently rolling, and has a very fertile soil, and in some localities there are valleys of strong, rich limestone land, and the whole is well adapted to the growth of farm products generally. Springs of clear, cold water abound all over the county, being found on nearly every farm in quantities sufficient for all ordinary purposes.

Most excellent mineral waters, sulphur, chalybeate, etc., are found in many places in the county, and they are known to be splendid medicinal waters. These, combined with other advantages, make this one of the healthiest counties in the State, and we think it cannot be surpassed for health by any country.

The principal crops are corn, wheat, oats, hay, potatoes, and tobacco. Fruit is extensively grown, and, with proper care, vineyards could be made very profitable, as the Concord, Ives' Seedling, Catawba, Elvira, and other varieties are easily grown in this locality. In same neighborhood peaches scarcely ever fail, but the apple is a more certain crop and more extensively grown, almost every farmer having a small orchard.

Almost every variety of vegetable and small fruit known to the kitchen garden is grown to perfection.

The breeds of horses, cattle, and hogs are generally very good, and are being improved every year, and in some localities sheep husbandry can be profitably engaged in.

The supply of timber seems to be almost inexhaustible, the principal kinds being white oak, black oak, poplar, chestnut, ash, beech, hickory, sugar-tree, etc. Millions of feet are annually floated down Rough, Nolin and Green rivers to Evansville and other points, and probably as much more sawed here and shipped by the railroad. Lumber for building purposes can be obtained as cheap here as any place in Kentucky.

Churches and schools are scattered all over the county, and every child can attend school, and every family go to church on Sunday.

Leitchfield, the county seat, with a population of about 800, is pleasantly situated near the center of the county, on the C., O. & S. W. R. R., seventy-one miles from Louisville, and is a quiet, pleasant town, and as healthy a town as can be found anywhere. It has a fine new court-house and jail, four elegant churches — Catholic, Baptist, Methodist, and Christian — one seminary, one good public school-house, one newspaper (the Sunbeam), several good hotels, carriage and wagon shop, several mechanic shops, about a dozen stores, one good flouring mill, four leaf-tobacco warehouses, and many excellent private residences. Leitchfield is surrounded by a very good farming country, and the railroad giving excellent transportation facilities, it has an extensive trade, extending into southern Breckinridge and northern Edmonson counties, and perhaps more business is done here than at any point on the railroad, from Elizabethtown to Paducah.

Caneyville, thirteen miles west of Leitchfield, on the railroad,

on Caney creek, is a pleasant village, containing about 200 inhabitants. It contains several stores, hotels, and shops, one flouring and saw mill, and is quite a business town.

The other railroad towns, Spring Lick, Millwood, Clarkson, Big Clifty, and West Clifty, are thriving villages, doing a good local traffic.

Millerstown, on Nolin river, in the east end of the county, is a nice village of about 100 inhabitants.

Falls of Rough, on Rough river, in the north-west part of the county, ten miles from the railroad, contains fine saw, flouring and woolen mills, with most excellent water-power, and is one of the best sites for a large factory in the county. Rough river, at this place, is spanned by a splendid iron bridge.

Grayson Springs, four miles south-east of Leitchfield, and two and a half miles from the Chesapeake, Ohio & South-western Railroad, has long been noted as one of the best summer resorts in Kentucky, and has very fine hotel accommodations. Within the space of two acres of ground there are a hundred or more of fine, natural mineral springs, of different kinds of water, and of different temperatures, varying in this respect some eight or ten degrees. These springs are annually resorted to by hundreds of people seeking health and pleasure. The natural advantages of this place as a summer resort are not excelled by any place in the United States, and, with a little capital judiciously expended, would soon become one of the most favored resorts of the South.

Formerly, while the Ohio river, forty miles north, was the nearest shipping point, the county made very slow progress, especially in the system of farming and the adornment of country homes. There was very little inducement for farmers to raise any thing except what was absolutely necessary for home consumption, as the cost of transportation consumed all the profits; consequently, our county was settled up very slowly, thousands of acres remaining an unbroken wilderness; but since the building of the railroad the system of farming is being generally improved, the average yield of crops is growing greater year by year, country homes are being made more attractive, the wild lands are being settled, and this county will soon be one of the first counties in the Green river country.

On account of the still unoccupied territory, the price of land in this county is remarkably low, and can probably be bought as cheap as any land with like advantages anywhere else in Kentucky. There being vast tracts containing thousands of acres of unbroken, uninhabited forests, and a great number of like smaller tracts, whole colonies can be located here, or the single individual can be supplied with a home.

Society is good, the people are intelligent, hospitable and thrifty, and are anxious to have immigrants settle among them to aid in building factories in our towns, opening and developing our mines, and in opening and cultivating our uninhabited, wild lands.

With a climate unsurpassed, winters short and not severely cold, a soil capable of growing an abundance of all the products of the farm and garden, abundance of timber, and plenty of undeveloped mineral wealth, Grayson county is certainly worth the attention of capitalists and those seeking homes in the South.

For information, address Kentucky Geological Survey, Frankfort, Ky., or John E. Stone, Leitchfield, Grayson county, Ky.

HENDERSON COUNTY.—THE CITY OF HENDERSON.

The city of Henderson is built upon an elevation varying from twenty to fifty feet above the highest water of the great flood of 1884. The Ohio river at this point is spanned by a magnificent steel and iron truss railway bridge, about three-quarters of a mile in length, and one hundred and twenty-five feet above the low-water stage of summer. Green and Wabash rivers, each navigable for several hundred miles, flow into the Ohio at short distances above and below the city. Five of the principal State roads diverging from the city have been graveled since the year 1880, at a cost of $85,000, making thoroughfares, in all respects, equal to the best turnpikes in the State.

Water-works built on the reservoir plan are in successful operation, affording the best possible protection against fire, as is shown by the fact that no fire of importance has occurred since their construction; and this advantage is secured without the use of fire engines.

These works have cost:

For buildings, machinery and 13½ miles of main	$150,000
Capacity of reservoir, gallons	3,000,000
Elevation of reservoir above principal business streets, feet	92
Elevation of stand-pipe above same, feet	172
Length of mains in miles	13½
Number of services	775
Number of consumers	1,300
Average daily consumption, gallons	500,000
Pump capacity per day, gallons	1,500,000
Annual receipts	$11,000
Annual expense	$3,900

The net income is applied to extensions. The city is the sole owner of these works, and gives low rates for water to all consumers, and special inducements to manufactures.

The gas-works are also owned by the city. They were built at a cost of $70,000; have a capacity of 70,000 feet per day; and when additions now being made are completed, the capacity will be increased to 90,000 feet.

Five years ago there were 200 private consumers; now there are more than 400. The price of gas is $1.75 per thousand feet, with no meter rents; and after supplying 127 street lamps and all public buildings free of cost, there is a net income of $6,000.

The public schools of the city are admirably conducted, and equal the best graded schools to be found anywhere. Free tuition is given throughout the year—the usual summer vacation excepted—and their successful continuance is assured by ample local taxation in addition to funds derived from the State revenue.

The school buildings cost about $50,000.

The public schools for white children have 16 teachers and 700 pupils; the schools for colored children have 5 teachers and 349 pupils. In addition to these, there are eight private schools, employing 23 teachers, with a daily attendance of 375 pupils; the aggregate showing 44 teachers and 1,424 children at present connected with the schools of the city.

The population of the city, according to the United States census in 1880, was 5,365; to-day it is certainly not less than 10,000.

In 1880 the county had a population of 24,690. Now it is confidently believed to be fully 33,000, showing an increase of about 9,000, or nearly 35 per cent., within the last seven years.

The tax-list of the city in 1880 was $2 086,559. For the year 1887 it is $4,073,462.

Two railroads leading from Henderson, and running south and west, have thirty miles of road in the county. While another, now rapidly approaching completion, will, by the first of January next, afford the shortest and quickest connection with Louisville, and add some twenty miles more of railway in the county.

Another road on the Indiana side connects at Evansville, some ten miles distant, with the entire railway system of the North and North-west.

Other roads are projected and favorably considered, and will no doubt be constructed within the next few years.

A street railway, with an authorized capital of $100,000, is now being constructed, and will in a few days be in operation.

All the leading denominations of Christians have church buildings of good and substantial character, numbering fourteen, with seating capacity of over 5,000; another large and handsome one is being built, and a Jewish synagogue will shortly be erected.

Henderson has three banks with capital stock all paid in, and surplus amounting to $808,743, with loans of $1,022,783, and deposits of $567,000.

In 1880 there were only two banks, with capital and surplus amounting to $507,376, with loans of $484,000 and deposits of $304,000.

Henderson has two Building and Loan Associations, one of which has a capital stock, all paid in, of $281,500, and has in the last five years supplied the funds for building 250 houses.

The other has but recently been organized, and is now well established and in successful operation.

The manufactories of Henderson have grown up since 1880. Among the leading ones may be mentioned the Henderson Cotton Mills, which have a capital stock and surplus of $410,000; employing 300 operatives, consuming annually 5,000 bales

of cotton, and producing 7,500 bales of manufactured goods of the value of $400,000.

Two hominy mills employ $125,000 of capital and fifty operatives, and produce annually 100,000 barrels of hominy, grits and meal, of the value of $250,000.

The Henderson Woolen Mills have a paid up capital of $125,000; employ 150 operatives, and produce annually 400,000 yards of jeans of the value of $175,000. One third of these goods is made into pantaloons, twenty dozen pairs being made per day, and the whole product of the mills will ultimately be used in the same way.

Two manufactories of chewing and smoking tobacco use $95,000 of capital; employ 130 operatives, producing 900,000 pounds of manufactured tobacco, valued at $225,000. This industry has begun within the last two or three years, and the goods produced are in very great demand.

Two saw mills use capital of $164,000; employ 216 hands, making 13,000,000 feet of lumber, worth $135,000.

Three distilleries have a capital of $105,000, $73,000 of which is invested in buildings and machinery, employing 45 hands, with a capacity of 48 barrels per day, and have produced, during the present year, 1,519 barrels of whisky, of the estimated market value of $35,000.

Three steam flouring mills, with a capital of $71,000, including buildings and machinery, employ 16 hands, and have capacity for producing 50,000 barrels of flour and 30,000 barrels of meal per annum, and have made products, the present season, of the value of $102,000.

One wool and grist mill, in addition to the others mentioned, has a capital of $7,500; employs six men; grinds 40,000 bushels of corn, and cards 20,000 pounds of wool, its products being worth $34,000.

Two coal mines, using a capital of $75,000, and working 80 miners, produce 450,000 bushels of coal, worth $36,000

One brewery uses a capital of $40,000; works 15 hands, and produces 24,000 quarter-barrels of beer, worth $42,000.

Two carriage factories have $79,000 capital; employ 48 workmen; make 450 vehicles per annum, of the value of $90,000.

One iron and brass foundry, with a capital of $16,000, employs ten men, and makes $15,000 of products.

One planing mill, with a capital of $70,000, employs 50 workmen, and produces dressed lumber, sash, doors, blinds, and all kinds of building material, of the value of $75,000 per annum.

Two coopers' shops, with capital of $19,500, work 50 hands, and produce, per day, 600 slack barrels and 30 whisky barrels, worth $59,000 per year.

One brick-yard, with capital of $18,000, employs 32 hands, and makes 4,000,000 brick per annum, worth $20,000.

One marble works uses $12,000 capital; employs 15 men, and makes products of $25,000 per year.

One ice factory uses $17,000 capital, employs 12 workmen, and makes 1,300 tons of ice, worth $13,000.

One cigar factory, with a capital of $18,000, employs 12 men, and makes products of the value of $10,000.

One mattress factory, with a capital of $8,000, employs six men, and does work of the value of $10,000.

One steam laundry, with a capital of $8,000, employs eight operatives, and does work of the value of $4,000.

One box-factory employs $3,500 capital, three workmen, and makes products worth $2,500.

One tile factory, with a capital of $8,000, employs seven men, making 200,000 pieces of tile per year, worth $5,000.

One mineral water factory, with a capital of $3,000 and three employes, makes $5,000 of products.

These thirty-three manufacturing enterprises just named have invested in buildings and machinery $891,000, employ 1,276 operatives, have an active capital of $608,000, and manufacture goods of the value of $1,764,000.

There are in Henderson eighteen tobacco stemmeries, preparing tobacco for foreign markets (Henderson being the largest "strip" market in the world), with an investment of $340,000 in buildings and machinery; working 960 employes, with an active capital of $868,000, and producing during the season just closed, with an unusually small crop, 2,588 hogsheads of leaf and 6,824 hogsheads of "strips," or stemmed tobacco, of the estimated value of $1,350,000.

These stemmeries, with the manufactories named, numbering

fifty-one in all, have invested in buildings and machinery $1,231,000, give employment to 2,236 operatives, have an active working capital of $1,476,000, and have manufactured, during the current season, products of the estimated value of $3,114,000.

In addition to what has been stated of the city of Henderson, there are in the county of Henderson four coal mines, with investments of $61,500 in mines and machinery; employing 134 miners, with active capital of $28,300, producing annually 1,216,000 bushels of coal of the value of $65,500.

There is also at Corydon a flouring mill costing $13,000, recently built, with all modern machinery and improvements, with a working capital of $15,000, employing six men, and manufacturing 10,000 barrels of flour of the value of $40,000.

There are also at different points throughout the county eighteen other tobacco stemmeries, costing $70,000, with an active capital of $239,000, employing 325 hands, handling 649 hogsheads of leaf tobacco and 1,775 hogsheads of "strips," of the estimated value of $376,000.

In addition to these, there are numerous small industries in the county, which are not reported for want of definite and reliable information concerning them.

Those named may be summed up as follows, viz: Total industries of county and city, 74; with investments for buildings and machinery, $1,380,500; employing as operatives, 2,701; having an active working capital of $1,758,300; making products for the present year worth $3,595,500.

These industries have, with few and trifling exceptions, been built up since the year 1880, prior to which time there were none of importance, except the tobacco stemmeries.

The advantages of Henderson as a location for manufacturing enterprises are extraordinary. In addition to the coal mined in the city, over 500,000 bushels are annually brought to the city by railroad and river, showing at present an annual consumption for fuel of over a million bushels. This is always readily obtained, and at uniformly low rates, in illustration of which may be cited the fact, that the cotton mills have a contract by the year for the delivery, at their furnace doors, of all the steam coal they may require, at the price of 58⅓ *cents per ton.*

A coal famine, which, to many places, otherwise favorably conditioned, is a calamity which may at almost any time occur, is at Henderson a moral impossibility.

The fact that the city owns its water-works, while assuring an abundant supply throughout the year, enables it to give exceptionally low rates to all manufacturing enterprises. The same is true of gas. Timber of every variety can be had at low prices and in unlimited quantities. A fine opening is presented here for many manufactories which have not yet been established; and all persons seeking a location for investment in any such enterprise may come with the assurance that they will receive a cordial welcome from all our people.

For information, address John C. Atkinson, S. K. Sneed, John F. Lockett, W. W. Shelby, T. J. Mann, W. S. Johnson, or John A. Lyne, Henderson.

HICKMAN COUNTY.

By W. M. Samuels.

Hickman county is situated in what is known as "Jackson's Purchase," and is in the extreme western part of the State, immediately on the Mississippi river, which is its western boundary. The county embraces about 226 square miles, is generally level or gently undulating, with soil of a rich black mold, based upon sand or clay. Timber is heavy, comprising white and black oaks, poplar, walnut, hickory, ash, elm, etc., with large grapevines and papaws in profusion. Numerous small streams, including the Obion, Bayou de Chien, Caney and Brush creeks, traverse the county from east to west, affording the greatest plenty of stock-water. We have a population of 12,500.

The county is developing rapidly; farms rapidly opening up; a better class of residences being erected; school facilities of the best, with a common school in every neighborhood, and two flourishing colleges located at the county seat (Clinton). The county is fully committed to temperance, there not being a place in the county where liquor can be sold for any purpose whatever. Drunkenness and profanity are almost unknown. Churches and school-houses dot almost every hill-top, and our people are prosperous and happy.

Our leading products are corn, wheat, tobacco, clover and the grasses, whilst stock of all kinds do well, and find a ready market.

The capacity of our soil has not been fully developed. Fertilizers are not known or used, the virgin soil meeting every requirement.

We have the very best shipping facilities, with three trunk railways traversing the county, and the old "Father of Waters" laving our entire western border, and being in daily communication with Louisville, Chicago, St. Louis, Memphis, New Orleans and Mobile, we have a choice of all the leading markets.

We grow every product known to any part of our State except hemp.

Our fruits are abundant in yield and fine in quality, growing specimens almost unequaled in other sections. Health, happiness and prosperity, noble men, beautiful women, pleasant homes, all combined in that section known as Hickman county, Kentucky.

KNOX COUNTY.

The Cumberland Valley Branch of the Louisville and Nashville Railroad, which will be ready for business by December next to Pineville, in Bell county, runs through Knox county, striking Cumberland river at Barbourville, and thence up the river about eighteen miles to where it leaves same for Cumberland Gap, and thence east to Big Stone Gap, to connect with the Norfolk and Western. Along this railroad are good white oak tobacco lands, which can be bought at reasonable prices, and also good grass lands, well adapted for sheep and cattle. From Barbourville to Pineville are fine river bottoms and splendid sites for saw mills and manufacturing purposes, where timber can be floated down the river and its tributaries, and coal obtained all along the railroad. Knox, Bell and Harlan abound in splendid timber of various kinds suitable for manufacturing purposes, and mills and manufactories at Barbourville and vicinity would have a large territory from which to obtain supplies. Farming lands are comparatively cheap, society good, and no mountain county offers greater inducements

to those wanting good, cheap lands suitable for cultivation than Knox. The indebtedness of the county is not more than three or four thousand dollars, and there are no outstanding railroad or other bonds to frighten the property-holder. The county has a good court-house and jail, and a college building, erected in 1882, at a cost of eight thousand dollars. There are immense quantities of white oak, chestnut oak, hickory and beech along and contiguous to the railroad.

Information may be had of John H. Wilson, Barbourville, Kentucky.

LINCOLN COUNTY.

By W. H. Miller, Stanford.

This famous old county was one of the three original divisions of the State, the other two being Fayette and Jefferson. Although long since reduced in area to a medium-sized county by repeated demands for territory for the formation of other counties, she still shows in the first rank in population, wealth, public improvement and other advantages, standing in order about the nineteenth or twentieth from the front. Her great growth and progress during the last two decades demonstrate a capacity for accomplishment second to none in the State, and that ought to be, and is, quite gratifying and satisfactory to all identified with her interests, and proclaims her to be a fine field for energy, enterprise and success.

By the census of 1860 the population was but 10,647, by that of 1870, but 10,947, whilst by that of 1880 it had increased to 15,080, a gain of 49 per cent. in ten years, so far outstripping all the adjoining counties as to make the percentage of increase greater than that of all the others combined. The population at this date, estimated from the Assessor's returns, amounts to full 18,000, and it is confidently believed that the census of 1890 will show a population of over 20,000. By the census of 1880, it is shown that of the population of 15,080, 14,090 were natives of the State, and of the 990 born elsewhere, only 84 were foreigners. It is a well-established fact, that, since 1880, more than 2,000 people have been added to the population by immigration from other States of the Union and from foreign countries, of which Switzerland

and Germany have furnished over 1,200, and it is believed that the end of the present decade will show a foreign population of at least 2,500. The splendid growth in population is not due to any new enterprise or business, or to the building up of a large town, but to the old enterprises, business and industries, which have all during the last fifteen years received a new encouragement and impetus, and added greater development to the county through its every section. In this connection it is gratifying to state that the loss from immigration has been less than that of almost any other county.

In 1865 there was not a mile of railroad in Lincoln county, nor within thirty miles of her borders, and only about forty miles of her highways were macadamized turnpikes. At this date there are within her borders *54 miles of railroad* and *128 miles of magnificent macadamized turnpikes*, and of the latter ten miles additional are now being constructed. Since 1865 *over one million eight hundred thousand dollars* have been expended in the construction of railroads and turnpikes through the county. There are twelve railroad freight depots in the county, and no farm is more than seven miles distant from one or more depots. Besides the immense expenditure for railroads and pikes, the public buildings—court-house, jail and almshouse—have been repaired, rebuilt and improved since 1870, at a cost of more than *forty thousand dollars*. It is very safe to say that the expenditures for public improvements of every description during the last twenty years have not been less than *two millions of dollars*.

Of the railroads built, portions belong to the *three great railroad systems* south of the Ohio and east of the Mississippi—the Louisville & Nashville, the Cincinnati, New Orleans & Texas Pacific, and the Chesapeake & Ohio, the first two of which have trunk lines through the county, and the other a line terminating at the county seat.

Attention is called to farm products only, as this county has, from the first settlement of the State, made agriculture its principal and almost exclusive business. According to the census report, it produced in 1880 628,807 bushels of corn; 13,942 bushels of oats; 7,792 bushels of rye; 98,946 bushels of wheat; 11,201 bushels of Irish potatoes, and 35,214 pounds

of tobacco. In 1870, 61,303 bushels of wheat; 16,148 bushels of rye; 321,438 bushels of corn; 72,611 bushels of oats; 13,499 bushels of Irish potatoes, and 7,166 pounds of tobacco, showing an increase in production of at least 75 per cent. per annum in ten years. Since 1880 the annual yield has increased to such an extent that the yield of wheat per annum is now at least 175,000 bushels, and of corn 900,000 bushels. All other farm products have increased in a like proportion. Live stock has likewise increased in numbers and value since 1870 more than one hundred per cent., as shown by the Commonwealth and United States statistics.

In 1870 the county paid tax on $4,483,920 of property; in 1887 on $6,052,000 in round numbers. But in 1870 the standard of valuation was the depreciated currency then in circulation, and in 1887 it was upon a gold basis. Estimated according to the standard of 1870, the valuation would very nearly or quite reach $7,000,000. With well founded pride, the county boasts that it owes not one dollar of bonded debt, and is the lowest taxed county in the State.

FINANCIAL.

The people of this county have always been distinguished for their thrift, economy, and, as is often aptly expressed in the rural districts, "saving knowledge." Time out of mind they have, as a general thing, had money ahead, and money to lend. The accumulations of years have now, perhaps, made the people of this county the possessors of more ready money and financial wealth than any other county of its size and population in the whole State. There are three national banks, with an aggregate capital of $500,000, which carry deposits ranging from $300,000 to $5,000,000. The citizens of the county are almost the exclusive owners of the stock of these banks. They own besides at least $500,000 of stock in other banks and financial corporations. It is estimated that they draw in money dividends annually not less than $75,000 on stocks and bonds alone, to say nothing of money loaned on private account, and they are less debt-ridden than any people in the State.

Lincoln county is immediately upon the dividing line between the famous blue-grass and mountain regions, the Mul-

draugh Hill range separating the two. Its waters are carried away by three of the great rivers of the State, Kentucky, Green and Cumberland. Its soils belong to three distinct geological formations—Subcarboniferous, Devonian and Silurian—and are of great variety and different degrees of fertility. By reason of its diversity of soils the county has a capacity for producing a variety of crops not equaled by any other section of the State.

About one-third of its area is within the blue-grass belt, and the land equal in fertility, improvement and capacity for production to any of this famous section. It is unnecessary to describe it further. Lying next to it are the black shale lands of the Devonian formation, some of which are the very best meadowed and grain lands to be found. Next, and last, are the loose soils of the Subcarboniferous section, fertilized by centuries of vegetable deposits. These lands have heretofore been held in the lowest esteem, as the least fertile, and, consequently, the least valuable for agriculture. In the market they have sold for the lowest prices, and the territory occupied by them is the most sparsely inhabited. But, as the population increases, they are now more in demand. They are, in the main, the homes of the Swiss and German colonists. These newcomers have acquired and taken possession of, and are cultivating these lands. They have demonstrated, beyond question, that they can be made to yield twenty-five bushels of wheat and from forty to sixty bushels of corn per acre, and other crops in proportion. This section is that which has been considered the best in the county for fruit, and the foreign immigrants are fast converting it into a great vineyard. Its proximity to the fertile blue-grass section has been to its disadvantage; but, as it becomes known that every man can not own a blue-grass farm, its inhabitants are beginning to care for and develop it, and in the not far future it will be a great farming section.

Every crop grown in Kentucky, as previously suggested, can be grown and produced in the very highest perfection in this county, and it is not necessary to specifically mention them here. For information on this point attention is called to articles upon the agricultural products of the State.

Live stock of all kinds and in great numbers is produced, and is one of the principal sources of revenue. Much attention is given to the breeding and rearing of blooded stock. State statistics and information concerning this business are both applicable to this county, and to these attention is called.

The elevation is from about 1,000 to 1,200 feet above the level of the sea. The natural water drainage is thorough, making it entirely free from marsh and swamp, and giving it complete immunity from all malarial disorders. The air is, at all times, dry and bracing, and free from all pernicious vapors. The climate is temperate and invigorating, making animal life as robust as there is at any point on the continent. There are many mineral springs, with valuable medicinal properties, all along the foot of the hill-range, and a number of health resorts, the principal of which is Crab Orchard Springs, the most famous health resort in Kentucky, and one of the most famous south of the Ohio river. There is no disease peculiar to the county, and the public health is exceptionally good.

INDUSTRIES AND SOURCES OF LIVELIHOOD.

Agriculture and its incidents are the main sources of living. Though an inviting field for manufacturers, there have not yet been any special effort made to develop any industries of this kind. Therefore, there are no establishments of any moment demanding the labor of mechanics and artisans. There are a large number of retail stores, a few grain mills, the principal one at Stanford, a number of small saw mills in the southern part of the county, and other industries on a limited scale, such as are ordinarily found in a rich agricultural community.

At the foot of the Knobs of the Muldraugh Hill range, at many points in the county, there are inexhaustible quantities of potter's clay that has never been worked. It can be bought almost for nothing. In the southern part of the county there still remains a vast amount of timber of the valuable hard wood varieties. There are thousands of acres of valuable farming lands which have never yet been settled upon and subjected to cultivation. Natural gas is found along the foot of the hill range.

In a county possessing so many natural elements of wealth and so many outlets for trade and commerce, and having already so much ready money which might be used for enterprise and development, it is impossible to suggest what would be a limit to its possibilities for contributing those things which promote comfort and happiness, if every thing at hand should be combined to afford industries and pursuits for those who wish to work. Hardy and courageous pioneers in need are invited to come.

More than all else, what is needed is more population to develop the country, whether their means be great or small; men to engage in manufacturing industries; people who understand how to establish and conduct manufactures.

The towns and villages are numerous, located generally upon the lines of the railroads. The principal of these is Stanford, the county seat, situated upon the Knoxville Branch of the Louisville and Nashville Railroad, 103 miles from Louisville, and at the terminus of the Kentucky Central Railroad, 140 miles from Cincinnati. It is a town of 2,500 inhabitants, and is surrounded by a magnificent agricultural country. It has seven churches, a female college, and a male seminary, besides the common schools, a semi-weekly newspaper, five hotels, a fine grain mill, woolen mills, railroad repair shops, two national banks, twenty stores, and other business. It has a fine supply of never failing water, and has fine sites, and is a fine location for manufacturers.

Lincoln county was first settled by white men more than a hundred years ago, the first immigrants being from Virginia, the most conspicuous being, first Gen. Ben Logan, afterwards Gen. Wm. Whitley, and after the Revolution, Governor Isaac Shelby. They were a knightly race of men—honest in their dealings, industrious in their habits, and generous and hospitable in their associations. From the beginning they formed a society pre-eminent for good conduct in general, and for manly and polite deportment particularly, and this character the population now bears. No better people to dwell among can be found anywhere than live within the county's borders to-day, and they, with one voice, invite good people to come from any State or nationality and cast their lots with them.

Values of lands range from $5 to $80 per acre for farming lands, depending on quality of soil, location, improvements, etc. A fine blue-grass farm can be purchased at from $40 to $60 per acre.

This county can show, to the satisfaction of any sensible man who will come and make investigation, that he can find here a home cheaper than he can acquire it by pre-emption or homestead entry on the public domain: a home in a country already greatly developed, among kindly people, who will encourage him in the battle of life, and where his family will not have to suffer the hardships and privations, and brave the dangers of frontier life. There is room here for thousands more, and the invitation and encouragement to come is as sincere as it is outspoken.

THE CITY OF PADUCAH.

Paducah had in 1880, according to the United States census, a population of 8,800. Now she has over 17,000 permanent inhabitants, an increase of 100 per cent. Since that time 1,325 buildings have been erected within her limits at a total cost of $2,750,000. Included in the new buildings are, a magnificent United States custom-house and post-office, of stone; a convenient and beautiful city hall, of pressed brick and white stone; a large and handsome high school building of modern design and appliances, built of brick and stone; extensive railroad machine shops, of stone and brick; many commodious and ornamental wholesale and retail business houses, built of brick, stone, and iron; one large brick furniture factory, large brick foundry, two extensive blind, door, and sash factories; two immense planing mills; three mammoth saw mills, and a large number of elegant residences, built in the most modern style of architecture, of brick, stone, and wood. Two years ago a substantial and highly approved system of water-works, with 18 miles of street mains, was built at a cost of $200,000. Last year a new and modern gas-works was constructed at a cost of $150,000. This year six miles of street railways have been laid down, and the same thoroughly equipped with the Stevenson cars and fine horses, and the city has been provided with an electric fire alarm system, and an

elegant building has been put up for the fire department headquarters. During the last two years twelve miles of permanent brick and stone sidewalks have been made, and thirteen miles of new streets have been opened and paved with the celebrated Paducah bond or conglomerate gravel, thus giving the city a total length of 37 miles of improved streets, which are the smoothest and most beautiful in the country. Within the last seven years the wholesale trade of Paducah has increased 150 per cent., and the retail business 100 per cent. Manufactories have increased about 50 per cent., and manufactured products 100 per cent. In 1880 Paducah had 26 factories, with a total capital of $600,000, employing 950 operatives; now she has 47 factories, with a total capital of $1,200,000, employing 2,320 operatives. Her manufactured products comprise rough and dressed lumber, leather and horse collars, brooms, pressed and common brick, stoneware and drainage tile, cigars and tobacco, candy and confectioneries, staves and cooperage, blinds, doors, and sash, furniture, buggies and wagons, ice, soap, saddles and harness, cider and vinegar, meal and flour, engines and boilers, house building castings, hubs and spokes, trunks and valises, etc. Of these, lumber leads in quantity on account of the close proximity of abundance of timber and the excellent advantages for rafting it to the mills.

Since 1880 Paducah has doubled her capacity for building and repairing steamboats and other river craft. To one of the best marine ways on the Ohio river she has added a large and well appointed ship-yard, and during the past twelve months $200,000 has been expended here in building new steamboats and barges and repairing old ones.

The leaf tobacco market of Paducah stands second only to that of Louisville. To accommodate the rapidly increasing traffic in this commodity, six very extensive warehouses have already been built, and others are to be erected during the coming winter and spring. The six warehouses already here have a combined storage capacity for 12,000 hogsheads tobacco.

The public school system and school buildings in Paducah are fully up to the standard of the best in the United States. Of school-houses, she has six for white children and three

for colored children. Paducah is noted for her excellent social order, and in this respect she has not a superior in the land. The city is quite healthful, and as an evidence of this fact, the death rate, since the first of January last, has been less than six to the 1,000 inhabitants. In the city there are 19 churches, 15 white and 4 colored.

Two years ago a railroad was completed from here to Memphis and New Orleans, which gives us a continuous line, under one ownership, through Texas to the Pacific coast. The N. N. & M. V. Co. and Chesapeake and Ohio form another continuous line to the Atlantic, at the splendid harbor of Newport News. Two new railroads are now rapidly building through Illinois to Paducah, and both will be finished and in operation by next summer early. One of these roads will afford a short route to St. Louis and Chicago and the West and North-west, and the other, a direct line to Cincinnati and the East and North-east.

A strong syndicate of capitalists has been formed to build a trunk line railroad from Paducah to Decatur, Alabama, and Atlanta, Georgia, and a corps of engineers are now in the field reviewing a route preparatory to the commencement of work on this great enterprise. It is contemplated to have this road done and in operation to Sheffield and Decatur, Alabama, in two years.

Labor is abundant, contented, thrifty and cheap.

A fine hotel, to be supplied with all modern comforts, conveniences and improvements, and to cost $150,000, is now in the course of construction.

Paducah's growth and prosperity are attributable to her factories, and to her unexcelled river and rail transportation advantages.

McLEAN COUNTY.

McLean county is located in the heart of the Green river country; is bounded by Daviess, Ohio, Muhlenberg, Hopkins, Webster and Henderson; has an area of 148,076 acres of land; has nine towns, to wit: Calhoon, Livermore, Sacramento, Rumsey, Beech Grove, Island Station, Glenville, Amoret, and Cleopatra.

Green river flows near its center and through its greatest length. The Owensboro & Nashville Railroad runs through the Livermore and Island precincts, and through the towns of Livermore and Island Station. It traverses the county a distance of eleven miles.

The water-power afforded by the dam at Calhoon and Rumsey is of immense value; it is utilized, on an average, about nine months in the year; practical experiments on the spot have demonstrated its superiority over steam for safety, convenience, regularity, and economy. Supplemented with steam for about three months annually, its advantages can not be too highly estimated. It has ample capacity for propelling a vast amount of machinery. At present it is but partially utilized, and its further development presents a magnificent field for capital and enterprise. It now drives an excellent flouring mill, saw mill and woolen factory in Rumsey, and is being applied to a large roller flouring mill and saw mill in Calhoon.

These mills are worthy of notice.

The flour from the roller mill in Calhoon is not surpassed by any manufactured in the State, and the woolen goods manufactured by the Rumsey factory will bear comparison with the best of the same class from the most noted establishments in the country. Very large capital can be advantageously employed in the further development and application of this water-power.

This county is in the midst of the coal fields of the Green river section of the State. Coal underlies at least three-fourths, if not the whole county. When better facilities for transportation are secured, this will become one of the leading industries. Beds of iron ore are discovered in several localities. But scientific and geological researches have been limited, and it is reserved for the developments of the future to determine the extent of the mineral resources. The indications, however, are that immense wealth slumbers within her bosom, awaiting the action of capital and enterprise.

An oil well is within two miles of Calhoon. The oil is said to be of superior quality. It is the opinion of many of the best-informed persons that capital can be successfully employed in this direction.

The quantity, quality and variety of timber have made this one of the leading interests of the county for many years, and yet vast quantities of oak, poplar, walnut, gum, ash, hickory and other varieties may be found along the creeks and rivers, and on the higher lands of the interior.

The principal agricultural products are tobacco, corn, wheat and oats. Tobacco is the chief article of shipment and export; in quality it ranks favorably, and, indeed, is equal to the best shipping and stemming tobacco in the west. Types are also produced of good Burley and manufacturing. The average quantity of tobacco produced annually is 4,000,000 pounds.

The other named leading products are shipped in considerable quantities; but the want of cheap transportation and better facilities for reaching distant markets is a great drawback to the shipment of these articles.

The river bottoms and low lands generally are well adapted for raising hay, and, as these are cleared and prepared properly for grass, this must become one of the chief productions of the county. The improvement of stock is rapidly gaining favor with the farmers generally.

Calhoon has a bank, with ample capital to meet the present demands of trade and commerce, and with an authorized capital of $150,000. This institution has recently started, and will afford facilities for moving produce and for general trade not heretofore had. It is said that the boats deliver a larger quantity of goods at Calhoon than any other point between Bowling Green and Evansville, evidencing a regular and large local trade.

McLean county wants greater railroad facilities. The people are alive to the importance of this; are ready and willing to do what they can in this direction. Initiatory steps are already taken looking to the construction of the Hartford, Calhoon & Morganfield Railway Company, under a charter from the Legislature of Kentucky, approved March 28, 1872.

This road would connect the Newport News and Mississippi Valley with Shawneetown, and thence St. Louis by way of Hartford, Calhoon, Sebree and Morganfield. It would run the whole distance through a fine agricultural country and a section rich in coal, iron and timber, and yet without a convenient and cheap outlet for its products.

We can earnestly direct the attention of capitalists to this important enterprise, with confidence of a favorable consideration from them of the project, after a thorough investigation and research.

We have given only an outline of advantages and resources of McLean. For a more intimate and thorough knowledge of them, we invite not only large capitalists representing railroads, commerce, manufactures and mineral interests, but men of moderate means, who may desire pleasant homes in the midst of a moral and intelligent people. In traversing the county, the general thrift and prosperity are discernible in the improvements of farms and residences, and the erection of good school-houses and churches.

Small, though McLean be in territory, her material resources will compare favorably with the same area in the best and larger counties of the State.

MARION COUNTY.

By W. T. Knott.

Marion county is centrally located in the State, with varied topography, from comparatively level table lands to lands more broken, with gently sloping valleys between and knobby ridges and isolated knobs, which are elevated above the average level of the county from 300 to 400 feet. The elevation of the county is an average of 750 feet above tide water: so the knobs are from 1,000 to 1,150 feet above the sea level. There are in the county 1,450 farms, with an average of 130 acres to the farm. This includes cleared and cultivated and timbered lands attached to farms; and there are 30,330 acres of timbered lands not included in the farms, making the total number of acres in the county 218,880, or 342 square miles, as estimated by the State Geological Survey. Of this 218,880 acres, 188,500 are cleared lands, including timber lands, and woodland grass pastures attached to farms. Of this 188,500 acres, 115,000 acres are cultivated; 73,500 acres timber on farms. Then we have—

Cultivated lands		115,000
Timber—Attached to farms	73,500	
Not attached to farms	30,380	
		103,880
Making total acres		218,880

Most of the cultivated lands of the county are located on the axis and slopes of the area of drainage to the Rolling Fork on the south and to the Beech Fork on the north, and include a variety of soils produced by the different geological formations found in the county. The red soils from the gray limestone, and the yellow soils from the blue limestone, are rich in the elements of fertility, and comprise, with the loamy bottom lands along the water-courses, the principal farming lands, and grow well all the grains and grasses adapted to this latitude. We have also a soil formed from the black slate in some parts of the county, which is less productive, being generally low and flat lands, are rather too wet and cold and full of acids from the shales to produce large crops of grain, unless well drained, but produce some of the grasses in abundance, and hence well adapted to meadow lands.

That the natural resources of this county have never been developed fully, will become apparent after a few incontrovertible facts shall have been brought to view and properly considered. And I presume the same might be said to apply with more or less force to the most of the agricultural counties of the State. It is a fact deeply to be regretted that our soils have been so little studied and cared for, or that they should be permitted to become so nearly impoverished and almost utterly unfit for agricultural or horticultural purposes as may be found on some of the best and originally the most fertile farms in the county. In addition to careless and unskilled cultivation, improper and unwise succession of crops, negligence in a manurial point of view, and utter ignorance as to what plant food is best adapted as fertilizers for certain soils in certain conditions. The *topography* of the country is a large factor, which enters into the causes of the rapid deterioration of the soils that have been for a longer or shorter time in cultivation. Hilly lands, with originally fertile soils, are suffered to wash into deep gullies and ravines, and broader areas of the slopes are denuded (by the erosive flows of falling rains) of all soils and clays down to the rock beds below. This now unreclaimable damage to the soils of sloping fields could have been prevented by proper efforts of the farmer at the proper time. A cessation of cultivation, a small amount

of rubbish thrown into the small wash when first discovered, and then sown in grass and kept as permanent grass lands, would have been all that was necessary. In many instances this state of affairs exists in our county in common with our sister counties. Many acres once rich in soils on some of our largest farms are now past redemption, with any thing like a reasonable amount of labor and outlay of money. But at this time, before further damage, it may be said that the greater per cent. of such lost lands the farmer can not only restore those barren places to their original fertility, but even enhance it greatly to the growth of his own personal wealth. In all such cases farmers are personally to be censured for the loss of the natural resources of their soils, for the occurrence was certainly occasioned by their own inattention at the proper time, or by their carelessness, or by procrastination. Then to the intelligent farmer it must readily occur, that to develop those barren waste-places on their farms, is to redeem them, by artificial means, from their present exposed condition of being carried away by rain-falls, the action of the atmosphere, or of the freezes and thaws of the winter. This may be done by stopping the washes that can be controlled, and by judicious fertilization of the impoverished soil until it will sustain a covering of grass, and this sward will prevent further erosion, and become a self-fertilizer.

I hope the farmer delegates at this conference will give their experience on this point. Another feature in the development of our soils is proper and judicious cultivation. Our system of cultivation of later years has somewhat improved with improved implements used, but, upon the whole, only slightly. Now, it is a fact well known to all of us, that the total amount of the vast products of agriculture is the yield of an average depth of cultivation of the soil not exceeding six inches—comparatively, a film of the surface. It is also known to intelligent farmers that the elements of fertility necessary to the nutrition and full development of plant life, whether organic or inorganic, must be supplied within the limits of the depth of cultivation, while any elements of fertility below that depth are inactive, and can have no influence upon the growing plant. It is known, also, that the roots of grasses and cereals do not generally reach

below the depth of cultivation, and that the average depth of cultivation in our agricultural district is absolutely insufficient to protect against drouth or excessive rain-fall, or to secure good and adequate returns for labor of cultivation of full supplies of farm products.

It may not be a matter of absolutely accurate calculation just what increase may be obtained by an additional inch depth in cultivation, but by actual experiment, not only in this country but in England, France and Germany also, it has been proven that in the limestone soils, as well as sandy soils, having deep subsoils, the increase of products are a near proportion, relatively, to increase of depth of tillage—that is to say, where soils are now worked six inches deep, an additional inch would increase the productiveness one-sixth; or if on a given piece of ground you produce six bushels of grain, the same piece of ground cultivated one inch deeper would yield seven bushels; and with still deeper plowing the increase would be nearly in same ratio for the next four or five inches in depth. To give an idea of deep cultivation as to profit, I refer you to the following table, taken from the census tables of 1880. In Marion county, for that year, there were reported:

Articles.	Acres Cultivated.	No. bus. raised.
Corn	27,275	745,464
Oats	5,021	56,920
Rye	1,738	12,851
Wheat	8,406	77,852
Hay	4,745	tons. 2,888

Now, with only one inch additional in depth of cultivation, according to results obtained by experience of England, France, Germany and the United States, the table would read thus:

Articles.	Acres Cultivated.	No. bus. raised.
Corn	27,275	869,710
Oats	5,021	66,406
Rye	1,738	14,998
Wheat	8,406	90,827
Hay	4,745	tons. 8,305

By this we find, assuming corn at 40 cents, oats 30 cents, rye 60 cents, wheat 80 cents per bushel, and hay $15 per ton, that farmers, if they had plowed only one inch deeper, they would have made $70,512 more than they did, and, besides, would have improved their land by bringing to the surface an additional amount of inorganic plant food which had hitherto lain inert below the usual depth of cultivation. Other features of development of soils might be elaborated, such as rotation of crops, the use of fertilizers, when and how best to be used to obtain the greatest returns, whether the use of commercial fertilizers alone, or mixed with barn-yard manure, is best, or whether "green manuring" is not, under certain circumstances, as good or the best method of restoring to impoverished or tired soils their original amount of plant food.

This "green manuring," "which is simply the sowing, growing and plowing down of some vegetable crop while it is yet green and growing, for the purpose of benefit to the soil, and to improve the future farm crops," is no new and untried process of fertilization. Celsus and Varro, and Cato and Pliny, and Virgil, and other distinguished agricultural writers of ancient Rome, inform us that the ancient Romans resorted to green manurial crops, by sowing, growing and plowing under different plants and grasses, to the great increased yield of farm crops. Xenophon, the distinguished general, historian and philosopher of ancient Greece, taught his countrymen the use of green manuring. Vermont and other Eastern States, as well as some parts of Maryland, Virginia, and the Carolinas, have made the experiment of green manuring with satisfactory results.

Then there can be no doubt, in the mind of the intelligent farmer, that, by proper alternation of crops, proper care to prevent erosion of soil, and with promptness from year to year in restoring to the soil the plant-food that had been taken from it by previous crops, that farms thus managed can go on producing abundantly from year to year as long as the world stands and the earth is cultivated for bread. I have talked with our best and most successful farmers, and all agree that, by proper rotation, deeper tillage, and fertilizing the lands with judgment as to what elements of plant-food the different soils require, that our cereal crops could be increased to nearly double of what the

average now is. The average of bushels of the different crops in the county, at this time, is as follows:

Corn, average per acre	27 bushels.
Wheat, average per acre	9½ bushels.
Rye, average per acre	7¾ bushels.
Oats, average per acre	11¼ bushels.
Hay, average per acre	½ ton.

The same soils, properly treated as above, our most intelligent and successful farmers agree, would produce an average acreage in the county as follows:

Corn, average per acre, at least	40 bushels.
Wheat, average per acre, at least	15 bushels.
Rye, average per acre, at least	15 bushels.
Oats, average per acre, at least	25 bushels.
Hay, average per acre, at least	1½ tons.

With this nearly 100 per cent. of increase from the soil, a proportionate increase of live stock would be an inevitable consequence. Hence, in conclusion, in regard to our soils, there must be, now *inert*, vast resources undeveloped.

FOREST PRESERVATION AND TREE PLANTING.

In considering the undeveloped wealth of this county, her timber and knobs enter as large factors. There are 30,380 acres of forest that have scarcely been touched by the axe of the lumberman, and 73,500 acres of timbered land attached to farms, a total of 103,880 of timber, almost all of the former and much of the latter covered with a large and fine growth of the different species of hard woods, as the oak family, the hickory family, the ash, the poplar, the maple, sweet gum, beech, and others in abundance. The oak and hickory of our knob districts would supply stave and spoke industries for many years to come. And considering that railroads pass through the county town from east to west, entirely through the county, with connections to every part of the United States, and a system of good turnpike roads radiating from the town, in every direction, to the near vicinity of the timber regions, we must conclude that, with proper industry on the part of our citizens, the day is not far in the future when these

facts will be generally known, and when our timber resources will be developed, either by our own citizens or others. Much more could be said on the timber question and its development, but thinking men will want no further suggestions to realize the importance of the subject.

But there are many, I am aware, who are ready to oppose the introduction of industries that will deplete the forest growth, now ripe for the woodman's axe and the mechanic's skill, and who will ask, "Why should we be called upon to invite, encourage, and nourish a rape upon our virgin forests? Why not protect and foster their virginity for the benefit of our children and grand-children?" This, at first, may seem to be a question unanswerable, but when I visit those forests and find the ground thickly covered, "crossed and piled" with the decayed and decaying trunks of past years' timber growth, and see still erect so many fine timber trees of the forest diseased, dying, or dead, that are soon to fall as others have done, and become fuel for the autumn fires that often ravage and destroy thousands of acres of the best growth, I would answer, save and utilize what young timber you have now, and make preparations for the future; go to forestry; commence at once the planting and growing of timber before it is too late—before you find yourselves in a country as denuded of timber as Syria, or Palestine, or the northern belt of Africa, or Spain, or Portugal, or as were Germany, France, and Italy and Austria, and other ancient countries, before they, as nations, adopted systems for growing timber for present and future use as well. This subject of timber planting and forest culture is one of the most important that will henceforth occupy the attention of the people of the nation. And I would be disappointed if, in the near future, every State in the Union were not to have laws bearing on timber culture. I hope the law-makers of our State will give the subject some thought, and ascertain if some general law for the State at large, or some special enactments for all counties now scarce of timber, can not be passed for the promotion of planting and growing timber. This question, I repeat, is of the greatest magnitude; it is not second in importance to that of the other interests of land-owners.

But little attention is given the question at this time. The public attention at large seems to be engrossed entirely upon the wheat, corn, and other cereal, and grass and tobacco crops, and raising of domestic animals. And if this question be much longer neglected by the people, it will be forced upon us in the near future with much more unfavorable surroundings than exist at the present time. These thoughts on timber culture are but the feeble followings of much abler writers on the subject, together with conclusions that any thoughtful man would reasonably arrive at in the study of Forestry. Another feature of Marion county to be noticed as natural resources of undeveloped wealth is the system of highlands, or knobs, found within its borders. Many, I know, will at once disagree with this statement, and regard the knobs as only valuable while the forests exist upon them, and who will say that "the knobs would be absolutely valueless denuded of their timber?" Well, let us reason together: It is known that the higher elevations, as our knobs and knobby ridges and their general slopes, are not practicable farming lands for the cereals, from the fact of impracticability of using the usual implements and means of cultivating and harvesting such crops. It is also known that these knobs have soils, as a general thing, of sufficient fertility to grow most of the grasses, and could be made valuable grazing for sheep-raising as well as for cattle. The wool-growing interests would be the most benefited, since it would be enhanced by the cheapness of its production. These cheap lands would take the place of more valuable lands, and in favor of the wool interest, for, while giving pasture and feed to the sheep, the elevation and escape from low, wet localities give the sheep health and size that they can never enjoy and attain on the lands below.

Our knobs grow forest trees of the largest size, and almost all the species of valuable timber are found on their slopes and terraces.

The wild grape is found everywhere, and higher up, and upon their summits, poplar, chestnut, chestnut oak, other species of oak and other timbers, have good growth. These known facts prove to us that when the forest growth shall have been cleared off, the soil and elevation would afford the most advantageous localities for all fruits of the tree, vine or

shrub. If the forest trees matured so perfectly, and fruited from year to year so regularly, so must the apple, the peach, the pear, the domestic grape, and all the smaller fruits. And from the well-known fact that those fruits, when cultivated at this time, upon these higher lands, rarely fail of a crop, (and I would refer to the high lands of the Muldraugh's Hill range, in Hardin county, and elsewhere along its summit), it must reasonably be concluded that like conditions of successful fruit and vine culture, as the localities mentioned, which have been proven by actual experiment to be eminently successful, exist in Marion county, and even more favorable, because the elevation of the knobs and knobby ridges of Marion county is greater than that of Hardin county by several hundred feet, and hence less liable to damage from frosts and the chilly dampness of lower altitudes. And who can approximate the positive wealth that will accrue to our county when our knob lands shall have been changed into grazing pastures for sheep husbandry, and into orchards of the finest fruits, and vineyards of the most luscious grapes? Then will Marion county boast of her "sheep upon a thousand hills;" and then her shepherds with "bag and crook," leading their bleating flocks to the grassy slopes high above, to the music of the "mellow horn," will present a picture of beauty that will be a "joy forever," and will be a personal and realistic scene of those pictures that charm us now so happily when reading the pastoral poems of the ancients—the ever beautiful bucolics of Theocritus and Virgil. Then will the horticulturist, happy in his cottage in the valley below, look upward, with manly pride, at his achievements, and the wealth overspreading the hills around him. Then the young men and maidens of this miniature Switzerland will merrily sing their songs of glee, and chant their love sonnets in softest cadence, sweetly falling upon lovers' ears, and dance their festive quadrilles in the moonlight, under the orchards and vine-clad bowers of their mountain homes. That this is no fancy sketch, drawn by the pencil of a *visionary*, the future will sooner or later abundantly attest. Our own citizens may not undertake the happy transformation pictured above, but it will be done in time, and, perhaps, much sooner than we an-

ticipate. Offer inducements to the industrious Swiss or Swede or German, whose homes in the fatherland are now inadequate to support the growing families, and the "beginning of the end" of the picture will soon be realized. You have but to visit the colonies of the industrious, honest and intelligent Swiss, already in our State, to witness and be utterly astonished at the wonderful work they have accomplished in so short a time.

The time has come for our county to offer inducement to such colonies, in order that our knobs and intervening valleys may be developed. "The slopes of our knobs and ridges are now kneeling and praying for pastures and orchards and vineyards and cottages and school-houses, and for spires of churches to rise up from out of and beyond the oak groves."

MANUFACTURES IN MAYSVILLE.

By Hawthorne Hill.

Maysville has less to report in the way of recent manufacturing enterprises, or experiments, than in the way of proof, through long-established concerns, of what may be done in successful manufacturing in a Kentucky town.

This is a type of town rather peculiar. Settled a century ago, with a remarkably fertile blue-grass county to depend upon, with the natural transportation facilities of the Ohio river, bringing the town near enough to the world for commerce, and yet not so near us to destroy the individuality of the place or its people, Maysville has grown to have features distinctly her own. It is a town independent of any other. The shops and factories of Maysville, and the farms and gardens and pastures of the adjacent country, have formed a mutual source of supply to all classes, without any having to go from home to satisfy their needs. Manufactories have flourished here from the beginning, some descending from father to son, and furnishing the completest test of the fitness of this place for diversified industries.

A retrospect of Maysville's history shows that manufacturing can be made profitable here.

A mill for the manufacture of cotton yarns, in successful

operation for more than forty years, employs two hundred laborers, and gives support to many families. There has long been no attempt at extending the works, they being owned by heirs content with the present conditions; but it is probable that if a share of the profits had been applied regularly to enlarging the mill, a thousand persons might now be profitably employed.

A plow factory here won, at the New Orleans World's Fair of 1884-5, a grand prize over all competitors, including Avery, of Louisville. Its products go throughout the South and into Mexico and Central America to an extent requiring a special catalogue to be printed in Spanish.

These industries are mentioned as an example of what the writer believes to be a truth; that the advantages requisite to successful manufacturing are less "natural" than in the shape of capital and intelligence for the work to be done. Thus Maysville possesses no "natural" advantages for a plow manfacturing point, save river transportation. So with the cotton mill; cotton is not grown near Maysville, nor is this a market for that staple, but it occurred to an intelligent man with capital to manufacture cotton here, and the mill still runs.

The lesson for Kentuckians is, that if they want diversified industries, they should not depend upon "natural" advantages to supply all the ingredients of success.

There appears a better local reason for the existence here of some other industries. There are three flouring mills using the "new process," one with a daily capacity of 300 barrels, to be increased to 500 barrels. The mills buy mainly from the excellent native wheat crop. One of the millers says that he has bought this year 140,000 bushels of wheat from farmers' wagons at a price five cents higher than the growers could have gotten by shipping. So here is a direct benefit to the wheat-growers of $28,000 in one season, from one mill, to say nothing of other classes to be benefited, and the benefits conferred upon the community by the other two mills.

The tobacco product of Mason county, especially since the "White Burley" was introduced, has been enormous, bringing millions of dollars into the county. Its excellence is shown by its large use by the Lorillards in their best brands. It is a question whether the extensive manufacture of tobacco here

would not pay, beside benefiting the growers by giving them a home market. A part of the crop each year is consumed, however, by thirteen cigar factories here, employing a large number of hands and turning out goods which go to a dozen States.

Some other manufactures which are successfully conducted here, are three distilleries, which have filled only a legitimate demand, escaping a panic in the worst years for the whisky trade; three carriage factories, a large foundry, from which stoves and other articles are turned out; two large saw and planing mills, which send lumber away, sometimes, as far as New England; a steam establishment for the manufacture of wooden work, paying $5,000 a year in wages; three printing offices, giving employment to numerous hands, one using steam as a motor, and receiving considerable orders from other States; an artificial ice factory, two extensive tailoring establishments, and some smaller ones; shoemaking on a considerable scale, with numerous individuals supported by industries less prominent—the making of jewelry, tinware, saddles and harness, and brick; cutting marble and stone, bottling mineral waters, putting up seeds for sale, plumbing, glazing and painting; besides the trades of carpentry and building.

There are some advantages which can justly be held out by Maysville to any who are seeking a point for manufactures or trade. The competition of river and rail insures, forever, cheap travel and freight rates. The cheapest rates in Kentucky to-day exist between Maysville and Cincinnati. Within six months the completion of the Maysville and Big Sandy Railroad will place the city on a direct line between Cincinnati and Richmond, Virginia, opening up to commerce a new territory, to which Maysville, by virtue of her position, will have the first claim. There are here excellent water-works, cheaper gas than any other city, low taxes, cheap insurance and cheaper fuel than Cincinnati. There is a profitable street railway. The county, large and fertile, is supplied with the finest turnpikes in the world, there being 250 miles.

SHELBY COUNTY.

Shelby county, with its county seat, Shelbyville, located in latitute 38° 11' and longitude 8° 12', contains 230,614 acres of land. The soil is based upon limestone with red clay foundation, and is uniformly very productive; and while all the grasses flourish and produce abundantly on its soil, Shelby can well be styled one of the first, if not the first, county in Kentucky from an agricultural stand-point.

The contour of its surface is gradually undulating, with the exception of the extreme eastern and south-eastern portion, which breaks into hills of some prominence. The variety of crops grown on its soil is peculiarly indicative of its adaptability to agriculture; and the readiness with which it responds to kind treatment and thorough culture, has induced the husbandman to drive the axe and the ploughshare through the greater portion of its naturally well-timbered forests. The once luxuriant and prolific growth of black walnut, blue, black and white ash, together with the bur, the white oak and the sugar maple, has been, to a very great extent, replaced by large fields of grass, grain, tobacco and hemp.

The lands are well drained by a number of semi-annual flowing streams, with here and there little brooklets fed by never-failing springs. Those localities in its bounds are exceptional, where an abundance of good water can not be obtained by sinking wells or stock pools in the solid limestone. The darkest, quickest and most pliable soil is to be found contiguous to these water-courses, yet in case of drouth both grass and grain seem to fare better on the uplands, through the subsoil of which ten to twenty feet must be passed to reach the limestone base.

This peculiar adaptability of its soil to agriculture has led the inhabitants, encouraged by a ready and very accessible market, to the culture of nearly every crop suitable to this clime. And while stock-raising has, to some extent, been supplanted by the increased culture of some crops, the quality of the stock has, to a great extent, been improved, there being in Shelby more registered cattle of all breeds than in any other county in the State. In the year 1870 Shelby county was the fifth county in the State in the production of cattle, with 11,804 head, and in

1885 the seventh county, with 11,215. In the production of hogs in 1870 it was first, with 22,089 head, and in 1885 it produced 16,158 head. In 1885 it was second in the production of sheep, with 23,803 head.

In the production of horses in 1870 it was third on the list, with 6,690 head, and in 1885 it reported 5,419 head. And, while in 1870, it stood first in the production of corn, with 1,108,605 bushels, in 1885, 882,310 bushels were reported. In 1870 it held the third position in the production of wheat, with 175,996 bushels. In 1885 it had increased this product to double that amount, with 350,000 bushels. And in the year 1882, 550,000 bushels were produced.

In 1870 it stood forty-ninth in the production of tobacco, with 239,450 pounds, while, in 1885, it had gained the twenty-fifth position, with 3,325,990 pounds. In the production of hemp, in 1884, it held its normal position, with 407,800 pounds.

In the production of hay, it now holds the fifth position. It will be easily perceived that the increased progress in the production of hogs and cattle during the period above-mentioned is far surpassed by the increased production of wheat and tobacco, to say nothing of the 150,000 pounds of wool and the 60,000 bushels of potatoes annually shipped out of the county, which, within the last decade, have become an article of export. Since the year 1878 all the surplus young cattle fit for breeding purposes have been shipped to western ranches.

The soil is peculiarly adapted to the growth of vegetables and fruits, especially apples and a great variety of small fruits, which have recently entered into the list of export products.

In the northern portion of the county the standard grass (Kentucky blue) has been, to some extent, supplanted by orchard grass, which, as a resource for grazing and as a forage and seed-producer, has proved eminently profitable. But when we compare the statistics of Shelby county with those of other counties in the State of near the same area, we find that, in proportion to the number of acres, Shelby has kept pace with them, not only in the relative increase of wealth, but has surpassed them in the increased production of the cereals, tobacco and hemp; and has kept pace with them in the production of nearly every class of stock. The population of Shelby county

to-day is about the same that it was forty years ago. This fact is accounted for in its contribution of a due proportion to the growth of the large cities outside of its bounds, and to a thrifty and industrious population in many of the Western States.

This surcease in the population has not been the result of the decreased value, either nominally or intrinsically, of its lands, from the fact that the major portion of the lands, by systematic rotation, kind treatment, and improved husbandry, is better to-day than it was thirty years ago. In the production of the wheat crops alone, the average yield per acre has been nearly doubled in the last fifteen years; and the heaviest and most profitable crops of tobacco are grown on lands which were cleared and cultivated fifty and seventy-five years ago. The hard varieties of wheat grown on Shelby county soil are eagerly sought for by millers from other counties, and its Burley tobacco, in competition with that from other counties, has, for several years, carried off the palm.

From a strictly agricultural stand-point, therefore, Shelby county, with its well improved and well-kept farms, must take the first position in the State.

It is to-day the fourth county as a wealth producer, outside of the three counties in which there are cities of 15,000 inhabitants, and if the vast amount of its products, which is not entered into our statistics, could be accounted for, its position would be higher. The internal improvements are of the first order and well preserved. In transportation facilities it is surpassed by few.

Two lines of railroad, under one system, run entirely through its bounds, and a third, under a new system, rapidly approaching completion, is being constructed. This will give competition North, South, East, and West.

It has thirty miles more turnpike road than any other county in the State, and the work of construction is still in progress. These roads all converge to the county seat. The flouring mills, three in number, with a daily capacity of 300 barrels, are not surpassed by any in the State. Yet there is room for other manufactories. There should be several woolen mills, starch mills, and hemp manufactories in the county. And the increased transportation facilities will soon bring them.

The climate of Shelby county is salubrious and invigorating. The modes of culture and the manner of conducting farm operations are of the most improved methods, with the latest improvements in agricultural implements. And in consideration of the area and population, there is not a section in the State in which the wealth is more uniformly and equally distributed, and in which, we venture the assertion, there are less paupers and fewer millionaires. The uniformly intelligent cast of the population is a tribute to the standard of education prevailing at the schools in its bounds. Its contiguity to the metropolis of the State is attracting the attention of city business men to its borders for country homes. Now is the time for investments in Shelby, while lands are relatively cheap and easy of access, before the boom, which is sure to come, places them at exorbitantly high figures.

Below are given some statistics showing the annual average products and exports of Shelby county for a period of five years. These figures have been carefully compiled from the Auditor's records and supplemented from other reliable sources, and they have been verified as far as possible by a systematic canvass of the county.

Average yield per acre for past five years:

Wheat, in bushels	15
Corn, in bushels	40
Oats, in bushels	28
Rye, in bushels	13
Clover seed, total	4,500
Hay, in tons	1½
Hemp, in pounds	1,075
Tobacco, in pounds	1,200

STOCK.

Cattle, No. of head	15,000
Horses, No. of head	7,000
Mules, No. of head	7,000
Sheep, No. of head	30,000
Hogs, No. of head	40,000

EXPORTS PER YEAR.

Wheat, in bushels	280,000
Corn, in bushels	200,000
Potatoes, in bushels	60,000
Hemp, in pounds	300,000
Tobacco, in pounds	1,000,000
Wool, in pounds	150,000
Cattle, No. head	4,000
Horses, No. head	800
Mules, No. head	800
Hogs, No. head	25,000
Sheep, No. head	15,000
Small fruits, value of	$7,000
Dairy products, value of	30,000
Poultry, value of	25,000

Shelbyville, the county seat of Shelby county, is situated a little south of the geographical center of the county, and thirty miles from Louisville, on the Shelby branch of the L. & N. Railroad and the Louisville Southern. The latter is yet under construction, but will be in operation by February 1, 1888. When it is completed, Shelbyville will have transportation facilities second to no town in the State. With two competing lines to Louisville, freight rates will be low, and communication afforded there with all points North, West and East, while the Southern will give direct connection at Lexington with the coal, iron and timber regions of Eastern Kentucky, and the markets of the South and East. By this means coal and all kinds of raw materials will be placed at her doors as cheap as in Louisville, and the markets of the world opened to her produce.

Besides her assured railway facilities, Shelbyville has many and glorious possibilities. With the completion of the Southern, there is a strong probability that the Lexington division of the Louisville and Nashville will be straightened so as to pass through Shelbyville, as by so doing it will lessen the distance from Lexington to Louisville by fourteen miles. There is, too, a probability, almost strong enough to be regarded as a certainty, that the Chesapeake and Ohio will be run through

Shelbyville, either over the Southern or the Louisville and Nashville when straightened. The management of the proposed Frankfort, Georgetown and Paris road are also looking forward to a connection with the Southern in Shelby county.

With such railroad facilities assured and in prospect, Shelbyville can offer as many inducements as any town in the State as a place of residence, business, or for manufactories of certain kinds. In the first respect, indeed, it would be hard to find a town of superior merits in the country.

Shelbyville is a beautiful little city of 3,500 inhabitants, with broad, well-shaded and well laid out streets, which are kept in a perfect state of repair. It is a remarkably healthful town, singularly free from all epidemics, which, perhaps, may be attributed to the cleanly condition in which it is kept. It has no bonded debt. The city taxes are only thirty cents on the hundred dollars. It has a well organized paid fire department, with a steam fire engine and every appliance for protection against fire. It is well supplied with water, and has gas-works, and, in short, all the conveniences of larger cities without their disadvantages.

Shelbyville is surrounded by a country as rich and beautiful, and inhabited by people as intelligent, cultured and prosperous as any in this nation. In the town are well built churches, representing all denominations, and five schools, one a public school, and the remainder private. Two of them, Science Hill and Stuart's College, are institutions known favorably all over the South. They were established many years ago, and, under their beneficent influence, the population of to-day has grown up inspired with a desire for a higher education, consequently the people are refined far beyond the average. With such schools, its educational advantages are naturally of the highest order. Morally and socially, Shelbyville will compare favorably with any place. There is not a bar-room, legal or illegal, within her limits, or within the county. Every influence thrown around the young is for good.

With such advantages, Shelbyville justly claims to be the model residence town in the State, and she offers to Louisville business men, who prefer living out of the city, the most desirable place of residence they can find. After the Southern is

completed, Shelbyville will be connected with Louisville by several daily trains, and can enjoy all the peculiar advantages she possesses, with those of Louisville added, without the extra cost and the other disadvantageous features of city life. While Shelbyville is well built up with uniformly handsome and comfortable homes, desirable building sites can still be had, in any number, at prices ranging from $300 to $1,500.

From a business point of view, Shelbyville possesses great natural advantages. Being the only town of any prominence within a radius of twenty miles, it has a large scope of country to draw on, and is a great distributing point. Some idea of the volume of business done in Shelbyville annually, may be gained from the following carefully prepared statistics:

Groceries, implements, vehicles, hardware, etc.	$350,000
Flouring mills	250,000
Dry goods, hosiery, millinery, etc.	175,000
Clothing and furnishing goods	100,000
Shoes and boots	60,000
Drugs, stationery, sundries	75,000
Coal, salt, lime, brick, etc.	75,000
Manufacture of vehicles, buggies, harness and blacksmithing	50,000
Lumber	50,000
Confectionery, fruits, notions, etc.	40,000
Builders	40,000
Livery business	50,000
Undertakers and furniture	20,000
Stoves, tinware, etc.	20,000
Sewing machines	15,000
Sundry business	50,000
Hotels and boarding houses	25,000
Schools	50,000
Total	$1,500,000

Shelbyville, besides, has two banks with a capital of $100,000 each, an average deposit of $200,000, and an average loan account of $500,000. The schools, too, add no little to the prosperity of the town, bringing annually into it about 100 pupils

from abroad, who spend not less than $30,000 in the community. The business houses are substantial structures, confined chiefly to the two main squares of the town.

The people are wide awake to the advantages to be derived from manufactories located in their midst, and are willing and eager to grant liberal terms to any manufacturing enterprise. Her nearness to Louisville, with her exceptional railroad connections and cheap freight rates, makes that city an available distributing point. The raw material for a tobacco or hemp factory, or woolen mills is at hand. Building sites can be secured at a mere nominal sum. City taxes are only 30 cents on the $100. Living is less expensive than in the city, consequently labor is cheaper. The completion of the Louisville Southern gives an outlet in every direction, and opens direct connection with the great coal and timber-producing regions. All kinds of raw material not supplied at home can be laid down at the door as cheap as in Louisville, manufactured at a less cost, and the produce shipped to the markets of the world with as little expense and trouble.

Shelbyville opens wide her doors to all kinds of public enterprises, and promises a hearty welcome to all who will take advantage of the invitation extended to investigate her claims, and, if satisfied, locate in her midst.

For information, address Jos. A. Logan, John A. Middleton, J. C. Beckham, G. W. Waddy, John W. Hardin, John W. Bell, John I. Logan, Shelbyville, Kentucky.

SPENCER COUNTY.

Spencer county is situated about thirty miles south-east of Louisville, lying between Shelby and Nelson counties, from which counties she was formed. Her surface is, geologically speaking, entirely of the Hudson River group of the Lower Silurian, and, like all soils of Kentucky in this formation, is remarkably productive, and can be kept so for all time by judicious cultivation.

Whilst her surface is somewhat broken, her hills originally covered by a growth of walnut, cherry, ash, burr, chinquapin and white oak, and largest papaw bushes and wild grape-

vines, will grow blue grass luxuriantly, and affords pasturage for all kinds ot stock—the gently rolling for large stock, and the hill-sides for sheep. Her hill-sides, on account of their richness and drainage, have shown their fitness for the production of all sorts of fruits, and especially for the best varieties of the grape, and offer the most promising field for vineyards—and their luxuriant production of grass offers most favorable invitation for the establishment of dairies and butter factories. The valleys of Salt river, Brashear's and other creeks, are unsurpassed for fertility, producing corn, wheat and Burley tobacco.

Stock water (as evidenced by the recent drouth) is unfailing, being furnished by Salt river, Brashear's creek and their numerous tributaries. The waters of Shelby county debouch by Brashear's creek, and the waters of Anderson, Boyle and Mercer by Salt river debouch through the county, uniting in the town of Taylorsville.

It is one of the healthiest counties in the State, attributable to her fine waters, good drainage, and attention to sanitary laws by her people.

We believe we are safe in alleging that we are in the natural gas region, as a gas-well was obtained many years ago four miles west of Taylorsville, the county seat, and a few days ago gas was struck at Fisherville, just outside our county, in Jefferson county. The Trenton limestone underlies the surface stone of our entire county. Her chief products are corn, wheat, tobacco, grass and hay, and, according to her area, she is the equal of any county in the State of Kentucky in the production of wheat, both in quality and quantity.

There is now assurance that a large tobacco warehouse will be built in the town of Taylorsville at an early date. She has three roller flouring mills, which, in the quality of product, will compete with the best.

She has about 113,000 acres of land—one of the smallest in the State—sixty-five miles of turnpike, and several new roads in course of construction, and passing through the county north, south, east and west. The Cumberland & Ohio Railroad passes through the county, with convenient stations along its route. All kinds of improved stock are to be found throughout the

county, and much interest is taken in its improvement. Good schools are to be found all over the county, and at Taylorsville is one of the best high schools (the Spencer Institute) in the State.

The population is thrifty and intelligent. Her greatest need is the division of her largest farms to an increased population of intelligence and energy, and the establishment of suitable manufactories.

TRIGG COUNTY.

By Robert B. Thomas.

Trigg county is bounded on the north by Caldwell and Lyon counties; east, by Christian county; west, by the Tennessee river, and south, by the State of Tennessee. The Cumberland river runs through the western portion of the county, the territory lying west of that stream being about nine by eighteen miles in extent.

Besides the Tennessee and Cumberland rivers, the lands of the county are watered by a number of minor streams, and innumerable creeks and springs.

Not one-tenth of the water power of Trigg county has ever been utilized. It is true there are several fine flouring mills on Little river and its two principal tributaries, but there is not a woolen mill or factory of any kind in the county. The only reason for this condition of things is a lack of capital, and not a want of shipping facilities. One year from to-day Trigg county will have three railroads, as additional means of transportation facilities to her two large navigable rivers—the Tennessee and Cumberland.

The soil of the eastern and north-eastern portions of the county is rich, and extremely fertile. The subsoil is a strong red clay, on a limestone foundation, especially adapted to the growth of Indian corn, the smaller grains, and a very fine quality of tobacco. The western and extreme southern portions are hilly, except along the creek and river courses, where there are rich alluvial bottoms. Owing to the rank growth of the straw, wheat, in the Cumberland river valley, has not been grown successfully. But the crops of Indian corn and hay are phenom-

enally large, and have never been known to fail. The hills are adapted to the growth of corn, wheat, tobacco and grasses.

On both banks of the Cumberland the hills extending back from ten to five miles inland are full of the richest quality of limonite iron ore. Specimens of this ore were examined by State Geologist N. S. Shaler in 1884, and the following report made:

"The ore is mostly in dense, hard, irregular hematitic layers, dark brown, and nearly black, with but little of the softer ochreous ore."

COMPOSITION DRIED AT 212° F.

Iron peroxide	71.708	= 50.195 per cent. of iron.
Alumina and manganese oxide	.945	
Lime carbonate	trace	
Magnesia	trace	
Phosphoric acid	1.217	= .095 per cent. of phosphorus.
Sulphuric acid	trace	
Combined water	9.630	
Silicious residue	17.280	= 16.960 per cent. of silica.
Total	99.780	

"This is quite a rich and pure ore, which would, doubtless, produce a very tough iron, provided the fuel and flux employed in the smelting process are free from sulphur and phosphorus."

State Geologist D. D. Owen made a chemical examination of both the ore and flux used at Trigg Furnace. He says:

"No. 1226.—*Labeled 'Pot Ore from D. Hillman's Empire Furnace, Trigg County, Kentucky.'*

"A curved, irregular layer of dense, dark colored limonite, inclosing a large cavity, through the walls of which project some remains of coralloid bodies (probably cyathophylli). Exterior soft, ochreous ore, of red, yellow, and brown colors.

"No. 1227.—*Labeled 'Brown Ore from Empire Furnace, &c.'*

"A dense, dark-brown limonite; in pretty thick, irregularly curved layers, incrusted with bright red, yellow, and brown soft ochreous ore.

COMPOSITION OF THESE TWO ORES DRIED AT 212° F.

	No. 1226. Pot ore.	No. 1227. Brown ore.
Oxide of iron	86.540	68.540
Alumina	.580	.480
Carbonate of lime	a trace.	trace.
Magnesia	.289	.854
Brown oxide of manganese	.184	.384
Phosphoric acid	.374	.156
Sulphuric acid	.166	.122
Potash	.193	.502
Soda	.076	.129
Silex and insoluble silicates	7.080	17.100
Combined water	5.560	11.180
Loss	. . . . .	.553
Total	101.042	100.000
Moisture expelled at 212° F.	1.400	1.600
Percentage of metallic iron	60.605	48.009

"The 'pot ore' is the richer, but the 'brown ore' will, doubtless, yield the tougher iron of the two.

"No. 1228—Limestone—*Labeled 'Grey Limestone, used as a flux at Empire Furnace, Trigg county, Ky.'*

COMPOSITION DRIED AT 212° F.

Carbonate of lime	93.040	= 52.21 per cent. of lime.
Carbonate of magnesia	1.259	
Alumina and oxides of iron and manganese	2.980	
Phosphoric acid	none.	
Sulphuric acid	.242	
Potash	.193	
Soda	.179	
Silex and insoluble silicates	1.980	
Loss	.127	
	100.000	

There are other portions of the county equally as rich in iron ore as the ones just mentioned. Prior to the war, and even since the war, hundreds of thousands of dollars in money have been invested in the manufacture of pig iron in this county, and princely fortunes made by the owners of the furnaces. Owing to the scarcity of timber, however, these furnaces have been idle for a number of years, but can and

will be operated again as soon as the Ohio Valley Railroad is built, enabling the owners to procure coal to run them.

Besides iron ore, there is a large and very rich vein of lead ore, starting at the mouth of Little river, and running diagonally across the county in a south-easterly direction. Thus it will be seen that Trigg is as rich in minerals as any county in Kentucky.

There are several mineral springs in the county. One, highly impregnated with sulphur, on Little river, within a few miles of the Christian county line; another, very similar to it, on Muddy Fork, one mile north-west of the village of Wallonia. No chemical analysis has ever been made of the water of either of them. Cerulean Springs, now on the Clarksville & Princeton Branch of the Louisville & Nashville Railroad, is one of the most widely known health and pleasure resorts in the South, and is annually visited by vast numbers of people from many of the Northern, Western, and Southern States.

There is hardly a neighborhood in the county where the very best qualities of stone suitable for building material can not be found. There is a quality of sandstone in the Montgomery neighborhood, from which the very best grindstones can be made.

At Wallonia there are vast beds of hydraulic cement that will be very valuable as soon as the Ohio Valley Railroad is completed to that place. Geologists who have examined specimens of this cement, say it is the finest quality ever discovered in the United States.

In the vicinity of Tuggleville there is a large ledge of slate. Whether it could be utilized for roofing purposes I am unable to say, but I am confident that such an idea never entered the mind of the owner of this quarry.

Trigg, as an agricultural county, holds a first-class position. All the cereal grains are raised in great abundance, a number of farms in the eastern portion of the county frequently producing as much as forty bushels of wheat per acre, and rich corn-fields, along the Cumberland and Little rivers, averaging fifty bushels of corn per acre. There is scarcely an acre of land in the county that will not produce tobacco, the yield per acre ranging from 500 to 1,500 pounds. All the fruits

and vegetables of the temperate zone can be raised in the greatest perfection and abundance, and in a few years the gardens and orchards will yield as large incomes to the owners as any other crops raised in the county.

There is one section, beginning at Flat Lick, which is partly in Trigg and partly in Christian, wherein the peach crop has rarely been known to fail, and the apple crop, never.

The abundant water supply of Trigg county especially adapts it to the raising of cattle and sheep, and the improvement of the breeds of all classes of domestic animals has been going on steadily since the close of the war. There are now many herds of thorough-bred Short-horn and Jersey cattle, as well as flocks of South-down and Cotswold sheep. The stock of hogs cannot be surpassed in the State. The native breeds of horses have been greatly improved, and some of the finest animals in the State are bred in Trigg county. The mules bred in Trigg county are justly celebrated in the Southern States.

The lands of the county are very cheap, prices ranging from three dollars to eighty dollars per acre, owing to location and the improvements that have been made.

TRANSPORTATION.

Trigg county has the advantage of two navigable streams, the Cumberland and the Tennessee, the former passing through the county and the latter forming one of its boundaries. I said two, when I should have said three; for Little river, one of the principal tributaries of the Cumberland, at a very small expense, could not only be made navigable up to the town of Cadiz, but the locks and dams required to make it so would furnish water-power sufficient to run the largest mills and factories. Some of the most enterprising citizens are contemplating the building of these locks and dams, with the view of leasing the water-power to manufacturing and milling companies, after the completion of the main stem of the Ohio Valley Railroad to some point in the county, and the building of the C. & H. branch running from the town of Cadiz to the city of Hopkinsville, in Christian county.

In addition to these streams as means of transportation, the Louisville and Nashville Railroad Company has built a branch road from Clarksville, Tenn., to Cerulean Springs, Ky., the line passing through ten miles of the finest farming lands of the county, or, you might almost say, the State. The branch line will more fully develop the best farming lands of both Trigg and Christian counties. The trunk line has already been built out from Henderson, on the Ohio river, through Henderson, Union, Crittenden and Caldwell counties, thus developing one of the richest coal regions of the globe. The objective point of this road is Sheffield, Alabama. It is evidently the intention of the company to extend its Hopkinsville branch on through the western portion of Trigg, and thus pass directly through the center of one of the richest mineral regions in the world, and when all these lines are completed the very best qualities of iron ore, coal and limestone rock for fluxing purposes, can all be brought together in Trigg county in greater quantities and at a smaller cost than at Pittsburg, Pa., or Birmingham, Ala. The idle furnaces in Trigg will again be put in operation by some syndicate, and will yield the investors rich returns.

Nearly all religious denominations are represented in the county, and I know of no neighborhoods destitute of schools and churches.

Cadiz, the county seat, is the largest town in the county. It is healthfully situated on Little River, and has a population numbering about 1,200. It will be a splendid location for manufactories when the Ohio Valley Railroad is completed. There are about a dozen other towns and villages, with populations ranging from fifty to five hundred.

The people are usually law-abiding, peaceful, and intelligent. There is plenty of room for a good class of emigrants. The total population of the county, in round numbers is 16,000.

TRIMBLE COUNTY.

By D. C. Peck, Bedford.

Trimble county was established in 1836, and is bounded on the north and west by the Ohio river; north-east by Carroll county; south-east by Henry county; south by Henry and Oldham counties.

The county seat is Bedford. It has a good, substantial court-house and a very substantial jail—though we seldom have use for the jail, except to deter bad men from coming among us—four churches, a mill, and shops of various kinds.

Bedford is located near the centre of the county; five miles east to the Ohio river is the nearest point. It is ten miles south of Madison, Indiana, and seven miles north of Sulphur, on the L. & C. Short-line Railroad. There are good macadamized roads leading to each of these places. It is situated on an elevated plateau, about 366 feet above the river. It is noted for the healthfulness of its climate and the abundant supply of the purest water. The Trimble High School is located here, which has a splendid corps of experienced, practical teachers, and is a good, roomy building, with boarding-house in the yard. The school is largely attended by both males and females. In this school are taught all the branches usually taught in an academy. It offers as good advantages to those desiring a good education as any school in Northern Kentucky.

Milton, in Trimble county, is situated on the Ohio river, opposite Madison, Indiana; is a considerable shipping point, and has a thrifty commercial population.

The leading industry of this county is soil tillage. The land being rich, produces hemp, tobacco, flax, corn, wheat, barley, rye, oats, potatoes, blue-grass, the hay grasses, and fruits of all kinds to perfection. The tobacco grown in the county is exceedingly fine in texture, beautiful in color, and ranks in quality with the finest cutting leaf in the market. The uplands and hill-sides produce from forty to fifty and the bottom lands from sixty to ninety bushels of corn per acre, and, with proper cultivation and care, the land of this county produces from thirty to forty bushels of wheat per acre.

The red clay uplands produce peaches and apples of the finest quality. The peaches grown in this county command the highest prices of any peaches in the market. They bear a crop, on an average, every four years, and bring from $100 to $500 to the acre, according to the care and attention given them. A few of the farmers have engaged in the peach-growing business to a considerable extent. The net proceeds of the peach crop of this county this year will amount to over

$200,000. The apples are the finest produced in any climate, and rarely ever fail to make a good crop. Raspberries, strawberries and grapes of all varieties are quite profitable crops, and are of fine size and quality.

This county has an abundance of the very finest building stone, and large quantities of very fine marble. It has also plenty of timber for building, fencing and fuel purposes, and of most all varieties; and is one of the best watered counties in the State.

The "medical springs" near Bedford, the county seat, are the "Parker Springs" and "Epsom Springs," celebrated for their medicinal properties. They are located in as healthy locality as can be found in the State. In the same neighborhood, and in other parts of the county, are mineral springs possessing good medical properties.

No minerals have been discovered in paying quantities, though no particular search has been made for them.

Manufacturing is not carried on in the county on a very extensive scale, though there are various manufacturing interests being carried on to some extent. One of the largest distilleries in the State—the Richwood distillery—is situated in the county. The product, of course, is all shipped abroad, as we are temperate, law-abiding people.

Our farmers have turned their attention to stock-raising, which compare favorably with any other stock in the State. It is well adapted to all kinds of stock-raising, never having been visited by any of the contagious diseases to which other sections have been subject. The main reasons for the usual health of the stock is the elevation and natural drainage of the lands, and the abundance of pure water.

Many of our farmers are of the old fogy order, cultivating their lands in a slipshod way, and they have let their lands go down by their bad management and inferior manner of cultivating and caring for them. These lands can be purchased for from ten dollars to thirty dollars per acre.

Our citizens are good, moral, law-abiding people, free from feuds and schisms of every kind, and are liberal in politics and religion.

The classes of immigration most needed, are, industrious, scientific farmers and horticulturists.

WARREN COUNTY AND BOWLING GREEN.

Warren county was originally settled by Virginians and North Carolinians, who, with characteristic courage and enterprise, pushed their way westward, over rugged mountains and through pathless forests, into the savage-haunted wilds of "the dark and bloody ground." The sturdy and energetic qualities of these early settlers were transmitted to their descendants, who, to-day, can be classed amongst the most industrious, thrifty and well-to-do people anywhere within the bounds of the Commonwealth.

In Warren county there are eighty-two district schools for the whites, and twenty-eight for the blacks. In the city of Bowling Green the people are justly proud of their many educational advantages. They are not surpassed, even if equalled, in any other city or town in the State. The graded school building for white children is an imposing three-story brick structure, recently constructed, with all modern improvements, has a seating capacity of about six hundred. The colored school building is a two-story brick building, and is, perhaps, one of the finest buildings for the purpose in the State. It will accommodate about four hundred pupils. Both these schools are under the skillful management of the same superintendent, and are open ten months during the year.

Ogden College, organized in 1877, has an able and experienced faculty, and is doing excellent work; and, by reason of its large endowment, and in accordance with the design of the generous founder, boys and young men from Kentucky, and particularly from Warren county, are enabled to receive within its walls a *thorough collegiate education without one cent of charge for tuition.* Here, too, is located the Southern Normal School and Business College, which, under its enterprising management, is largely attended. In it both sexes receive instruction in the normal methods, and a thorough commercial and business course can be pursued. Then there is the Conservatory of Music, which is successfully conducted under the direction

of one of the most eminent musicians in the State. There are, besides, some good private schools in Bowling Green for girls lone; while close to our southern border—in fact the county line runs through its ample grounds—is that excellent institution for girls, Cedar Bluff College.

Warren is second to no other county in the State in agricultural resources and advantages. Of the staple crops, corn, wheat, oats, hay, and tobacco, we produce largely over an average of the State. We have soils of the best quality for the production of all crops suited to this latitude; and for orchard and garden products they are unsurpassed. We have the rich alluvial soils of numerous water-courses, the strong fertile soils of the level "barren" or prairie lands, and the lighter and warmer soils on the high sandstone lands. The bottom lands are inexhaustible in fertility, producing year after year immense crops of corn, hay and tobacco. The "barren" lands are equal to the best farm lands in the State for the production of corn, wheat, oats, rye, grass, clover, and tobacco, as well as all kinds of tree and small fruits. This is the natural home of the strawberry, raspberry and grape. The high sandstone lands produce excellent pasturage, and the finest quality of tobacco, and surpasses all others in the fine quality and highly colored fruits; such as apples, peaches, plums and grapes. We have also a considerable proportion of hill lands that are fertile and well adapted to general farm purposes, and some of our most valuable farms are there located. Warren county has but little land that is not tillable, and none but what can be made profitable for grazing or fruit-growing. We have the land, the location, the climate, the markets, all waiting for labor and enterprise to utilize them. Those who will come among us with a strong honest purpose can live and thrive as well as they can in any part of our big country, and they will receive a hearty welcome from our people.

It may be safely asserted that no county in the State possesses an area of river and creek bottom land equal in extent to Warren. Barren river runs diagonally through the county, making immense bends, some of them including thousands of

acres. This stream has immense tributaries of like character, while Green river skirts her northern border with similar peculiarities. The land along these streams, known as second bottom, and being just above overflow, is a warm, sandy loam of almost inexhaustible fertility. It is friable and easily tilled, being composed largely of leaf mold, the deposit from the great forests which yet, in many places, cover it. These conditions, coupled with our facilities for transportation, make our county the most desirable location for those desiring to make "trucking" a business. Our facilities for transportation are the Louisville and Nashville Railroad, with branch to Memphis. We also have an outlet to the Ohio river through Barren and Green rivers, open at all seasons. In addition, our county is traversed with a net-work of turnpikes, which makes the county seat accessible from the limits of the county, in almost every direction and at any season of the year.

In regard to that king of small fruits, the strawberry, Warren county has already a reputation surpassing any county in the State. Her annual exhibitions have been recognized far and wide as bringing together the best specimens of this delicious fruit ever seen, one of its members being the originator of two varieties which have been disseminated extensively and been widely popular. Our county is near the center of the region known as the "Barrens," which, seventy years ago, was the habitat of the wild strawberry. So abundant was this wild fruit in its season, on our then prairie region, that horses' feet were stained strawberry color by being ridden through them.

Warren county can justly claim that it is second to none in regard to grasses and stock-raising. As regards the grasses of our county—the soil and climate are well and peculiarly adapted to many or almost all kinds of grasses; in fact, more varieties than almost any other section of country; some of which—blue-grass and white clover—are indigenous to this part of the country, appear and thrive well without being sown. Among the most valued in the order named are the orchard grass, blue-grass, red clover, timothy and many others.

The white oolitic, or Bowling Green limestone, is well-known all over the country. It is the geological equivalent of the celebrated Bedford and Salem limestone of Indiana. There

are two quarries now open and in active operation, each connected with the Louisville & Nashville Railroad by branches—of three miles in one case and one and a half miles in the other. This stone has been extensively used in Louisville, Memphis, Nashville, Atlanta, Paducah, New York and other places. It has been used in the construction of a number of Government buildings. There is an immense deposit of it in this county. It lies near the upper portion of the St. Louis group, and covers an area 15 miles long and 3 miles wide, containing at least 45 square miles of territory, with an average of ten feet thick, and in no place is it more than five miles from the railroad, and in many places directly on the river, thereby permitting of its easy shipment by water to all the Mississippi Valley.

In addition to the building stone mentioned, Warren county has also, in great quantities, flagging stone of a most desirable kind. This stone has been used for a number of years in Bowling Green, and, within the last year, some $10,000 worth has been shipped to Memphis. There are now four large quarries in operation, and another is to be opened soon.

The waste from the quarries, besides the quantity of stone unsuitable for building purposes, may be readily converted into lime of an excellent quality—indeed, not equaled by any in this county. It is already worked in many places in the adjoining States, and some work has been done here with admirable success.

A company recently organized here is now prospecting for both natural gas and oil, with very excellent prospects for success. One well has been put down 1,782 feet, developing the fact that we are situated in the gas and oil region, as both gas and oil were found in the well. It is evident that both came from the Devonian black shale, which is found here at a depth of 700 feet, in a bed 75 feet thick, which bed carries about 17 per cent. of bituminous matter, thereby giving promise of immense quantities of oil, and probably gas. Another well is now going down, and it is the intention of the company to thoroughly test the entire territory.*

*Since this account was written, we are glad to learn that the "excellent prospects" alluded to, have been fully realized, natural gas having been struck in immense quantities, in a well in the vicinity of Bowling Green.—*Commissioner.*

In the extreme north-western part of the county, along the narrow divide which separates the waters of Green river from those of Barren, there is found a coal bed of excellent quality, being coal L, or the first of the series. It is three feet and over in thickness, and tests recently made show it to be both a good coking and gas coal. Lying above this coal, and in the same hill, there are several beds, running from three inches to eight inches, of carbonate of iron, amply rich to work. These beds being stratified, it may be readily shown that there are very considerable quantities of iron here. These same hills also carry limestone well suited for fluxes, as well as sandstones for hearths and other portions of furnaces. The facilities for transportation are good, the lands lying on the waters of two streams navigable the entire year. Iron could be made here at a cost of $10 per ton, and could be put in Louisville, Cincinnati, and St. Louis for $11 per ton. Just across Green river, in Edmonson and Butler counties, both coal and iron are found in quantities which are literally inexhaustible, and both places are easily accessible to Warren county and Bowling Green.

The timber product of Warren county is a very important factor in its natural resources. The forest product in 1880 was $84,000, and there has been a marked increase since then. There is no better place for the establishment of hard wood factories than Bowling Green. Besides the county and the adjacent hard wood districts, the Green and Barren River Navigation Company can lay down at their doors the choicest product of the finest hard wood district in the United States, if not in the world.

The price of real estate in Warren county is very low, taking into consideration our geographical position and facilities for ready markets for our produce, &c. We are located nearly midway between Louisville and Nashville, at the head of navigation of the Green and Barren rivers. Our county is located on both sides of the Louisville & Nashville Railroad, and Louisville & Memphis Railroad; also on both sides of Barren river. We also have charters for several other railroads; some of them we expect to be built in the near future. This shows our superior advantages. Owing to the stringency of money, real estate is dull, except some very desirable property, which

still commands full prices. In pricing our land, I will premise by saying we have three kinds of soil, viz.: Alluvial, calcareous, and silicious, a full description of which you will find in another part of Warren county's reports. Lands are valued and governed in price by several circumstances: First, by quality of soil; second, by distance from city and railroad; third, by amount and quality of improvements. Well improved land within a radius of five miles, with good calcareous soil, can be bought at from $30 to $60 per acre, in tracts, say of 150 acres. Silicious soils, with some improvements, etc., can be bought at from $15 to $30. Alluvial soils rate about as the calcareous. As you leave the city and railroad, land decreases in value, while equally as good, and in many instances the improvements are on a par, yet the price decreases, so that at a distance of ten miles you can buy the same land at from one-half to two-thirds the cost of those near the city. In some parts of the county there are large bodies of timbered land that could be bought at from $4 to $8 per acre; timber near water transportation. Should any one desire fuller information on the subject of our county, he can write to Col. T. J. Smith, President of our Immigration Society, or Dr. W. H. Blakeley, Secretary of same, and they will, at all times, take pleasure in answering queries in regard to our county and section.

STATISTICS.

	1880.	1887.
Manufacturing establishments	54	200
Capital invested	$412,580	$715,000
Hands	328	887
Paid for wages	$96,282	$225,000
Cost of material	281,912	650,000
Products (value)	501,698	11,000,000
Population, white, 19,892; black, 7,639.		
Population of Bowling Green	5,114	8,320
Population of Smith's Grove	338	500
Population of Woodburn	197	300
Population of Oakland	130	200
Population of Rich Pond	146	250
Acres (value per acre 1887, $13)	$350,000	$350,000
Real estate (assessed value)	4,209,645	5,197,055
Personal property	1,468,294	2,460,655
Assessed value, total	5,668,939	8,848,969
Miles of railroad	42.69	42.69
Miles of turnpike	40.00	90.00
Cost per mile	$2,000	$2,000
Total cost	80,000	180,000

THE CITY OF BOWLING GREEN.

Total valuation of property (1887)	$2,363,468 00
Total valuation of property (1883)	2,061,607 00
Increase in 4 years	15 per cent.
Net indebtedness	$154,000 00
Tax per $100, $1.15; poll tax $3.50.	
Annual revenue about	$30,000 00

Bowling Green is beautifully situated in the center of Warren county, on Barren river, in latitude north 37°, longitude west 86° and 30'. Its average elevation above sea level is about 550 feet, the highest point rising 600 feet, the lowest 450 feet.

The Louisville and Nashville Railroad, main line, passes through the city, with a junction four miles below, thereby giving connection with the Owensboro and Nashville and Chesapeake and Ohio, and bringing Bowling Green in communication with Louisville, 114 miles, Nashville 71 miles, Memphis 289 miles.

Bowling Green is also at the head of navigation on the Barren river, thereby having communication with Evansville and the Ohio and Mississippi systems.

The country immediately tributary to Bowling Green is almost exclusively agricultural, with large grain and tobacco interests. The cattle interest is also extensive; the soil being well adapted to grazing. There are also four stone quarries in the immediate vicinity, each of which does an increasingly extensive business. Many small fruits are grown, such as strawberries, apples, grapes, and melons. The local trade is generally with the farmers of this and the adjoining counties.

Bowling Green lies in an amphitheatre, formed by hills of St. Louis limestone, rising to the height of 100 to 200 feet. The soil is a rich marl resting upon a subsoil of red clay, very rich in all the ingredients of plant food. The underlying rock is all St. Louis limestone, containing many caverns. The natural drainage is excellent. The surrounding country, for a distance of five miles, is on the south, south-east, and south-west gently undulating; on the north, hilly and broken.

Highest recorded temperature for 1887, 102 degrees; lowest

recorded temperature, 24 degrees. The climate is mild and equable, free from the blasting heat of the far south and the chilling winds of the west and north-west.

The total length of improved streets is eighteen miles. They are well constructed of broken stone, laid upon a hand-made foundation, after the Tilford system. All curbing is set to grade and put in with instruments. Curbing is excellent, and comes from the local quarries. The sidewalks are from eight to ten feet, made of brick and flag-stones. Gutters are paved either with flagging or hand-set stone. Trees are planted along the sides of the pavements. The streets cost about $8.00 per square rod. Work is done sometimes by contract, usually by the daily labor employed by the city. Number of miles, about eighteen.

The water-works are owned by the city. The combined system, comprising both a reservoir and the Holly, is used. Cost (original) about $90,000. Capacity of reservoir, 1,000,000 gallons; pressure, 80 pounds; greatest amount pumped per day, 2,000,000 gallons; annual cost of maintenance for 1887, $4,000; annual income for 1887, $10,600; forty water meters are used; pipe, eleven miles; engines, two; capacity, 2,700,000 gallons daily; fire-plugs, eighty-four.

Gas is supplied by a private company at a cost of $2.00 per thousand to private individuals, and to the city at $25.00 per lamp-post, of which there are 112 in the city. A movement is on foot to substitute electric lights, which will probably be done at an early day.

A handsome court-house, built of Bowling Green limestone, which cost $125,000, stands near the center of the city.

Bowling Green has two public schools; cost $25,000. One white, costing $18,000; one colored, costing $7,000. She has also one engine-house for water-works; one station-house, etc.

There are two public parks. Fountain Park, containing about one acre and costing $12,000, with a fountain constructed at a cost of $2,500. This park is surrounded by an excellent iron fence, and lighted by 114 gas jets. Reservoir Park contains 17 acres, and is beautifully located immediately around the reservoir, and contains a fine assortment of the trees and shrubs indigenous to this section. It is surrounded by a substantial stone wall

Bowling Green has one theater, six halls, one beer garden.

The natural drainage of the town is excellent, there being a difference of at least 75 feet between the highest and lowest points. The surface waters are carried off without difficulty.

There are no public markets, but there are 25 private ones.

The Board of Health consists of the Mayor, Health Officer, Street Commissioner and Chief of Police, with ample powers.

The fire department is very effective, as much so as that of any town of its size in the Union. It consists of hose carriages, 4; feet of hose, 2,000; water pressure, 80 pounds; effective force, 30 regular and 10 runners; pay, $2 per man for each fire and 50 cents for false alarm.

Street cleaning is done entirely by the city. Garbage and ashes are removed by private individuals, except on the public square. Dead animals are carried off by the city.

The police force consists of a Chief of Police and 4 men; pay of chief, $75 per month; policemen, $50 per month.

WASHINGTON COUNTY.

By J. N. Saunders.

Washington county was the first organized after the admission of the State to the Union, in 1792. Washington county embraces about 600 square miles of area; is bounded by Mercer, Boyle, Marion, Nelson, and Anderson, with a population of 14,419, according to the census of 1880, which is an increase of 1,955 in ten years. Springfield, the county seat, with a population of 1,800, is situated fifty-seven miles from Louisville, fifty from Lexington, and forty from Frankfort. A number of villages are scattered through the county.

Washington county is in the limestone basin, yet cut off by the deep hills of Chaplin river, and the outlet being through Lebanon, at the foot of the knobs, it is generally looked upon as being separated from the balance of the blue-grass plateau. The timber and soil of the county is equal to that of the best counties in Kentucky. Mr. Procter, in his geological report of Kentucky, says of Washington: "Perhaps there is no county in the State which has a larger proportion of arable lands." In the quality and excellence of our crops, corn,

barley, wheat, rye, oats, timothy, and clover, she is only surpassed by a few favored localities in the State. Of late years orchard grass is becoming one of the most profitable crops raised, twenty bushels of seed to the acre, being no unusual yield. It affords grazing six months out of the year, and, as the crop stands for many years from a single seeding, is fast gaining favor. Our State Geologist says, and the statement is confirmed by our growers, that this county produces the largest yield per acre, and the best quality, of White Burley tobacco raised in any part of the State, some of our growers raising this year as much as 1,650 pounds to the acre.

The millers claim that the wheat raised on the Middle Hudson River group, which extends over about one-third of our county, is not surpassed in quality by any on the continent. All the fruits and vegetables known to our climate are produced in equal quantity and excellence with any section in the State; in grapes, few counties can equal it. Washington has been one of the largest jack, jennet and mule-producing counties in the State, but of late years our attention has been turned to trotting horses. We ship more lambs than any county, perhaps, in the State. We have more registered Shorthorn cattle than any county south of the Kentucky river, and among them Col. Grundy's premium herd of the State.

We have in Washington county sixty public schools for white, and twelve for black children; four parochial and five chartered high schools, and two colleges. We have in the county five Catholic churches, three Presbyterian, ten Baptist, eight Methodist and five Reformers. We have two hundred and fifty miles of turnpike road already completed, and bridges spanning almost every stream that ever becomes too swollen to ford. These improvements have been paid for, and have ceased to be a burden to our tax-payers. We have under construction a branch of the Louisville and Nashville Railroad, connecting us with Louisville. This outlet renders accessible our large and fertile county, which has hitherto been segregated from the balance of the State. It is this past isolation which accounts for the fact that our lands, of equal quality, are cheaper than any in the State. The county has no bonded debt unprovided for.

Washington county, free from debt, with turnpikes, bridges, school-houses, and churches paid for, with rich lands at low rates, and good markets now opening, affords inducements to immigrants hardly equaled in any section of the United States. For information, address W. R. Casey, W. E. Selecman, J. N. Saunders, G. W. Greene, Springfield.

WOLFE COUNTY.

By W. O. Mize, Hazel Green.

Wolfe county lies due east of the center of the State; belongs to, and is embraced in, the section denoted by its dark hue, as outlined on the map which has been before this Conference, indicative not of dark and forbidden territory, but a deposit of mineral wealth which, in quantity—as has been said last night by the distinguished visitor from Pennsylvania, and long recognized by all—excels the combined resources of Great Britain, and in quality is par excellence. That line covers, in the county of Wolfe and her sister counties, cannel, bituminous and coking coals in workable veins sufficient to run the engines and furnaces of an empire for an age. And not coal alone exists within our borders. Iron ore, known as the Red River, and which, in years gone by, received the attention of Louisville's capitalist, Dr. Standiford, exists in such quantities as guarantees to this, the iron age, a paying field. Another mineral has but recently been discovered, and, although for years Argus eyes searched our State from center to confines, it lay unknown; and accident brought to light the only deposit of mica in Kentucky. As capital, labor, and railroads reach out and enter our long neglected mountain counties on the east, the first reached is Wolfe, and the first coking coal is found—a coal which is converted into a coke 8 to 10 per cent. better than the famous Cannelton of Philadelphia, which is shipped all over our Union—while Kentucky's coal sleeps on, awaiting, Micawber-like, "something to turn up." I need only refer to one, the Hobbs bank, as described in our Geological reports.

To these mineral products others might be added to the list with worth, such as the finest quality of sand and building stone. They are there, awaiting development, covered with

175,000 acres of soil of a fair agricultural quality, crowned with virgin forests of timber, composed of oak, beech, poplar, black walnut, and the only belt of white pine south of Michigan of 20,000 acres, lying in Powell, Menifee, and Wolfe.

Our soil produces crops which pay a fair remuneration to the tiller of the soil, and to the acre the average is, of wheat, 12 bushels; corn, 25 bushels; oats, 30 bushels; rye, 15 bushels; potatoes, 75 bushels; turnips, 100 bushels; tobacco, 500 pounds, on land now valued at about $4 per acre.

These produce no revenue, having no means of transportation. Though recently a Lexington firm has bought at Hazel Green and shipped to market about 200,000 feet of black walnut plank, which was hauled twenty-six miles on wagons over a rough mountain road to reach the coal roads and make a connection with the Newport News & Mississippi Valley Railroad at Mt. Sterling. Live stock produces the only revenue for the county, and cattle more than all. Our citizenship is distinctive and known, as all that vast section is known, as "Mountaineers;" and pardon me if I make an assertion, and state that one reason of our financial weakness, applicable to more than my section in Kentucky is "the failure to work a reasonable portion of the whole year" A people can not be prosperous financially who labor twelve weeks and loaf forty annually. Wolfe county is singularly free from the feuds so much to be deplored in the mountains, and civil law is supreme. An educational interest is awakening which is gratifying, and bids fair to place our people on a plane with the more favored of the interior section, and hand in hand with this is the cause of religion. In the county there are two villages, Campton, the county seat, near the center, and Hazel Green, near the northern boundary, each with a population of three hundred. In the latter there are three nice, commodious church buildings, Methodist, Presbyterian, and Christian, and a high-school building recently erected at a cost of $4,000. This school is the only one of its kind east of Winchester, and is rapidly gaining the notoriety which its merits demand. A local paper ably edited, and established in 1884, has a wide circulation, and its columns are always filled with matter looking to the development of the mountains. Thus churches,

schools, newspapers, etc., are found in Hazel Green, *but no saloons*. Near Hazel Green is found the Swango Springs. The curative properties of its waters are wonderful, as can be attested by many, and among them the recent Chief Executive, J. Proctor Knott. Transportation would place it on the market at $8.00 per barrel, with a demand which could not be supplied. Thus we stand, 5,000 men, women and children of Wolfe county, with hands manacled with the shackles of poverty, extended to the world, pleading for capital, immigration and manufactories. Come, build railroads, shops, furnaces, factories; we are paupers, while under our feet are 175,000 acres of land, underneath which lies enough coal and iron to give employment to all Ireland and Germany, were all Ireland and Germany miners, and on which is enough timber to build a home for each.