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INFORMATION FOR IMMIGRANTS

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CONCERNING

MIDDLE TENNESSEE

AND

THE COUNTIES IN THAT DIVISION

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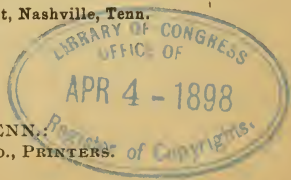
"A land of gushing springs, sunny skies, productive
soils and generous crops."

By J. B. KILLEBREW, PH.D.

*Former Commissioner of Agriculture, Statistics and Mines for Tennessee,
and now in charge of Immigration for the
NASHVILLE, CHATTANOOGA & ST. LOUIS RY.*

ISSUED BY THE PASSENGER DEPARTMENT.

W. L. DANLEY, Gen'l Pass. Ag't, Nashville, Tenn.



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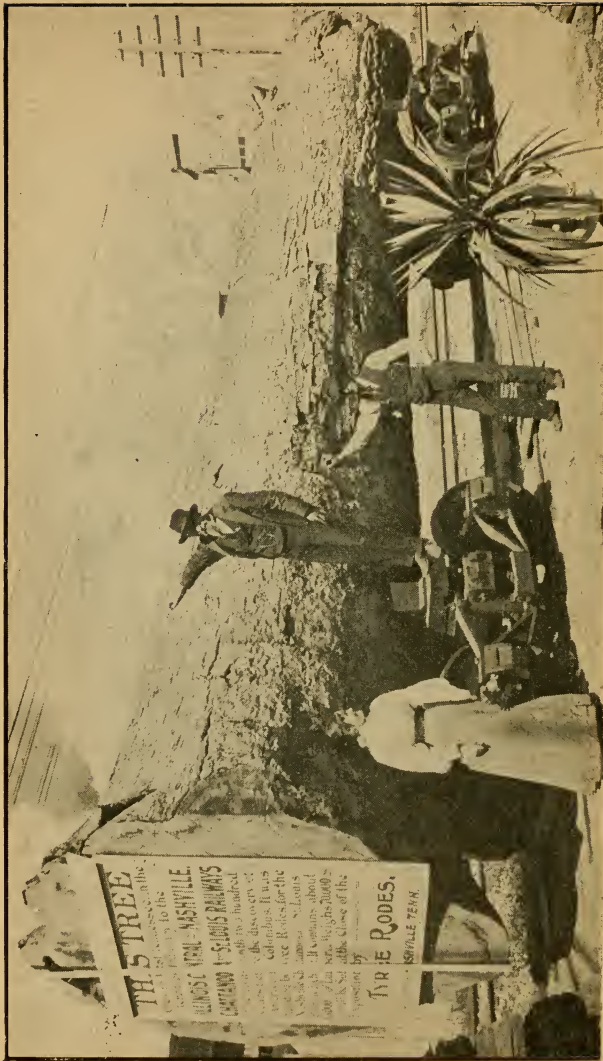
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INTRODUCTORY.

THE accompanying work, whatever else may be thought of it, is truthful. It tells the facts as they exist about Middle Tennessee. Home-seekers may rely with confidence upon all the statements made concerning the soils, timber, crops, minerals, markets, etc. The worst possible policy for the railroad would be to deceive those who propose to settle on it for, a dissatisfied or deceived immigrant can do more harm to the cause of immigration than one hundred satisfied ones can do good. Out of the two thousand northern families that have settled on the Nashville, Chattanooga & St. Louis Railway during the past five years there are not a dozen who are dissatisfied with the country or the people. An immigrant runs no risk in coming to the region through which this road passes, for its climate is pleasant and healthful; its soils cheap and productive; its transportation and markets good; its people law-abiding and hospitable. Its seasons are such as never to produce crop failures. Fuel and water are abundant everywhere, and the number of crops that are grown to perfection are greater than are grown elsewhere. The winters are usually mild, at times severe, but this severity is of short duration. For nine months in the year green crops may usually be relied upon to furnish grazing to live stock.

A farmer would become financially independent if he would only save the difference in the amount necessary to provide for the exigencies of the winters in the Northwest as compared with the outlay required for the same purpose in Tennessee. The climate in Tennessee may be said to contribute this much to his prosperity. There is no sense in giving away half of one's earnings to take him through the winter, when by removing five hundred miles farther South he may live in a climate far healthier and equally as productive, and save this expenditure.

No case of yellow fever ever originated in Middle Tennessee.



LARGE POPLAR (LIRIODENDRON TULIPIFERA) SHOWN IN THE EXHIBIT OF NASHVILLE, CHATTANOOGA, AND ST. LOUIS RAILWAY, CENTENNIAL EXPOSITION, NASHVILLE, TENN.

INFORMATION FOR IMMIGRANTS.

MIDDLE TENNESSEE.

THERE is not in all America a more charming or a more fruitful region naturally than that known as Middle Tennessee, which extends from near the middle of the Cumberland Table-land on the east to the Tennessee River on the west. It has a superficial area of 18,126 square miles out of the 42,050 embraced in the State of Tennessee. The following counties are included in Middle Tennessee, viz: Bedford, Cannon, Cheatham, Clay, Coffee, Cumberland, Davidson, DeKalb; Dickson, Fentress, Franklin, Giles, Grundy, Humphreys, Hickman, Houston, Jackson, Lawrence, Lewis, Lincoln, Macon, Marshall, Maury, Montgomery, Moore, Overton, Perry, Pickett, Putnam, Robertson, Rutherford, Smith, Stewart, Sumner, Trousdale, VanBuren, Warren, Wayne, White, Williamson, and Wilson, making forty-one in all.

Statistics.— In 1890, out of a total population for the State of 1,767,518, Middle Tennessee had 713,992, of whom 539,750, or 75.13 per cent., were white, and 177,561, or 24.87 per cent., were colored. In 1880 the total population of Middle Tennessee was 660,408, of whom 485,378, or 73 per cent., were white, and 181,030, or 27 per cent., negroes. There were 3,770 other persons in the State, which embraced the Chinese, Japanese, and civilized Indians. These have not been included in the estimate of the population for Middle Tennessee. Between 1880 and 1890 the whole population of Middle Tennessee increased 7.1 per cent. While the white population increased 11.2 per cent., the negroes decreased 4 per cent. The number of persons to the square miles in Middle Tennessee in 1890 was 39.4; in 1880, 36.7. . The number of votes cast in the presidential

election in 1896 for the whole State of Tennessee was 320,090. Of these, 166,268 were cast for Bryan; 148,773 for McKinley; 1,951 for Palmer, and 3,098 for Levering. Middle Tennessee cast of the whole vote 126,598. Of these, 79,054 were for Bryan, 45,173 for McKinley, 957 for Palmer, and 1,414 for Levering. Middle Tennessee has nearly 40 per cent. of the voting population of the State.

The scholastic population in the whole State of Tennessee, between the ages of six and twenty-one, was on June 30, 1896, 728,725. Of these 543,668 were white and 185,057 were colored. The total number enrolled in the State for the same year was 481,585; daily attendance, 338,176; total number of school houses in the State, 7,882; number of teachers, 9,135. Middle Tennessee had 285,789, or 39 per cent., of the whole. Of these 210,039, or 74 per cent., were white and 73,750, or 26 per cent., were colored. The number of pupils enrolled was 191,733, and the average daily attendance was 139,222; the number of school houses was 3,307; number of teachers, 3,897.

The total number of acres of land assessed for taxation in 1897 was 25,746,050, with an average value per acre of \$6.34. The number of acres of land assessed for taxation in Middle Tennessee was 11,086,371, valued at \$73,606,585, with an average value per acre of \$6.63. The total value of the taxable property in the State, exclusive of railroads, in 1897 was \$311,372,729, of which there was personal property valued at \$36,720,503; town lots valued at \$111,732,120. Of this the total valuation of Middle Tennessee was \$134,924,624. The total number of miles of railway in the State is 3,044.55. Middle Tennessee has 1,032.32 miles of railway, which is one mile for every 691 persons, and one mile for every seventeen and a half square miles of its surface.

There were 12,949.79 miles of telegraph in the State in 1896, of which Middle Tennessee had 4,716.15.

The total number of miles of telephone wire in the

State was, during the same year, 5,313.40, of which Middle Tennessee had 2,307.00 miles.

Middle Tennessee has about 500 miles of navigable waters, of which Cumberland River supplies 304 miles, Tennessee River 131 miles, and Caney Fork, Obey's River, and Duck River supply about seventy miles.

There are 1,075 postoffices in Middle Tennessee; in the State, 2,660.

Of the entire land area in Tennessee, amounting to 42,050 square miles, or 26,720,000 acres, the census reports for 1890 takes account of only 20,161,583 acres embraced in 174,412 farms, leaving 6,558,417 to be credited to wild lands, town sites, railroads, etc. The improved lands in these farms amounted to 9,362,555 acres, and the unimproved 10,799,028 acres. The value of the lands, fences, and buildings was \$242,700,540; implements and machinery, \$9,936,880; and the live stock on hand was valued at \$60,254,230. The estimated value of all farm products for 1889 was \$55,194,181 which is about 24 per cent. of the value of lands, fences, and buildings.

Applying these figures to Middle Tennessee we have 8,619,592 acres in 71,263 farms. The improved lands in Middle Tennessee amounted to 4,105,642 acres, and the unimproved lands in farms 4,513,950. The total number of acres assessed for taxation in that division was 11,089,804. This will leave 2,470,212 acres for wild lands, town sites, etc.

The number of square miles in this division reduced to acres will show 11,600,640 acres. Deduct from this the number of acres assessed for taxation in 1895, and it will leave 484,663 acres which was in large part occupied by towns, rivers, and roads. Underestimates of quantity and duplications by persons claiming the same lands will account for the remainder.

The value of the lands, fences, and buildings for Middle Tennessee is \$111,589,520; implements and machinery, \$4,405,630; live stock, \$29,922,315. The es-

timated value of products for 1889 was \$22,762,930, which is 24 per cent. of the value of the lands, fences, and buildings of the farms, which coincides with that for the whole State.

Natural Divisions.—There are certain terms used in this pamphlet indicating the natural divisions of Middle Tennessee that should be defined. These are the Central Basin, the Highland Rim or Highlands, the Cumberland Table-land or Plateau, and the Western Valley.

The Central Basin is a great limestone circular area in the center of Middle Tennessee. It has numerous elevations scattered through it like islands, that rise 200 or 300 feet above the general level. It is to Tennessee what the blue grass region is to Kentucky. Its average elevation above the sea is 550 feet. It covers 5,450 square miles, and embraces in whole or in greater part the counties of Sumner, Trousdale, Smith, Wilson, Davidson, Rutherford, Bedford, Moore, Lincoln, Giles, Marshall, Maury, and Williamson, and considerable parts of Cannon, DeKalb, and Coffee.

The Highland Rim or Highlands surrounds this basin like the rim of a plate, and is on an average 300 feet higher. It contains 9,300 square miles, and embraces in whole or in part the following counties: Stewart, Montgomery, Robertson, Macon, Jackson, Pickett, Overton, Putnam, White, Warren, Coffee, Franklin, Lawrence, Wayne, Lewis, Hickman, Humphreys, Houston, and parts of Perry, Sumner, Cannon, and Hardin.

The Cumberland Table-land has an elevation of 1,000 feet above the Highland Rim, and lies to the east of the two divisions already described. Middle Tennessee embraces only half of this division. In it are included the counties of Grundy, VanBuren, Cumberland, and Fentress, and parts of Pickett, Overton, Putnam, White, Warren, and Franklin. The entire area of this natural

division of the State is about 5,100 square miles, one half of which is in Middle Tennessee.

The Western Valley lies on the Tennessee River west of Nashville, and contains about 1,200 square miles. One half of this division approximately lies in Middle Tennessee, and embraces parts of the counties of Perry, Humphreys, Houston, and Stewart on the eastern side of the Tennessee River.

Geological Formations.—The geological formations of Middle Tennessee include the Trenton rocks of the lower silurian, and all above them, to and including the carboniferous. This takes no account of the alluvial or recent. Taking Murfreesboro as the geographical center of Middle Tennessee, as it is of the State, we find it resting upon the Trenton or Lebanon rocks. These rocks with the next group of overlying rocks, the Hudson or Nashville limestones, cover with few exceptions the entire floor of the Central Basin, a natural division which embraces 5,450 square miles, and has an average elevation above the sea of from 600 to 700 feet.

Forming a circle around this basin is the Highland Rim, which embraces 9,300 square miles. The line of separation between the highlands and Central Basin is very much broken by the spurs running into the Central Basin from the highlands, and by valleys extending far up into the highlands from the Central Basin. Notwithstanding this, the Central Basin is an irregular, elliptical area inclosed by the Highlands. The geological formation of the latter belongs almost entirely to the subcarboniferous, which has been divided into three groups: (1) The Barren Group; (2) the Coral or St. Louis Limestone Group; (3) the Mountain Limestone Group.

1. The Barren Group is found immediately circling the Central Basin, in a rim generally about ten to twelve miles broad, but extending out westward through Hickman County, and then expanding into a

long area more or less parallel with the Tennessee River, through the western parts of the counties of Humphreys, Lewis, and Wayne on the south, and Houston and Stewart on the north. A large part of Perry is included in this formation.

2. The Coral or St. Louis Limestone covers large areas in the northwestern part of the Highland Rim, embracing the counties of Robertson, Montgomery, Cheatham, the larger part of Stewart, Houston, and Humphreys, and the western part of Dickson. It may be mentioned here that in the Wells Creek basin, in Houston County, the Knox Dolomite comes to the surface by an upthrow. It is of value as a basic lining for furnaces, and is extensively mined and shipped. In the southern part of the Highlands the Coral limestones cover nearly the whole of Lawrence County, and about half of Wayne. On the eastern side of the Highlands it occupies an irregular belt between the barren group on the west and the mountain limestones on the east, and embraces large areas in Picket, Overton, Putnam, White, Warren, and Franklin counties. The soil derived from this formation is chocolate in color, and one of the most productive in the State. This formation may everywhere be recognized by the presence of hopper-shaped sinkholes and fossil coral.

3. The Mountain Limestones of Middle Tennessee are confined to the western foot of the Cumberland Table-land, and generally to the slopes or benches of the table-land. The soil derived from this formation, though limited in extent, is quite fertile. In the western part of the Highlands in Buffalo River and Duck River valleys, the Niagara rocks of the upper silurian crop out in a few places. Middle Tennessee has also about 2,600 square miles, or half of the carboniferous or coal bearing formation of the State. This embraces the counties mentioned under the head of coal and coke.

But one more section of Middle Tennessee remains

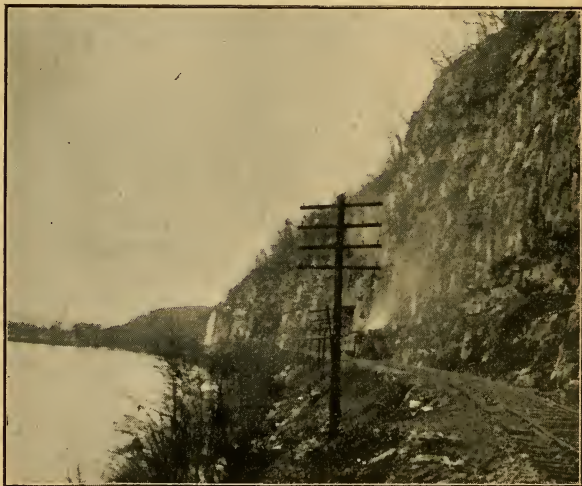
to be mentioned, and that is the eastern half of the natural division, known as the Western Valley of the Tennessee, and of this about 600 square miles are embraced in Middle Tennessee. The principal rocks which come to the surface are the Niagara and Lower Helderberg of the upper silurian. The soils derived from these rocks are quite fertile, but the surface of the country where they are exposed is generally much broken into steep hills. The valleys, however, both on the Tennessee River and its tributaries in Middle Tennessee are very fertile, and are probably the best corn producing soils in the State.

Topography.—The surface of Middle Tennessee is greatly diversified, and exhibits varieties of scenery the most opposite. Passing from Pickett County to Wayne, or from Stewart to Franklin, one may see almost every variety of landscape and surface features—mountainous, with tall craggy precipices, deep clefts, rushing torrents, and foaming cataracts; hilly, with crowning forests and green slopes, upon which thousands of sheep and cattle graze and rest under the sylvan shades, beside gurgling and swiftly gliding streams; level, where the waters linger by the side of waving cornfields; green pastures and grassy meadows, and where the fecundity of the soil and the amenity of the climate make a fitting habitation for high bred animals and intelligent people.

Of all that vast region which lies between the Mississippi on the west and the Atlantic Ocean on the east, no part of it has been more bountifully endowed by nature than Middle Tennessee. Nature has been lavish in her gifts of soils, of minerals, of timber, of water, of the productions of the soil, of freshness in the breeze, of health for the body and mind, and of freedom from the inclemences of the seasons.

Streams.—The drainage of Middle Tennessee is perfect, notwithstanding the wonderful diversity in the configuration of its surface. There is not a swamp

properly so called within its boundaries. The surface is tilted towards the northwest, and in that direction its great rivers find an outlet. The Cumberland River, rising away up in the mountains, descends by many cataracts and rapids. Cutting through the coal measures, it bends down into the richest wheat, corn, tobacco, and live stock region in the South, and in its exit from the State opens great banks of iron ore which has been famed for nearly a century for its excellence,



TENNESSEE RIVER, FOOT OF LOOKOUT MOUNTAIN.

thus uniting the coal and iron fields and placing between the two a region where cotton, tobacco, the cereals, and fruits flourish, and where all the animals necessary for man's support, comfort, and service may be reared in their greatest perfection. Tennessee River is born of the confluence of two mountain streams that have emerged from the land of the mist and the storm, and like a rustic maiden she glides along in all her purity of beauty through the valley of East Ten-

nessee, and pours into the lap of Chattanooga a wealth of timber, coal, iron, marble, and grain. Breaking through the mountains at Moccasin's bend, she indulges in a vagrant visit to Alabama, now dancing into the mazes of a mad waltz at the whirlpool, now gliding in silent dignity, majesty, and beauty by Bridgeport, Guntersville, and Decatur. She then enters upon a joyful dance at the Mussel Shoals, glittering in her jeweled vestments, and presenting her most seductive charms, to Mississippi, in whose lap she rests but for a fitful moment. Then, home again, she enters upon a career of sober usefulness for Middle Tennessee, sweeps gracefully out into Kentucky and goes hand in hand with her bridesmaid the beautiful Ohio, to be made one with the Great Father of Waters, only to return loyal and loving to hug and caress her parent State for 140 miles, united to her august spouse. In her beneficent course she has opened the way for the outlet of almost every valuable thing in the South—coal and iron, marble and zinc, copper, lead, and phosphates; cotton, corn, wheat, tobacco, peanuts, live stock, all the gold producing products, all the principal bread grains, all the most valuable timber trees. She virtually crosses the State three times, and gives 500 miles of navigable waters to her parent State. More than 200 streams in Middle Tennessee useful for milling purposes contribute to swell the volumes of water in the Cumberland and Tennessee rivers. There are flowing creeks and purling rivulets and gushing springs in every county, suited for machinery, for stock water, for the dairy, and for the household, and in a climate so congenial to the physical man that the pleasures of life are doubled.

The largest tributaries in Middle Tennessee of the Cumberland are Obey's River, Caney Fork, Harpeth River, and Red River. The largest tributaries of the Tennessee River are the Elk, Shoal Creek, and Duck River, with its tributary Buffalo River. Each one of these streams has many tributaries, which supply a

large amount of excellent water power. The best water powers probably in the State are Caney Fork Falls, Bark Camp Fork, and Garrison Fork of Duck River, Calf Killer, Elk River, and Red River. The different streams will be mentioned in the description of counties in another part of this pamphlet.

Climate.—The climate of Middle Tennessee is one of the most agreeable on the globe. The State lies between 35 degrees and 36.30 North latitude. The mean altitude of Middle Tennessee is about 700 feet above the sea. There is just rainfall enough to bring the crops to the highest degree of perfection and maturity, but not enough to produce a humid climate like that of Great Britain, and keep it wrapped in mists and fogs a larger part of the year. Taking an average year when the rainfall is about normal, or say 52 inches for the State, there will be 140 days out of the 365 in which there will be either rain or snow. The 225 remaining days will be about equally divided between bright, clear days and partially cloudy ones, when fleecy clouds drift over the sky and obscure the sun at intervals. The average annual temperature for Middle Tennessee in the country is about 58 degrees on a median line drawn through the State, 57 degrees on the Kentucky line, and 59 degrees on the Alabama line. The temperature for the cities is probably one degree higher than this. The average rainfall for 25 years in Nashville has been 50.10 inches. The mean and highest temperatures for the several months for a period of 25 years at the same place were as follows:

| | MEAN TEMPERATURE. | HIGHEST TEMPERATURE. |
|----------------|----------------------|-------------------------|
| January | 38.2 | 75 |
| February | 42.4 | 77 |
| March | 48.7 | 85 |
| April | 59.7 | 90 |
| May | 68.0 | 93 |
| June | 76.2 | 99 |
| July | 79.3 | 101 |
| August | 77.7 | 104 |

| | MEAN TEMPERATURE. | HIGHEST TEMPERATURE. |
|-----------------|----------------------|-------------------------|
| September | 70.9 | 99 |
| October | 59.9 | 92 |
| November | 48.2 | 81 |
| December | 41.4 | 75 |

The lowest temperature for the several months in Nashville during twenty-five years, and the amount of rainfall, are shown in the following table. The sign — indicates below zero:

| | LOWEST TEMPERATURE. | AVERAGE RAINFALL. |
|-----------------|------------------------|----------------------|
| January | —10 | 5.09 inches. |
| February | — 7 | 5.29 “ |
| March | 12 | 5.20 “ |
| April | 26 | 4.79 “ |
| May | 37 | 3.59 “ |
| June | 42 | 4.30 “ |
| July | 56 | 4.31 “ |
| August | 51 | 3.41 “ |
| September | 38 | 4.06 “ |
| October | 27 | 2.48 “ |
| November | 10 | 3.85 “ |
| December | — 2 | 3.73 “ |

Average annual precipitation... 50.10

It will be interesting to compare the three representative cities in Tennessee with some of the leading points of the Northwest. In the table below, T indicates the mean yearly temperature, H the highest, L the lowest, D the range or difference between the highest and lowest, and R the rainfall or precipitation.

| STATIONS. | T | H | L | D | R |
|-----------------------|------|-----|-----|-----|-------|
| Nashville, Tenn. | 59.2 | 104 | —10 | 114 | 50.10 |
| Chattanooga, Tenn. .. | 60.3 | 101 | — 7 | 108 | 54.97 |
| Memphis, Tenn. | 61.5 | 102 | — 8 | 110 | 53.06 |
| Moorhead | 37.4 | 102 | —48 | 150 | 24.53 |
| Green Bay | 42.8 | 98 | —36 | 134 | 33.56 |
| Duluth | 39.0 | 99 | —41 | 140 | 31.87 |
| Davenport, Ia. | 49.0 | 100 | —27 | 127 | 34.80 |
| Omaha, Neb. | 49.6 | 106 | —32 | 138 | 33.23 |
| North Platte | 48.3 | 107 | —35 | 142 | 18.81 |
| St. Paul, Minn. | 43.7 | 100 | —41 | 141 | 28.36 |
| Huron, S. D. | 42.6 | 108 | —43 | 151 | 22.15 |
| Bismark, N. D. | 39.9 | 105 | —44 | 149 | 19.00 |

It will be seen that the thermometer in four towns in the Northwest reaches a higher point in summer than it does in Tennessee, while the lowest temperature is, on an average, over 30 degrees below what it is in Tennessee. The great range of the thermometer in the Northwest makes the climate exceedingly rigorous in winter and oppressive in summer, while the more equable climate of Tennessee makes it far more pleasant and healthful.

The isothermal lines of Tennessee are the same as those of Spain, Italy, and Southern France. This, however, does not indicate the same climate. The range of the thermometer is much greater in Tennessee than in the countries named. It is hotter in summer and colder in winter. The orange, the olive, and the lemon that flourish upon the shores of the Mediterranean do not mature in the climate of Tennessee, but the greater degree of heat in summer permits of the growth of Indian corn, melons, and annual vines. It is also cold enough in winter to secure ice, which cannot be done in the Levantine States of Europe. The rainfall in Tennessee is much greater than in those States, and all vegetation grows with much greater rapidity. The length of the growing season in Middle Tennessee, or the time between killing frosts, varies from 162 to 228 days, the average being 189 days.

There are but few days in a year when a laboring man is prevented, either by excessive heat or cold, from performing comfortably outdoor work.

The healthfulness of Tennessee is proverbial. Statistics show that there is a larger number of persons of advanced age living in the State than in any of the other States of the Ohio valley. There is a region in Middle Tennessee where that fell destroyer, consumption, has never originated, and where even those persons in the first stages of that dreaded disease are often completely restored to health. This is the Cumberland table-land, where the climate is alluring, bracing, and healthful;

where the sun shines with peculiar splendor; where clouds seldom form; where cool breezes sweep over the surface in midsummer, carrying health for the body and vigor for the mind; where the dry sandstone soil makes it ever pleasant to walk, and outdoor exercise can be indulged in without injury to the feeblest constitution from a damp soil, and where the beauty of the landscape and purity of the atmosphere tempt one to long walks and healthful exercise.

Soils.—The soils of Middle Tennessee, as might be inferred from the large number of geological formations, are quite varied. They may be classified as follows:

1. The soil derived from the Trenton or Lebanon limestones.

2. The soil derived from the Nashville limestones.

3. The upper silurian soils.

4. The barren soil of the Highland Rim.

5. The chocolate colored soil of the Highland Rim.

6. The soil of the mountain limestones.

7. The soils of the Cumberland Table-land.

8. The alluvial soil.

1. The Lebanon or Trenton soil is derived from a blue fossiliferous limestone, and covers nearly half of the lands of the Central Basin. It is friable and fertile, and by its warmth, dark color, and productiveness brings crops forward earlier than any other soil in Middle Tennessee unless it is that derived from the Nashville limestones. With this soil is sometimes mingled a black, flinty rock known as chert, which by its disintegration adds mellowness to the soil. There is also, as around Murfreesboro, a large percentage of the oxide of iron in its composition, which acts as a chemical agent in adding to its fertility. This soil grows the best wheat in the State, which is exceedingly flinty and heavy, sometimes reaching a weight of seventy pounds to the bushel. It does not produce blue grass or barley as

well as the soil next to be mentioned, but it is probably better suited to the production of cotton. It is the soil of the fine cotton belt which girdles Murfreesboro and extends to Bedford County, and embraces the larger portions of the cotton growing districts of Giles, Maury, and Williamson.

2. The Nashville limestone soil has more sandy material in its composition, but not so much clay. It is mellow, porous, highly productive, and well adapted to the growth of blue grass, corn, cotton, oats, wheat, barley, clover, timothy, and vegetables of every kind. It is the soil above all others in the State for growing melons of large size, sweetness, juiciness, and delicious flavor. This soil, by reason of the large content of sandy material, washes more easily than any other calcareous soil in the State. In color it is more yellowish, and not so black or red as the Trenton soil. It is, however, for agricultural purposes second to no other soil in Middle Tennessee. It covers about half of the lands of the Central Basin. The high fertility of the Lebanon and Nashville soils have made Middle Tennessee famous as an agricultural region.

3. The upper silurian soils are limited in extent, and are in Middle Tennessee confined mainly to the elevated portions of the counties lying on the eastern side of the Tennessee River. There are two varieties of this soil: First, That derived from the Niagara rocks which rests upon a gray and red limestone; and second, that which is derived from the Lower Helderberg limestone, which is a bluish, thin-bedded fossil limestone, interbedded oftentimes with cherty layers.

The first of these soils is moderately productive, growing Indian corn well, and some of the grasses, but it does not produce wheat of as good quality, nor in such large quantities as many other soils in the State. The soil of the Lower Helderberg, or second of the lower silurian soils, does not differ greatly from other calcareous soils. It is a dark gray in color, and some-

times chocolate. It is more fertile than the Niagara soil, but not as much so as the calcareous soils of the Central Basin. The small areas covered by the Lower Silurian soils in Middle Tennessee make them unimportant.

4. The Barren soil of the Highland Rim occupies a large area in the counties of Lawrence, Wayne, Lewis, and occur in smaller areas in Stewart, Montgomery, DeKalb, Cannon, Coffee, Moore, Hickman, Humphreys, Dickson, and Franklin. This soil, until within the past four or five years, has not been regarded with favor, because it is naturally sterile and unproductive, thin, whitish, porous, and leachy. But some intelligent immigrants from the North who have recently settled upon such soils, have by proper fertilization and the sowing of cow peas, been able to produce easily twenty bushels of most excellent wheat to the acre.

Mr. Jas. G. Aydelott, of Tullahoma, and the Swiss colonists at Hohenwald, have recently experimented with the growing of a high grade of yellow tobacco upon such soils, and they have succeeded far beyond their expectations. It is now believed that this poor, "rejected" soil will become the chief "corner stone" in the building up of a grand tobacco industry in Middle Tennessee.

This whitish porous soil is well adapted to the growth of almost every variety of fruit. Apples, pears, peaches, grapes, and all the smaller fruits make a fine yield, and the fruit is noted for beauty, flavor, and keeping qualities.

The lands where this soil is found are usually very level, and in their natural condition they are thinly wooded. Wild grasses grow luxuriantly in the open woods, and supply a large amount of grazing.

5. The chocolate soil of the Highland Rim is scarcely surpassed by any other in the State for strength of constitution, durability, productiveness, and versatility. It is the soil of most of the land in Stewart, Mont-

gomery, Robertson, Cheatham, DeKalb, Cannon, Hickman, Humphreys, Dickson, Warren, White, Overton, Putnam, and Franklin. It occupies considerable areas in other counties lying on the Highland Rim. This soil is usually chocolate in color, calcareous in character, with intermingling chert, and rests upon a thick, red clayey bed known as the lithostrotion bed, which in its turn rests upon the St. Louis limestone rocks. It forms the best lands in the State for growing heavy shipping tobacco, and is equally as well suited for the production of corn, clover, grass, oats, wheat, and fruit. The farmers cultivating this soil are usually prosperous. It is easily restored to fertility when partially exhausted. It never fails to produce fair crops, whether the seasons be wet or dry. In dry weather the thick, clayey bed upon which it rests supplies moisture, and in wet weather the underlying beds of chert furnish natural drainage. The surface of the country where this soil is found is sometimes broken, usually undulating, rarely level. An immigrant cannot possibly err in buying lands with this soil, provided the surface of the land is not too much broken by hopper-shaped sink-holes, due to underground water channels.

6. The soil of the mountain limestone is very fertile, and occupies benches on the slopes of the Cumberland Table-land. While excellent and durable in character, the small areas covered by it make it comparatively unimportant. It is a sandy but sometimes a clayey calcareous soil, easily worked, highly productive, and is the soil relied on for the production of crops among the settlers living on the western edge of the mountains in Middle Tennessee. In its natural condition it is densely wooded with many timber trees of valuable species.

7. The soils of the Cumberland Table-land are considerably varied, in consequence of the predominance of clay in one place and of sand in another. They are also modified by the varying quantities of humus in

their composition, and also by the depth of the earthy material.

Underlying all these soils are carboniferous sandstones and shales, from the crumbling of which they have been derived. The sub-varieties are: (1) A thin, sandy soil with but little depth; (2) a sandy soil, light, porous and deep; (3) a sandy soil that rests upon a mulatto clay; (4) a transported soil made up of humus and drifted clay and sand, upon which water has stood until it is bleached; (5) glacial soils, where lakes once stood, and which are made up of accumulations of vegetable matter.

The third sub-variety is best for all purposes. Good vegetables may be profitably grown on these mountain soils. It is said that the flavor of the Irish potatoes grown on this mountain is unequaled by any others grown in the United States. Apples also reach great perfection, and there are many famous orchards on the mountain top. As a health resort there are few places in America its superior.

8. The alluvial soil is abundant in Middle Tennessee. All along the Cumberland and Tennessee rivers, and their tributaries, there are wide and extensive lowlands that are exceedingly fertile. Some of these will grow Indian corn year after year for a century without any apparent diminution in their fertility. On Duck River, in Humphreys County, near its mouth, is a large area of bottom-lands four miles in width, covering nearly 20,000 acres, that are considered the best corn-growing lands in the South. It is usual for the farmers in this Big Bottom, as it is called, to grow from fifty to eighty bushels of shelled corn per acre, and they plant the same land in corn every year. Some of the alluvial soils make excellent wheat, and all of them, unless too sandy, which is rarely the case, will grow timothy, herd's grass, and clover luxuriantly. Fully one-third of the farms in Middle Tennessee, owing to the great

number of flowing streams of water, have more or less alluvial soils on them.

This great diversity of soils in Middle Tennessee gives an opportunity to the immigrant to select whatever character of soil he prefers. There is no reason why he may not secure a farm having precisely the same quality of soil that he tilled before coming to the State. One of the greatest advantages that Tennessee offers to immigrants is that one may buy any variety of soil he prefers, and may grow any crops for which there is a demand, or that may be grown elsewhere in the United States, except those that are tropical in their character.

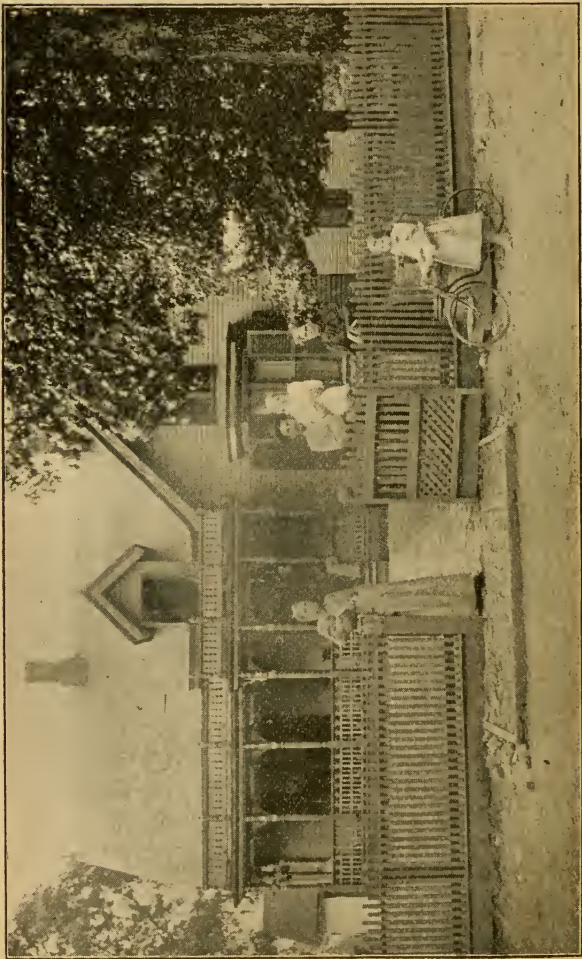
Timber.—Before the farms were opened, Middle Tennessee scarcely had a superior in the Mississippi Valley for the extent, variety, density, and value of its timber trees. All over the Central Basin timber trees grew thickly, and the cedar forests in Davidson, Wilson, Rutherford, Bedford, and Marshall counties did not have their equal in America. Poplar was very abundant, and walnut also.

While the largest and best forests of these valuable timber trees have been destroyed, there yet remains an ample supply to last for many decades if proper care is taken in preserving the forests. On the mountain slopes, on the ridges, and in the coves of Middle Tennessee, there are many bodies of valuable timber that have scarcely been touched. On the Highland Rim, in Hickman, Wayne, Perry, Franklin, Warren, White, Putnam, Pickett, Jackson, Stewart, Houston, Cheatham, and Humphreys counties, there is probably one-half of the original timber left. The cedar forests are almost exhausted. Probably 1,000 acres would cover all the virgin good cedar forests in Middle Tennessee.

The native forest growth of Middle Tennessee consists of white, red, prickly, and green ashes; white oak, chestnut oak, burr oak, cow oak, post oak, overcup oak, chinquapin oak, red, yellow, and Texas oaks,

laurel oak, swamp oak, turkey oak, willow oak, black oak, water oak; red, black, sugar, and ash leaved maples, silver leaf maple, swamp maples; white linden or bass wood; box elder; southern hackberry; pignut, mocker nut, butter nut, bitter nut, shell bark, and shag bark hickory; red cedar; horn beam; aspen; alder; mountain birch, water birch, red birch; white and red beech; buckthorn; buckeye; black walnut; black and red haw; black jack; china wood; cotton wood; iron wood; tiswood; sour wood; arrow wood; chittem wood; cypress; wild cherry; catalpa; coffee tree; cucumber tree; wild crab; dogwood; red, rock, white, slippery, and winged elm; black gum, tupelo gum, sweet gum, red gum; holly; hemlock; red, honey, black, and yellow locust; black and red mulberry, and silkworm mulberry; mock orange; pecan; paw-paw; wild plum; silver leaf poplar, and yellow poplar or tulip tree; loblolly pine, old field pine, yellow pine, short leaf pine; persimmon; redbud; red sycamore and brush sycamore; sassafras; spice-wood; sarvis berry; black and weeping willow; black sumach and white sumach; hawthorne; lilac; chestnut, horse chestnut; fringe tree, and probably several others.

The value of the timber products has increased manyfold during the past decade, and there are now produced more staves in Tennessee for the European and domestic markets than probably in any other State in the Union. Not fewer than 240,000,000 staves were made during the year 1897 on the line of the Nashville, Chattanooga & St. Louis Railway, besides millions in the aggregate of spokes, hubs, handles, and rims. In fact, every branch of the timber industry is more active now (1898) than ever before in the history of Tennessee. Timber lands are still very low in price, and this fact doubtless has been the cause of the wonderful increase in the lumber business.



A FARMER'S HOME.

AGRICULTURAL PRODUCTS.

Nothing astonishes a visitor to Tennessee more than the great diversity of agricultural products that may be successfully grown in the State. There are 67 field crops that grow in Middle Tennessee. The principal ones, however, are corn, wheat, oats, barley, rye, buckwheat, potatoes, hay, cotton, tobacco, peanuts, sweet potatoes, clover seed, broom corn, flax, beans, peas, sorghum, molasses, cotton seed, tomatoes, strawberries, and melons. Besides these field crops, there are over 50 vegetable crops grown in the gardens. Many of these vegetables, such as cabbage, onions, okra, egg plant, cucumbers, beans, peas, squash, cauliflower, lettuce, radishes, asparagus, etc., are shipped early in the season to the markets of the Northwest. The most important crop probably in the State is

Corn.—According to the report of the United States Department of Agriculture, there were grown in the State of Tennessee for 1896, 71,893,446 bushels of this cereal upon 3,125,802 acres. This crop has always been a favorite one with the people of Tennessee. In 1840 Tennessee ranked first among all the States in the production of this great staple. In 1850 it took the first rank as a hog producing State, by reason of its immense crops of corn that could be marketed more readily when fed to hogs than when carried to Southern markets by boats down the Tennessee, Mississippi, and Cumberland rivers. Tennessee also took the first rank as a mule producing State in 1860. During the census year of 1889, Middle Tennessee produced 33,526,521 bushels on 1,316,599 acres, showing an average of 25.46 bushels per acre. Its percentage of acreage of this crop, as compared with the whole State, was 47.16, but its percentage of production was 52.68, thus

showing that with less than half the acreage by nearly 3 per cent., it produced more than half the corn grown in the State by over $2\frac{1}{2}$ per cent. In quantity of production Maury took the first rank, not only in Middle Tennessee, but in the State, growing 2,363,414 bushels upon 82,093 acres. It was the only county in the State that passed the 2,000,000 bushel mark. The counties in Middle Tennessee that grew between 1,000,000 and 2,000,000 bushels, named in order of their production, were Rutherford, Wilson, Bedford, Giles, and Lincoln, each of which produced over 1,700,000 bushels. Then follow Marshall, Williamson, Smith, Davidson, Sumner, and Montgomery, with over 1,000,000 bushels each. Moore produced a greater average yield per acre than any other county in the State, reaching 30.60 bushels, followed closely by Smith with an average yield of 30.10 bushels per acre. Maury, Marshall, Moore, Trousdale, Jackson, Pickett, and VanBuren each planted over $2\frac{1}{2}$ acres for each person. It is not unusual on good lands to grow from 50 to 75 bushels of shelled corn per acre.

Wheat.—In 1889 there were produced in the entire State 8,300,789 bushels of wheat on 877,361 acres. Of this Middle Tennessee produced 4,477,264 bushels on 433,679 acres, making an average yield of 10.32 bushels per acre. The production of wheat in Tennessee varies from 6,000,000 to 12,000,000 bushels annually, grown upon an acreage varying from 780,000 acres to 900,000 acres. The percentage in Middle Tennessee of acreage in wheat compared with the whole State was 49.43, and its percentage of production was 53.94, thus showing, while it did not have quite half of the acreage in the State, it produced nearly 4 per cent. over one-half the wheat grown. In Middle Tennessee, and indeed in the entire State, Williamson took the first rank in the quantity of production, making 527,615 bushels on 38,460 acres; Bedford came second, with 489,007 bushels grown on 39,168 acres. In acreage Bedford took the

first rank. Then follow in the order of production Maury, Wilson, Lincoln, Rutherford, Robertson, and Davidson, each of which produced over 200,000 bushels. The counties in Middle Tennessee producing over 10 bushels per acre were Bedford, Davidson, Franklin, Lincoln, Maury, Montgomery, Moore, Robertson, Rutherford, Stewart, Sumner, and Williamson.

Nothing but winter wheat is sown in Middle Tennessee, and the yield in the counties tributary to the Nashville, Chattanooga & St. Louis Railway will average about 12 bushels to the acre. This yield, however, is increasing every year by the use of commercial fertilizers and clover.

Wherever Northern people have settled, and have introduced the intensive system of farming, the yield has been doubled, trebled, and even quadrupled, in places. They often produce from 25 to 40 bushels per acre.

The price of wheat in Nashville is generally regulated by the price in Chicago. Usually the price in Chicago, with the freights added, will be the price in Nashville. Precisely the reverse of this is true of the Northwestern States, where the prices are regulated by the price in Chicago, with the freights taken off. The reason of this is that Tennessee has a wide market south for all the flour and wheat it can produce. The production might be doubled without lowering the price to any extent, for the demand is certain and constant from the cotton States.

Another profit comes from wheat in the value of winter grazing. One early lamb may be raised for every acre sown early in winter wheat.

Oats.—Oats form a standard crop in Middle Tennessee. It produced in 1889, 3,613,120 bushels on 256,304 acres, which shows a yield of 14.1 bushels per acre. The number of bushels grown for each thousand inhabitants, in 1889, was 5,060. The entire production of the State was, in 1889, 7,355,100 bushels, grown

on 588,138 acres. Middle Tennessee therefore grows 49 per cent. of the crop on 43 per cent. of the acreage.

While oats are regarded as a most valuable grain, it is not a favorite crop with the farmers of Tennessee, because many other crops equally as nutritious may be grown at less cost. Many hay grasses, clover, and cow peas, the haulm of which is used for making hay, have taken the place of the oat crop to a large extent. Nevertheless, there are many soils in Middle Tennessee upon which from 50 to 75 bushels of oats may be easily grown per acre. Oats are in many sections, therefore, a profitable crop.

Barley and Rye are often sown for winter grazing. The yield of barley is about 18 bushels per acre, and of rye, when harvested, about 9 bushels per acre. There were 3,585 acres in barley in 1889, nearly one-half of which was in Davidson County. Of rye there were in the State 26,443 acres, yielding 156,419 bushels. A large proportion of the latter crop is not harvested, and hence the small yield reported.

Buckwheat.—Buckwheat is not grown to the same extent in Middle Tennessee that its merits would seem to justify. It is an excellent crop, and grows upon all classes of soils. Even the sandy soils on top of the Cumberland Table-land yield oftentimes as much as 30 bushels to the acre. The amount grown in the State of Tennessee has been, according to the census returns, regularly declining for several decades. In 1870, 77,437 bushels were reported; in 1880, 23,434 bushels; and in 1890, only 7,143 bushels for the whole State. The Commissioner of Agriculture at Washington, however, reported for 1896, 31,488 bushels grown upon 13,012 acres, by which it appears that since 1890 the production has greatly increased. The counties in East Tennessee have been by far the largest producers in the State of this crop.

Irish Potatoes.—This tuber has become one of the standard field crops of Middle Tennessee. It is grown

extensively in Sumner, Davidson, Williamson, Maury, and Giles counties. Two crops are usually grown during the same year. The first crop is planted in February or March, and gathered in May and June. This early crop meets with ready sale in the northern cities, coming in, as it does, a month earlier than the northern crop. The second crop is planted early in August, and harvested in October. The second crop also finds a ready sale for seed, and it also takes the place of late varieties. The usual yield is from 30 to 60 barrels, of nearly three bushels each, per acre, though frequently a much larger yield is made, reaching even 100 barrels per acre. The quantity shipped to northern markets from the principal stations in Middle Tennessee averages about 200,000 barrels annually. The largest shipments are made from Gallatin, in Sumner County; Nashville, in Davidson; Ashwood and Mt. Pleasant, in Maury County; Chattanooga, in Hamilton County; Fayetteville, in Lincoln County; and Murfreesboro, in Rutherford County. At all these points the production of the Irish potato is gradually increasing, the soils being well adapted to its growth. It reaches a market sooner than any other crop, and the proceeds from the sale comes in at a time when they are most needed by the farmers.

The Irish potato crop for the whole State, as reported by the National Commissioner of Agriculture, for 1896, was 2,130,258 bushels on 34,350 acres.

Sweet Potatoes.—The sweet potato has always been a favorite culinary vegetable with the people of Tennessee, and of the South generally. It is planted to a great or less extent upon nearly every farm. There are probably a dozen varieties or more cultivated. When grown upon sandy soil, this tuber is delicious in flavor, very sweet, and is highly prized. The yellow yam, after it has been cellared for a few weeks, becomes a most agreeable addition to the table comforts. Usually this vegetable is propagated by slips grown

in a hot bed where the old potatoes have been bedded. The number of bushels reported for the State, in 1890, was 1,973,625, grown upon 23,746 acres, which is something over 80 bushels per acre. This is a larger yield by ten bushels per acre than that reported for the Irish potato crop. Within the past three or four years there has sprung up a considerable demand from many points in the North for Tennessee grown sweet potatoes, and there is but little question that this demand will increase rapidly as the merits of this vegetable become better known among northern consumers.

Hay.—In nothing has the State of Tennessee made a more rapid advance than in the production of hay. In 1850 there were only 74,091 tons harvested of all kinds; in 1860 there were 143,499 tons; in 1870, 116,582 tons; in 1880, 186,698 tons; and in 1890, 630,417 tons; showing an increase of 238 per cent. in the amount harvested in ten years. The acreage in 1880 was 300,251; and in 1890 was 661,705, showing an increase of 110 per cent. in the acreage.

The best hay grass grown in the State is timothy, which does well on all well-drained river basins, and on deep upland soils, making a yield in a favorable season of from one and a half to three tons per acre. With proper care a timothy meadow should last in Middle Tennessee from eight to ten years. Herd's grass is also much used as a hay grass, and while it is hardier than timothy, and is better adapted to all kinds of soils, it is not so prolific in yield, nor is the hay so valuable.

Orchard grass is sometimes mowed for hay, but this grass is better adapted for grazing purposes. Probably there is a larger quantity of clover hay made than any other kind, but it is used almost entirely for home consumption, and is rarely sold on the market or shipped abroad. From three to five tons to the acre of this hay may be made on fertile soils. Quite recently the haulm of peas has been employed for mak-

ing a very nutritious forage, which is especially prized for the feeding of sheep and cattle.

Peanut hay is also extensively made in Perry, Hickman, Dickson, and other counties where the peanut is grown. In nutritive qualities it is the equal of any hay made.

The black pea, sown at the rate of $1\frac{1}{2}$ bushels per acre, will make an enormous quantity of vine, which, if cut when the first pods are beginning to turn yellow, and before the leaves begin to fall, will often make three or four tons of excellent hay to the acre, and leave the land in the best possible condition for wheat.

German millet and Hungarian grass are forage plants which are largely used for making hay in Middle Tennessee, but they are very injurious to the soil, especially if the seeds with their large content of oil are allowed to mature.

Recently much forage has been made from sorghum for the feeding of cattle. It has become a very popular crop for this purpose, on account of its nutritious qualities and large yield.

Middle Tennessee produces by far the largest quantity of hay of any other division of the State. Out of the 630,417 tons harvested in 1890, it produced 279,940 tons, or over 44 per cent. of the whole.

Cotton.—The production of cotton has been gradually declining in Middle Tennessee for many years. Stock-breeding and the growing of vegetables are taking its place in all the more central counties. The total area planted in cotton in Middle Tennessee in 1889 was 107,026 acres, which gave a production of 17,166 bales, showing a yield of .16 of a bale per acre, or a bale to 6.25 acres. In 1879 there were produced 52,948 bales in Middle Tennessee. Giles County with 35,808 acres, and a production of 5,416 bales, took the first rank in Middle Tennessee in 1889. Nothing more clearly shows how unfavorable and disastrous was the season for cotton in 1889 than a comparison of the



BIG TOBACCO FIELD OF MIDDLE TENNESSEE

production of this county for that year with the previous census year. In 1879, from 31,416 acres there were harvested 13,802 bales, or with 4,392 fewer acres there were 8,386 more bales gathered. In the year 1889 there was .15 of a bale to the acre in Giles County, or a bale for 6.61 acres. In 1879 there was .44 of a bale to the acre, or a bale for 2.27 acres. Rutherford County took the second rank in 1889, producing 4,729 bales from 24,890 acres. In 1879 it produced 12,414 bales from 32,657 acres. These two counties, Giles and Rutherford, in recent years make much more than half the cotton grown in Middle Tennessee. In 1889 West Tennessee had 84.12 per cent. of the acreage in cotton in the State, and produced 89.54 per cent. of the crop. Middle Tennessee had 14.36 per cent. of the acreage, and produced 9.08 per cent. of the crop. East Tennessee had 1.52 per cent. of the acreage, and had 1.38 per cent. of the production. The entire production for the State in 1889 was 189,072 bales grown on 745,176 acres, showing a yield of a bale for 3.94 acres. The production in 1897 was 330,621 bales grown on 722,562 acres, or a bale for 2.19 acres.

The production of cotton in 1896, according to the report of the Secretary of Agriculture at Washington, was 304,112 bales grown upon 912,337 acres. There is no data at hand for separating the amount grown in Middle Tennessee from that grown in other portions of the State.

Tobacco.—For more than a century tobacco has been a standard crop in many of the counties in Middle Tennessee. The amount produced in the State in 1889 was 36,368,395 pounds grown on 51,471 acres. Of this Middle Tennessee produced 26,490,942 pounds on 35,774 acres, making 73 per cent. of the product on 69 per cent. of the acreage. Montgomery County took the first rank in the State as to acreage and production, and Robertson, second, though the latter county took

the first rank as to yield per acre. The tobacco grown in Middle Tennessee is largely exported to Europe. That grown in East Tennessee is taken for home consumption. The heavy shipping tobacco of the Clarksville district is richer in nicotine than any other tobacco grown in America, except the same quality grown upon similar soils in Kentucky. This tobacco is largely used in Europe in giving strength to inferior qualities grown elsewhere, and which are employed as substitutes. Within the past two years a fine grade of yellow tobacco has been grown in Coffee and Lewis counties, to which reference has been made under the title of soils.

The tobacco growing counties of Middle Tennessee are Montgomery, Robertson, Stewart, Houston, Cheatham, Dickson, Coffee, Lewis, Williamson, Sumner, Wilson, Macon, Smith, and Jackson. Clarksville, in Montgomery County, ranks third in the United States as an inland market.

Peanuts.—Peanuts are grown extensively on the Highland Rim, in the western counties of Middle Tennessee. Perry, Hickman, Humphreys, Dickson, Lewis, and Wayne are known as the peanut growing counties of Middle Tennessee. In 1889 this region produced 373,177 bushels on 11,398 acres, showing an average yield of 32.74 bushels per acre. The entire production in the State in 1889 was 523,088 bushels, grown on 16,250 acres, and worth in farmer's hands about one dollar per bushel. The production is decreasing in the State at present, owing to the greater demand for the North Carolina and Virginia product, which is harvested and dressed with more care, and therefore is in greater demand. The color of this nut is strangely influenced by the color of the soil upon which it grows, taking a light color when grown upon light soils and a dark, muddy color when grown upon red colored or alluvial soils.

A new demand for peanuts has recently sprung up

for the manufacture of oil. The probabilities are that the crops will be largely increased for this purpose.

Clover Seed.—The production of clover seed in Middle Tennessee is gradually increasing from year to year. Out of the forty-one counties in that division, thirty report to the census of 1890 clover seed as one of the products of the farm. Out of the 49,277 bushels reported for the State, 27,524 bushels were produced in Middle Tennessee. Rutherford County, of which Murfreesboro is the county town, produced the largest amount, which was 4,994 bushels; Williamson County came next with 4,566 bushels, followed by Maury with 3,624 bushels, then Wilson with 3,473 bushels, Marshall following with 2,423 bushels, and Bedford with 2,010 bushels. These counties produced nearly one-half the clover seed made in the State.

There are several other products in Middle Tennessee that deserve notice, but the limits of this pamphlet will not permit a further mention, except to say that broom corn, beans, peas, molasses from sorghum, the tomato, strawberry and melon crops were estimated, in the aggregate, for the State at \$1,124,000. In addition to this, the cotton seed sold were valued at \$277,000. Nor does this estimate embrace a large number of other vegetables that are grown for market in Middle Tennessee, which would aggregate, at a low estimate, over \$300,000. The total value of the field crops grown in the State for the year 1896 was estimated to be worth \$47,332,000. Of this amount Middle Tennessee should be credited with something over \$20,000,000.

Fruits.—In the counties of White, Warren, Coffee, Franklin, Putnam, Overton, and Pickett, lying at the western foot of the Cumberland Table-land, the cultivation of apples is a growing and profitable industry. The following varieties succeed admirably at the foot of the mountain: Ben Davis, on high, self-draining land; Mammoth Black Twig, which is a very firm apple

and late keeper; Winter King, a large brownish red apple, which keeps until March; Red Limber Twig, a very late keeper, with good flavor when fully ripe; Smith Cider, a very prolific bearer; Arkansas Black, which has a flavor like the Winesap, a very handsome apple, and a good keeper; Nickajack, which is an extra heavy good shipper, and keeps until February; Kinard's Choice, which does well on low lands, and is a good keeper; Limber Twig, which is a very hardy apple, and keeps until spring; Baldwin, a successful grower; Rome Beauty is a very excellent winter apple, and commands the highest price of any grown at the foot of the mountain; Jennett, Newton Pippin, Winesap, Winter Sweet, and Halls' Seedling are much prized for their good qualities. All these mentioned are winter varieties, and many of them are hardy shipping apples.

Among the summer apples which are grown with the greatest success, are the Early Harvest and the Early June. The Hoss apple follows these, and is much used for drying and the making of brandy, as well as for domestic purposes. Buncombe is an early apple, and is very popular with distillers, on account of the large yield of brandy which it makes. The tree is also a long liver, and will flourish upon a thin, poor soil.

Among the fall apples the Vandevere and the Red Pearmain, Sheep Nose and Mangum are the most popular varieties.

The top of the mountain, in the vicinity of Pomona, in Cumberland County, has long been noted for its excellent apples. Mr. J. W. Dodge, an artist from New York, planted an orchard in 1847 near that place. He also established a nursery. His fruits took the premium at the State and district fairs throughout the South. It is said that though the famous orchard planted by Mr. Dodge has been in bearing for fully

forty-five years, yet there has been but one complete failure of a crop within that long period.

The apples that succeed best around Pomona are the following: Ben Davis, Red Limber Twig, Shockley, Large Striped Pearmain, Smith's Cider, Rome Beauty, Winesap, Rambo, Yellow Bell Flower, York Imperial, Clayton, Mammoth Black Twig, Yellow Transparent, Winter Sweet, Paradise, Early Sweet Bough, Maiden's Blush, and Duchess of Odlenburg.

Cherries, plums, strawberries, raspberries, grapes, and other small fruits succeed wonderfully well on top of the mountain. Peaches are often killed by blooming too early, but when they do escape frost they are very large and of delicious flavor. Pears and quinces find a most congenial soil on the Cumberland Table-land. Mr. Dodge always took the first premium on his quinces. Pears are about as sure a crop as apples.

On the highlands west of Nashville, in the counties of Cheatham, Dickson, Humphreys, Hickman, Lewis, and Wayne, fruits grow very kindly and produce abundantly. Many of the whitish soils on the broken lands of this region are as well adapted to the growth of apples, pears, quinces, peaches, and other fruits as any lands in the South. On the high hills of Davidson County, and especially the hills north of Nashville, peaches rarely make a failure.

LIVE STOCK.

The live stock interest is one of paramount importance in Middle Tennessee. This division has won a distinguished reputation for the excellence and high qualities of its horses, mules, cattle, sheep, and swine. Besides these, considerable numbers of jack stock, Shetland ponies and goats are bred. The Central Basin is the center of the live stock industry of the State. The soils of this basin are prolific in their yield of the cereals, also grow clover, timothy, herd's grass, orchard grass, millet, Randall grass, cow peas, and many other grasses and forage plants with great luxuriance. Much of the rolling lands and sloping hills are permanently set in blue grass, and many rich meadows fringe the numberless streams that flash in beauty in every part of this natural division. In many parts of the Highland Rim there are extensive highway pastures. In all the open woods wild grasses spring up in the vernal season and clothe the surface with living green. Thousands of cattle are raised at a nominal cost on these natural pastures. The same may be said of the pasturage of the Cumberland Table-land. The mast eaten greedily by swine cover the surface of the ground in fall and winter. Swine need but little attention during the winter months when raised in the open woodlands. Sheep are notably healthy on these elevated lands.

But it is in the Central Basin of Middle Tennessee where stock-breeding is carried to its greatest perfection, and has been crowned with the greatest success.

Horses.—The character of the horses bred in this division is of a very high standard, as high probably as may be found in Europe or America. This is due to the fact that this branch of stock husbandry has claimed and received the best attention of the most

intelligent men of the State, whose time, means, zeal, and energy have been devoted to the production of the highest types of the equine race. One of the early pioneers in the breeding of horses of high qualities was Gen. Andrew Jackson, through whose influence some of the best stallions were brought from East Tennessee to Davidson County, and afterwards many imported stallions were brought into the county. Gen. W. G. Harding may also be considered one of the first and most successful breeders of thoroughbred horses.

It would be difficult to find in any quarter of the globe breeding establishments for the rearing of race horses and trotting stock which would outrank, both for the character of the stock and the fairness and integrity of the management, several of the studs in Middle Tennessee.

Belle Meade, established by Gen. Harding, among the racing studs stands unsurpassed, if equaled, in America. One of the stallions belonging to that establishment, Iroquois, won the Derby, Prince of Wales stakes, and the Doncaster St. Leger stakes, in England. His produce is making very high records. One sale of fifty-three yearlings from this establishment made at Tattersall's, in New York, on the twentieth day of June, 1892, brought \$110,000, an average of \$2,076 per head. This is said to be the best sale for that number of yearlings ever made in any age or in any country.

A writer in *The American*, a newspaper printed at Nashville, Tenn., points to the fact that "in Tennessee is owned, or was bred, the only horse that ever won the English Derby, Prince of Wales stakes, at Ascot, and the Doncaster St. Leger, Iroquois; the first horse that ever ran a mile and a half in 2:34, Luke Blackburn; the greatest cup horse ever seen in America, Bramble; the first horse that ever ran a mile in 1:40 flat, Stuyvesant; the winner of the first Futurity,

Proctor Knott; the sires of two of the fastest horses ever seen on the American turf, Bishop and Vanderbilt, Racen and VanBuren; the greatest weight carrying stallion that ever faced a starter, Ecuador; the greatest sire of stake-winners living, Enquirer; and scores of the fleetest mares that ever carried the colors of enthusiastic champions to victory."

A book might be written about the thoroughbred horses of Tennessee, but the above shows beyond question that this State cannot be surpassed by any other in the Union when it comes to the production of the highest type of the race horse.

Tennessee has done much to give to the pacer prominence. Tom Hal was bred near Nashville.

For many years Ewell Farm, in the neighboring county of Maury, was the most noted nursery of pacing horses in the world. Hal Pointer, the greatest of all pacers, was a Maury County horse; Dallas, Star Pointer, 1:59¼ (world's record), and Little Brown Jug are Tennessee bred. The breeding of trotting horses has engaged a great deal of capital in the section near Nashville. Within five miles of its gates are the Hermitage and Melrose establishments.

Tennessee is now, or has been, the home of such trotting sires as Wedgewood, Bow Bells, Ponce de Leon, Tennessee Wilkes, Candidate, Bonnie Wood, McEwen, Beaumont, Red Fern, Frank Buford, Hyperion, Nuthunter, Lookout, Bay Fisherman, Rene, Brown Mark, Knickerbocker, Guy Corbitt, Ben Franklin, Oceanus, Mordante, Alvan, Chaska, Shandon Wilkes, Detroit, Adfield, Ben Fox, Almont Jr., Thor, Scarlet Wilkes, Duplex, and many others.

Mules and Shetland Ponies.—Mules of a high order are produced from high bred mares and imported Spanish jacks. Hundreds of these jacks have been imported during the past ten years from Spain, and distributed to every part of the State, thus greatly raising the standard of the mules in Tennessee. Nash-



HICKS' CATTLE FARM, DAVIDSON COUNTY.

ville ranks second only to St. Louis as a mule market. Columbia is also a very large shipping point for mules. Shetland ponies are bred to some extent, and are fairly profitable. They are in demand for children.

Cattle.—Imported herds of cattle are scattered all over Middle Tennessee. In every county may be seen some thoroughbred bulls, either Shorthorn, Jersey, Holstein, Devon—one or all. Ewell Farm, in Maury County, was at one time the largest establishment for the breeding of Jersey cattle in the Mississippi valley. Sussex cattle has also been introduced from England by Mr. Lea, of Davidson County, and has given eminent satisfaction.

Swine.—Among the breeds of swine to be found in Middle Tennessee, the Berkshire appears to be the favorite. But many prefer the Chester White, others the Essex, and still others the Jersey Red or the Poland China. The old razor back, long-snouted, and long-eared hogs of half century back are rarely seen, except in the wild lands of the mountains, where they are expected to make their own living from the succulent roots of the forests or the mast that falls so abundantly from the oak and beech trees in autumn.

Sheep.—The character of sheep grown in Middle Tennessee is very high. It was a fleece from a Merino sheep, bred by Mark Cockrill, near Nashville, that took the premium at the London Exposition in 1851, as the finest in the world. Merino, Cotswold, and Southdown are the breeds most generally preferred. The first two are mainly kept for wool and the raising of lambs, the latter for mutton and lambs. The latter is the most prolific. The raising of early lambs is a highly profitable industry in Middle Tennessee, and indeed throughout the State. Lambs at the age of four months bring in the market from \$4 to \$5 each, which is about twice as much as a full grown animal of the same breed will bring. The number of spring

lambs sold in Middle Tennessee in 1890 was 51,179. These were for consumption.

The census statistics of 1890 show the following:

| | STATE OF TENNESSEE. | MIDDLE TENNESSEE. |
|-------------------------------------|------------------------|----------------------|
| Horses | 311,842 | 152,940 |
| Mules and asses | 203,639 | 103,850 |
| Milch cows | 345,311 | 142,626 |
| Other cattle and work oxen | 620,028 | 398,581 |
| Swine | 1,922,912 | 945,079 |
| Sheep | 540,996 | 290,372 |

It will be seen by these figures that Middle Tennessee has 49 per cent. of the horses in the State; 50 per cent. of the mules; 41 per cent. of the milch cows; 51 per cent. of other cattle; 49 per cent. of swine, and 53 per cent. of the sheep, making it decidedly the stock breeding division of the State.



TWIN PRODUCTS.

DAIRY HUSBANDRY.

No prospective diversification of agricultural industry holds out greater possibilities or inducements for Middle Tennessee than that of dairying. The adaptability of the soils for the production of grasses, the mild winters, the length of the growing season, the comparatively short time that cattle have to be housed and fed, and the active demand from all the Southern States for dairy products of high character, are a few of the advantages which Middle Tennessee offers to the dairyman.

It will be seen from the figures below that the products of the dairy, with the exception of cheese, which has fallen off rapidly, have increased many fold in Tennessee since 1850.

| | LBS. BUTTER. | LBS. CHEESE. | GAL. MILK. |
|------------|--------------|--------------|-------------|
| 1850 | 8,139,585 | 177,681 | No report. |
| 1860 | 10,017,787 | 135,575 | No report. |
| 1870 | 9,571,069 | 142,240 | 415,786 |
| 1880 | 17,886,369 | 98,740 | 1,006,795 |
| 1890 | 28,314,387 | 69,919 | 107,657,116 |

In 1890 Middle Tennessee produced 12,562,864 pounds of butter, or 44 per cent. of the whole amount made in the State; 18,253 pounds of cheese, or 26 per cent. of the amount of the whole State; and 47,422,085 gallons of milk, or 47 per cent. of the quantity of the whole State.

In Middle Tennessee, Davidson County made the largest quantity of butter, the amount being 749,356 pounds; Maury came second, with 731,810 pounds; Rutherford third, with 709,792 pounds; and Wilson fourth, with 704,160 pounds.

The county making the largest quantity of cheese was Grundy, which produced 4,725 pounds. This was due to the fact that there is a large Swiss colony in

that county which utilizes the highway pasturage in making an excellent quality of cheese, which commands a good price everywhere. Franklin County, with 3,485 pounds, took the second place in the production of cheese in Middle Tennessee. This is due to the fact that a large number of Northern people have settled in that county.

East Tennessee by far surpassed Middle Tennessee in the production of cheese. Knox and Sullivan counties each produced over 7,000 pounds; Johnson over 5,000 pounds, and Hawkins and Greene over 4,000 pounds.

The county in Middle Tennessee producing the largest quantity of milk was Davidson, which returned 3,082,582 gallons; Giles came second, with 2,555,562 gallons; Maury third, with 2,451,705 gallons; and Wilson fourth, with 2,422,244 gallons.

Tennessee corn is worth in a foreign market possibly thirty-five cents per bushel. If this corn were utilized in the making of cheese, it would bring the farmer four times as much. One pound of cheese is worth at least twenty pounds of corn, and the saving in the cost of transportation of cheese in the place of corn would of itself be a fair profit to the farmer.

It is much better to convert all our grain, grasses, and forage crops into such marketable products as fat beeves, mutton, butter, cheese, and milk than to ship them in their raw condition. If we should carry our dairy industry no farther than to supply the home demand for butter and cheese in place of buying the northern product, it will be one step in the right direction. Nor can this fail to be profitable. Prime butter is worth the year round in Nashville 25 cents per pound; good cheese, 15 cents per pound; sweet milk retails at 20 cents per gallon, and buttermilk at 10 cents per gallon.

Experience proves that wherever the soil and climate will permit corn to mature, cheese and butter can be

manufactured at a great profit at the prices named, while milk with a sufficient local demand will yield more than 100 per cent. profit at 20 cents per gallon.

If rye or barley or winter oats are sown in Middle Tennessee in September, the ground is usually matted with a luxuriant growth of green food suitable for cattle by the middle of November. The summer pastures of blue grass, herd's grass, clover, crab grass, united to the fall and winter pasturage, obtained from rye, barley, and winter oats give green crops to milch cows wellnigh throughout the year. This constant supply of green food greatly increases the flow of milk, and at the same time reduces its cost as well as the cost of butter and cheese.

Several co-operative creameries have been established in Middle Tennessee, and wherever proper attention has been given to their management good profits have resulted. One of the most successful of these is at Belvidere, in Franklin County, to which the sweet milk is brought every morning by the farmers, and after the cream is separated the remaining milk is carried back and fed to pigs and calves. The milk at the time of delivery is tested by a lactometer, and the price paid for it is regulated by these tests.

The dairy products from the creamery are sold in certain markets for as long a period as possible, the price being regulated by the prices paid at some designated point.

Intelligent immigrants from the North will find Middle Tennessee along the line of the Nashville, Chattanooga & St. Louis Railway, an unsurpassed region for engaging in dairy husbandry. The lands are cheap; the grasses and grain crops abundant; markets and facilities for transportation good, and the climate all that could be desired for that industry, being neither too warm nor too cold.

MINERALS.

The three most important minerals in Middle Tennessee are iron, coal, and phosphates, all of which are extensively mined.

Iron—The Western Iron Belt, which lies mainly in Middle Tennessee, east of the Tennessee River, is forty miles wide and 110 miles long. The same belt extends north into Kentucky and south into Alabama, while a small portion of it lies in Decatur and Benton counties, west of the Tennessee River. About 4,000 square miles of this belt are embraced in Middle Tennessee, and it includes Stewart, Montgomery, Cheatham, Dickson, Humphreys, Hickman, Lewis, Maury, Perry, Wayne, and Lawrence, in addition to the two counties already mentioned as lying west of the Tennessee River. There are good deposits of iron ore in all of these counties, and in some of them the deposits are very large, extending over several square miles of territory, and showing a thickness of from ten to fifty feet or more.

The ore, with two exceptions, is a hydrated oxide of iron called limonite, or brown hematite, and contains from 40 to 59 per cent. of metallic iron, from 3 to 13 per cent. of silicious matter, from .04 to .712 per cent. of phosphorus, and very rarely any sulphur at all.

The ores are found associated with red clay, rarely with yellow, and with flinty masses called chert, which have been liberated by the decomposition of the St. Louis limestones of the Mississippi, or subcarboniferous age. Throughout this whole Western Iron Belt the deposits may be looked for. They occur with no regularity, but sometimes cover many square miles. The proportion of iron ores compared with the matrix in the banks is as variable as the size of the banks. Sometimes three-fourths the bulk of material removed

may be excellent ore; again not one-half, and sometimes not one-sixth. When the latter point is reached, unless the ores are of most excellent quality, it is not profitable to work the bank.

The largest amount of mining has been done in the counties of Stewart, Dickson, Hickman, Wayne, Lewis, and Lawrence. The quantity of ore taken from the McLanahan mines, in Lawrence County, has reached as high as 50,000 tons to the acre. The ore occurs in various forms, sometimes in rock-like ledges; sometimes in hollow concretions called pots; sometimes in porous contorted masses; again in long stalactitic forms or rod-like masses. Frequently the lining of the interior of the pots is a red ore called turgite, very rich, but very frangible. Forms of needle ore occur as well as goethite. Near Clifton, in Wayne County, is a bed of red hematite, which was worked in a furnace near it in the early days of iron making in the county. The carbonate of iron, or spathite, exists in a stratified form at Iron City, in Lawrence County. It has been worked to some extent. Some iron ore of the brown variety occurs in Overton, DeKalb, and White counties, but it has only been worked in Catalan forges. The total production of iron ore in the State for 1896 was 577,403 tons, of which Middle Tennessee produced 203,766 tons; Lawrence leading all the counties with 137,616 tons.

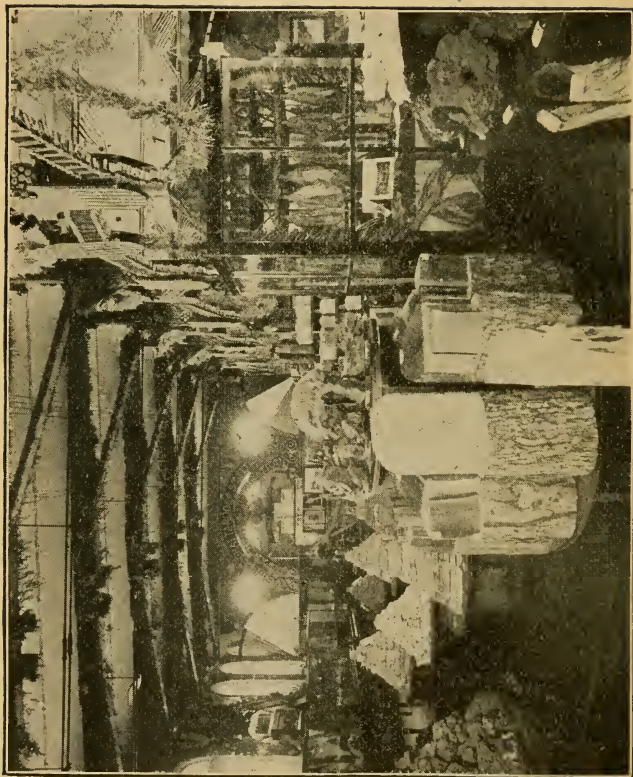
Furnaces.—Of the twenty-three furnaces reported for the State, in and out of blast, twelve are in Middle Tennessee, two of which are coke furnaces and ten charcoal furnaces. The low prices prevailing for charcoal iron has greatly depressed the charcoal iron industry. The total capacity of the furnaces in Middle Tennessee is 615 tons of pig iron per day. The production of pig iron in the State in 1896 was 219,749 tons. Middle Tennessee produced 27,249 tons of charcoal iron. The cost of making charcoal iron at present in Middle Tennessee does not exceed \$6.75 per ton.

Coal and Coke.—The coal field of Tennessee coincides in extent with the Cumberland Table-land, and covers 5,000 square miles, though the area of workable coal will probably not embrace over 3,600 square miles. The following counties, in whole or in part, are embraced in the coal field of the State: Anderson, Bledsoe, Campbell, Claiborne, Cumberland, Fentress, Franklin, Grundy, Hamilton, Marion, Morgan, Overton, Putnam, Sequatchie, Rhea, Roane, Scott, VanBuren, and White. Of these Cumberland, Fentress, Franklin, Grundy, Overton, Putnam, VanBuren, and White, constituting about half the coal area, are in Middle Tennessee.

Coal is extensively worked in Grundy and White counties, and there are some small mines in Putnam, Cumberland, Franklin, and Fentress counties. The total production of coal for the State in 1896 was 2,633,106 tons, which is the largest output by 127,462 tons ever made in the State. Of this quantity Middle Tennessee mined 477,704 tons from regularly reported mines, and about 2,000 tons from small mines, making a total of 479,704 tons, which is about 18 per cent. of the whole coal production of the State. The average value of coal per ton at the mines in 1896 was 85½ cents per short ton, making the entire value of the coal at the mines \$2,251,295 for the whole State.

The amount of coke produced in Tennessee for 1896 was 332,746 short tons, about 80 per cent. of which was made from the coal of the Sewanee seam, and 20 per cent. of it was made in the coke ovens at Tracy City, in Grundy County. To make this coke 592,393 tons of coal were used. The value of coke at the ovens was \$1.74 per short ton, making the total value of the whole amount of coke produced in Tennessee, for the year named, \$580,115.

Phosphates.—The most remarkable discovery of recent years is that of the stratified phosphates of



A CORNER OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS EXHIBIT, NASHVILLE, TENN.

Middle Tennessee. This discovery was due to a happy accident, but its importance in the agricultural development of the South, and of Tennessee in particular, can hardly be overestimated.

The first beds of phosphates discovered were those on Swan Creek, in Hickman County, about fifty miles in a straight line southwest of Nashville. This was in 1894. The beds belong to the sub-Devonian rocks that lie immediately under the black shale of the Devonian age. The beds of phosphates are from three feet to four feet thick, and are usually confined to two layers, the lowest being bluish-black in color with a maximum thickness of twenty inches. The analysis of this shows about 65 per cent. of the phosphate of lime or bone phosphate.

Immediately above this layer, and resting on it, is a layer of grayish rock from 20 to 22 inches in thickness, which contains by analysis about 75 per cent. of the phosphate of lime or bone phosphate. The weight of this gray rock is about 5,000 pounds to the cubic yard, which is double the weight of Florida or South Carolina phosphate. It has rarely as much as three per cent. of iron and alumina, and very often less than two per cent. In acidulation it is conceded to be the best phosphate rock in America, there being just enough carbonate of lime in its composition to make the acid phosphate dry out quickly, so that it gets in the proper condition for shipping within two days. Its finely pulverulent condition after acidulation, and its freedom from lumps, make it especially desirable for use in a wheat drill, for distribution with the seed wheat in the sowing of the wheat crop.

The Devonian Shale above the gray rock contains many nodules of the phosphate of lime, which, in the absence of the beds below, would be considered valuable deposits.

The area of the sub-Devonian phosphate covers about sixty square miles, and extends on both sides of Swan

Creek, with a width of the phosphate-bearing stratum certainly of three miles, and a length of twenty miles. It is estimated that this field will yield over 9,000 tons to the acre, and allowing only one-fourth of the area to be accessible, there would still be available over 88,000,000 tons, a quantity so vast that it may well be called inexhaustible. At present there are two companies mining in this field, viz.: The Southwestern Phosphate Company and the Duck River Phosphate Company. There are also several individual owners of mines who work them with some regularity. The amount mined in this subdevonian field, and shipped by the Nashville, Chattanooga & St. Louis Railway, was, for the year ending December 31, 1897, 26,478 short tons. The shipments were made from the following places: Aetna, 3,737 tons; Centreville, or the Duck River Phosphate Company, 16,639 tons; Twomey, 6,082 tons; Allen's Creek, 20 tons.

Another discovery of phosphate was made near Mt. Pleasant, in Maury County, towards the close of the year 1895, and mining began at that place in July, 1893. These phosphates belong to the Nashville rocks of the lower silurian age, immediately over what is known as the orthis bed, and the stratum is identical in geological formation with that of the capitol limestone.

The bed of phosphate was originally, no doubt, composed of the carbonate of lime, with a large content of the phosphate of lime. The carbonate of lime has been leached away, leaving behind, as a residue, the phosphate of lime, which occurs as a porous, fragile stone, like loosely aggregated grains of sand, grayish in color, and resembling in weight and general appearance a pumice stone. It is very easily mined, nothing but a pick and spall fork being required for that work.

The thickness of the bed varies from three feet to twelve feet. It is regularly stratified, and very per-

sistent. The top surface is thoroughly leached, and this leaching process has extended to varying depths, so that the bottom of the beds is interrupted by chimneys of limestone, which run up into the bed of phosphates. These chimneys are sometimes thin ledges, sometimes narrow lines separating the thick pockets of phosphates, but there is always a layer of phosphate, more or less thick, above these unleached rocks, so that the continuity of the stratum is unbroken on its upper surface. The stripping, or overburden, varies in thickness from a few inches to six feet or more. In a few places the phosphate is hard and compact, or rather these hard, compact bodies are imbedded and surrounded by the porous phosphate.

Analyses from many car loads show about the following averages:

| | |
|-----------------------------------|-------|
| Moisture | 1.50 |
| Sand | 2.25 |
| Phosphate of lime..... | 78.75 |
| Peroxide of iron and alumina..... | 4.00 |
| Carbonate of lime | 2.00 |

This gives a percentage of 36.1 of phosphoric acid, which probably is the largest percentage of phosphoric acid yet found in any other commercial phosphate.

The extent of the Mt. Pleasant phosphate has not been accurately determined, but it certainly embraces from seven to ten square miles. The amount mined near Mt. Pleasant, and shipped from that point, for the year 1897, was 235,141,842 pounds, or 117,572 short tons, nearly. There are six companies at work mining phosphates in the Mt. Pleasant district, besides numerous individuals.

The phosphate is now shipped, as well as that from Hickman County, to all the principal points in this country and Europe where fertilizers are manufactured, and the demand increases rapidly. These two phosphate fields are likely to lead all the others in

this country. From them were shipped, in the aggregate, for the year 1897, 144,050 tons of 2,000 pounds, and they are likely to double this production within the next two years. The prices f. o. b. range from \$2.20 to \$1.25 per ton, dry and undried. The working of these phosphates has already seriously impaired the value of the great phosphate beds of South Carolina and Florida.

There is no place so well suited for building up a great center for the manufacture and distribution of fertilizers as Middle Tennessee, by reason of the quantity, quality, and cheapness of the raw material used, and of the great number of markets near at hand for all kinds of commercial fertilizers.

Petroleum.—The petroleum field of Tennessee embraces the counties of Overton, Pickett, Fentress, and Putnam, but there are evidences of oil in the counties of Scott, Smith, White, Cannon, Warren, VanBuren, and Coffee, on the eastern side of the Central Basin, and Dickson, and Hickman on the western side. The first attempts to bore for oil were made in Overton County, on Spring Creek, in 1865. In 1866, 2,600 barrels of oil were pumped out of a well which was 45 feet deep. The well was afterwards drilled to the further depth of 51 feet 7 inches, when great quantities of oil flowed out with a terrible rush, rising in a column 30 feet high. It was estimated that from 12,000 to 15,000 barrels were lost. The well continued to flow for three months, and twelve months afterwards 600 barrels were pumped out. Several producing wells were sunk at that time, and the oil was all obtained above the black shale, and within an area of 150 acres. It was evidently stored in the crevices of the siliceous limestone. At that time the amount saved was 6,813 barrels.

More recently the oil developments have been carried on in the adjoining counties, and thirty-one wells have shown more or less oil at depths varying from 20 to

1,781 feet. The wells in the various localities in Pickett, Fentress, Overton, and Scott counties struck oil at many different levels, no two being the same. All the wells which furnish oil in paying quantities were shallow, the oil being found in the limestone lying immediately below the black shale. All experts now agree that the wells are what are called 'crevice wells, and are fed by large deposits of oil from a lower level, though this remains to be demonstrated. There are two kinds of oil furnished by these wells, one known as the green oil, and the other as the black oil. The well which yielded the largest quantity of oil was bored in Fentress County, and known as the Bob's Bar Well, in which the black shale was reached at the depth of 80 feet, and the oil was struck at the depth of 275 feet.' The black shale in this well was 28 feet thick.

No statistics of production are accessible, but it is known that as much as 700 barrels per day have been produced for this district for short periods.

In Dickson County, lying west of Nashville, a well was bored on Jones Creek, in 1869, to the depth of 295 feet, when oil was struck, and flowed at the rate of 13 barrels in half an hour, but the supply was soon exhausted. Another well was sunk about 50 feet from this to the depth of 565 feet, and a good flow of oil obtained. Some 200 to 300 barrels were shipped to Nashville, where it was refined and sold. The specific gravity of the oil was 42 degrees.

There are some oil springs in the adjoining county of Hickman.

Natural Facilities for Manufacturing.—No portion of the United States offers better natural facilities for the manufacturer. The raw material is abundant. Coal, iron ores, clays, marble, building stones, cotton, wool, timber, grain, and phosphates are plentiful, convenient, and cheap. Water powers, not excelled anywhere, are found in many places along the line of the

Nashville, Chattanooga & St. Louis Railway. The great markets of the South, the Mississippi valley, the West Indies and South America, are accessible to the Tennessee manufacturer. The Brooklyn (New York) *Eagle* of recent date, commenting upon the superior advantages which the South offers to the manufacturer of cotton goods, says: "The South has the cotton in her fields, it can be passed into her mill doors without putting it on a train or boat; she has water power, wood and coal, brick, clay, building stone of all sorts, and her land is still so cheap that it is easy to acquire all that is needed of it for factories; it is easier for operatives to live in the South, too, than it is in the North; rents are cheaper, because land is cheaper; there is less need for fuel to keep the houses warm, and of thick clothing to keep the body warm; food of all kinds is offered in greater variety than in the North, and at lower prices in some seasons."

Referring to the mills already in operation in the South, the *Eagle* adds: "They are forerunners of a vast industry that will one day be developed in the cotton belt, and that will be followed by a transfer of the sugar industry to a region where the sugar cane is grown. Economy and sense dictate the removal of factories to the places that furnish the crude product. Normally, there was never a reason for these mills in Massachusetts, because the cotton was grown a thousand miles away from that State."

PRICES OF LANDS.

Nothing is more unsatisfactory than for anyone to attempt to give a correct idea in regard to the prices of land. The soils of Middle Tennessee, as has been mentioned, are so varied in their character, and the different qualities are so interspersed, that on the same farm may be often seen a field worth \$50 per acre and adjoining it another field not worth \$2 per acre. The prices are also largely influenced by the nearness of the lands to railway lines and markets. A general idea may be given by the following classification of farms and lands in Middle Tennessee:

CLASS I.

IN THE CENTRAL BASIN COUNTIES.

1. The best improved farms in the Central Basin near railroads, from \$40 to \$100 per acre.
2. The same character of farms with indifferent improvements, from \$30 to \$40 per acre.
3. Farms of uneven surface though fertile, from \$25 to \$35 per acre.
4. Farms badly damaged, but capable of easy restoration, from \$15 to \$20 per acre.

CLASS II.

FARMS ON THE HIGHLANDS.

1. Best chocolate colored soils of the highlands, well improved and near railroad or market, from \$25 to \$40 per acre.
2. Chocolate colored soils more or less broken, but well improved and in good tilth, with conveniences of market, from \$20 to \$30 per acre.
3. Chocolate colored soils with indifferent improvements, land in good condition but four or five miles from railroad, from \$10 to \$20 per acre.

4. Chocolate colored soils with poor improvements, and considerably worn, but near market or railroad, from \$8 to \$15 per acre.

5. Chocolate colored soils much worn, but easily improved, within three or four miles of railroad, indifferent improvements, from \$5 to \$12 per acre.

6. Farms with whitish soils, well cared for and good improvements, convenient to railroads, from \$4 to \$15 per acre.

7. Whitish soils in bad condition, but near railroads, from \$3 to \$5 per acre.

8. Whitish lands unimproved, near railroads, from \$2 to \$6 per acre.

CLASS III.

CUMBERLAND MOUNTAIN FARMS.

1. Mountain farms in good condition, near railroads, from \$8 to \$12 per acre.

2. Mountain farms near railroad, but much worn, from \$3 to \$5 per acre.

3. Mountain farms in good condition, several miles from railroad, from \$4 to \$10 per acre, according to improvements.

4. Mountain lands, level, well timbered, from \$3 to \$6 per acre.

CLASS IV.

1. Well timbered lands near railroad, from \$3 to \$6 per acre.

2. Well timbered lands eight to fifteen miles from railroad, from \$2 to \$5 per acre. Very large tracts of 50,000 acres, at \$2 to \$5 per acre. Timbered lands are probably cheaper in Tennessee than in any other State in the Union having equal facilities for transportation, and for reaching good markets.



CANEY FORK FALLS, N., C. & ST. L. RAILWAY, BETWEEN WARREN AND WHITE COUNTIES.

TRANSPORTATION.

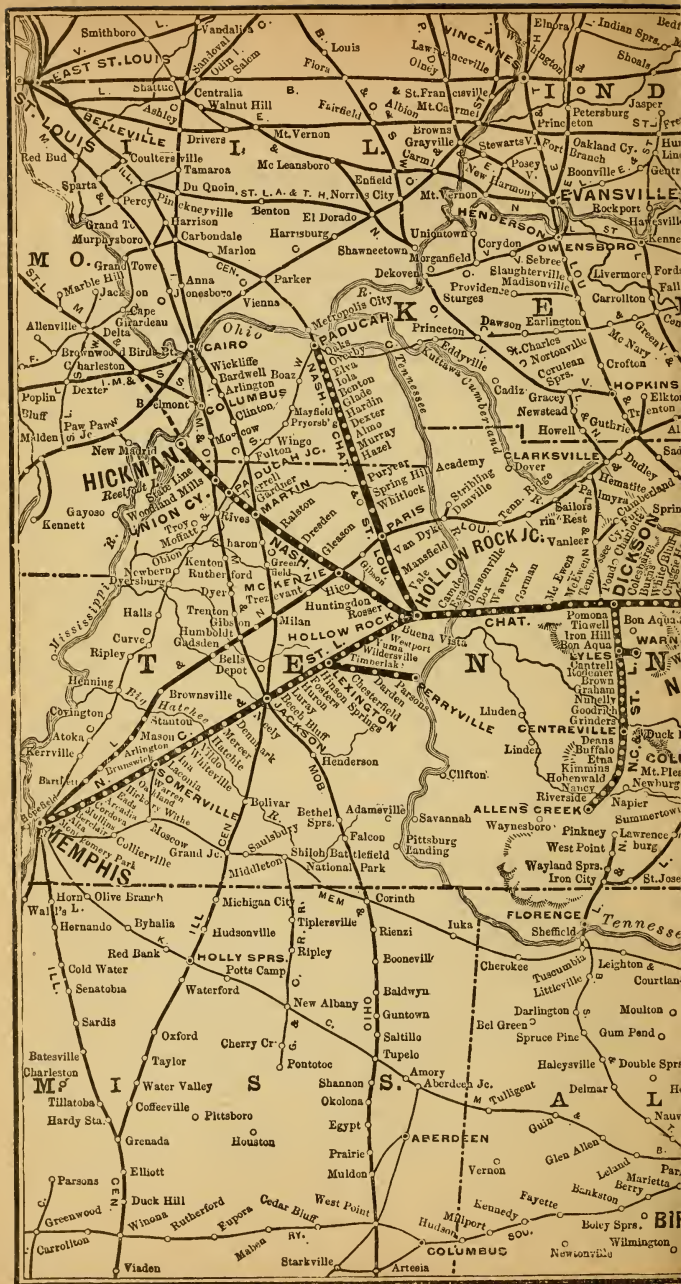
The railroads in Middle Tennessee are the Nashville, Chattanooga & St. Louis Railway, the Louisville & Nashville Railroad, the Tennessee Central, the Chesapeake & Nashville Railroad, the Middle and East Tennessee Central Railroad, and the Nashville & Knoxville Railroad. The Nashville, Chattanooga & St. Louis Railway passes through eighteen counties in Middle Tennessee, and ten additional counties are tributary to it. The Louisville & Nashville Railroad furnishes transportation to eleven counties in Middle Tennessee; the Tennessee Central to two; the Nashville & Knoxville to four; the Chesapeake & Nashville Railroad to one; and the Middle & East Tennessee to two.

Cumberland River gives water transportation to the following counties in Middle Tennessee, namely: Clay, Jackson, Smith, Sumner, Wilson, Davidson, Cheatham, Dickson, Montgomery, and Stewart. The Tennessee River gives transportation in Middle Tennessee to Wayne, Perry, Humphreys, Houston, and Stewart. Obey's River furnishes transportation for a few months to Clay and Pickett counties.

Logs are floated down Elk, Buffalo, and Duck rivers to the Tennessee River, and down Caney Fork to the Cumberland River. The latter stream is navigable for steamboats during the winter months as far as Sligo, in DeKalb, near the foot of Caney Creek Falls. Duck River has been navigated by steamboats as far as Centerville.

NOTED WATER POWERS IN MIDDLE TENNESSEE.

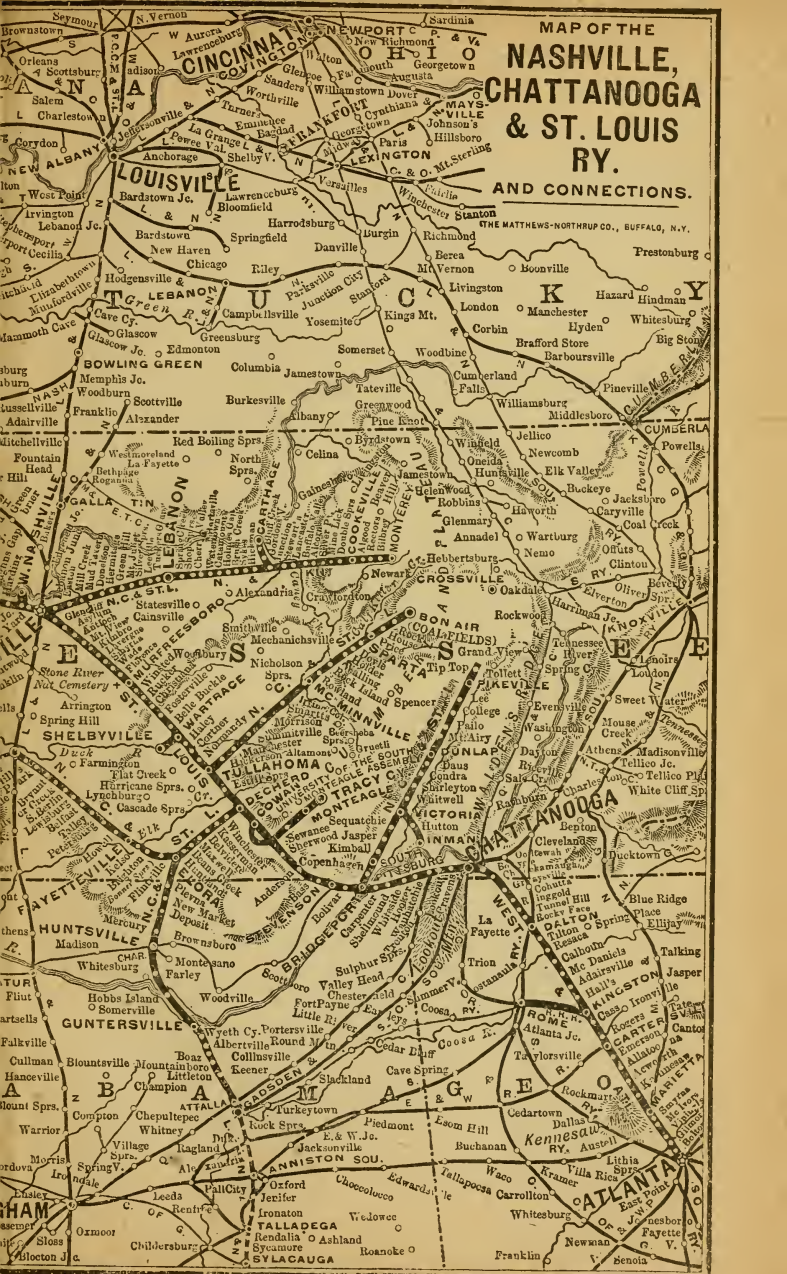
The streams from the most eastern edge of the Cumberland Table-land flow westward down the slopes of the plateau, foaming and dashing in wild torrents and leaping cascades through valleys between the spurs and outliers of the table-land, pouring an unceasing waterfall over the rim of the Central Basin. There long, white lines of mist and creamy foam seem to beckon the citizens to the pursuits of peace, prosperity, and manufacturing industry. A description of the water power of White County will be fairly representative of the region lying at the western foot of the Cumberland Table-land. The water power on Caney Fork, the principal stream in this region, if not the best in Middle Tennessee, is at least the most powerful. This stream, a tributary of the Cumberland River, takes its rise on the table-land, about eighteen miles east of Sparta. Running south, and then west, it descends through a deep, narrow gorge hemmed in by beetling cliffs, and characterized by startling scenery. The gorge down which it passes must be 300 feet below the general level of the mountain. Emerging into the valley, it passes westward by many devious windings, among romantic hills, to the Big Falls below Rock Island, near which the railway line crosses the stream. From the railroad bridge, the river plunges down one fall after another, descending about 106 feet within the distance of two miles. To go more into detail, at Rock Island there is a fall of five feet. From the island to the principal fall, a distance of about one and one-half miles, there is a fall of five feet. At the principal falls the water descends perpendicularly twenty-five feet. For 250 yards below there are rapids with a fall of six feet, after which



MAP OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS RY.

AND CONNECTIONS.

THE MATTHEWS-NORTHROP CO., BUFFALO, N. Y.



there occur three successive falls, within 100 yards each, of about eighteen feet. Then succeed rapids, for 30 yards, with a fall of six feet. Below the rapids there is eddy water for 150 yards, followed by rapids for 100 yards, with a fall of five feet. From this point to the principal fall, a distance of a quarter of a mile, the aggregate descent, as measured by Maj. Falconett, civil engineer, is 96 feet. It is estimated that these falls represent 8,250 horse powers. Below the rapids last mentioned there is a succession of shoals until the distance of three miles the Horse Shoe Falls occur where there is a perpendicular descent of six feet. In many places in the river the channel is compressed within the breadth of 20 yards, while at others it widens to 100 yards or more. The average breadth of the stream at the falls is about 60 yards. The banks and bottoms of this stream, from Rock Island to the foot of the falls, are composed of ledges of hard siliceous rocks, which have withstood the grinding action of the water, while the softer rocks below have not been able to resist it.

Another valuable water power is Falling Water, a tributary of Caney Fork. At Williams Mills, twelve miles from its mouth, there is a succession of rapids, where the descent is 200 feet in 700 yards. Taylor's Creek, Town Creek, the falls of Calf Killer River, and many other streams, furnish good water privileges.

Caney Creek Falls may be said to belong to both White and Warren counties, as the stream is the dividing line. Warren County also has many other streams that supply good water powers. Among these are Charles' Creek, Barren Fork, Collins' River, Rocky River, Hickory Creek, and a few others.

Coming to Coffee County we find near Manchester much water power of great excellence, and easy of access, being scarcely a mile from the railroad. Bark Camp Fork takes its rise a short distance from Man-

chester, the county seat, and is fed by numerous bold springs. The supply of water is constant, and there is danger neither from the scarcity of water in summer nor from its excess in rainy seasons, as the stream descends very rapidly, having a succession of falls, or rapids, for nearly a mile, making within this distance a descent of 100 feet. The bed of the stream is composed of solid rock, and it empties into a larger stream, called Barren Fork, within a mile of Manchester, furnishing, however, excellent water power before uniting with the latter stream. Barren Fork, which is the larger stream of the two, rises some ten or fifteen miles in the eastern part of the county, in a section known as the "Barrens." It approaches within 200 yards of Bark Camp Fork, a half mile before the two streams unite. It also has a succession of falls, or rapids, furnishing good available water power now used for a paper mill. Between these streams is a ridge, or backbone, upon which the old stone fort is situated.

Franklin County has many excellent streams that furnish good water power. The principal one of these is Elk River, where the water power has recently been utilized for driving the largest flouring mill in the South. One of the most remarkable water powers in Middle Tennessee occurs on a point near the Dickson and Cheatham County line, about five miles from Craggie Hope, a station on the Northwestern Division of the Nashville, Chattanooga & St. Louis Railway. This water power is known as the "Narrows of Harpeth." Harpeth River here makes an extensive bend, inclosing a large peninsula, the neck of which is a bed of stratified limestone, only a few feet across. This narrow neck has been tunneled, and a fall obtained, which gives water power enough to run a large number of manufacturing establishments. Jones' Creek, Turnbull Creek, Barton's Creek, Piney Creek, Yellow

Creek, and Johnson Creek, all beautiful streams in Dickson County, have sufficient capacity each for running flouring, cotton, and woolen mills. Sycamore Creek, in Cheatham County, furnishes also much excellent water power.



SOUTHERN FLOWERS.

DESCRIPTION OF COUNTIES.

The counties in Middle Tennessee traversed by or tributary to the Nashville, Chattanooga & St. Louis Railway are: Bedford, Cannon, Cheatham, Coffee, Cumberland, Davidson, DeKalb, Dickson, Franklin, Grundy, Hickman, Humphreys, Jackson, Lewis, Lincoln, Marshall, Maury, Moore, Overton, Perry, Putnam, Rutherford, Smith, VanBuren, Warren, Wayne, White, and Wilson. These will be briefly described in the order in which they are named.

The assessed values of the railroads in each county are not included in the amount of taxable property given for each county. These assessments add from \$6,000 to \$30,000 per mile of railroad to the taxable property, the average being \$13,300 per mile. Nor are the assessments for telegraphs or telephones included, though they are taxed for county, State, and municipal purposes like the railroads.

BEDFORD COUNTY.

Organized, 1809. *County seat*, Shelbyville. Population in 1890, 24,739, of which 18,411 were white, and 6,328 colored; percentage of whites, 74.42. Area, 520 square miles, or 332,800 acres; inhabitants to the square mile, 47.57; improved land, 201,059 acres; unimproved land, 120,870 acres. Taxable property in 1897, \$4,536,670; number of acres assessed for taxation, 291,000, valued at \$3,494,790; value per acre, \$12. The average elevation of the county, 828 feet. The county lies in the Central Basin; its surface is rolling, with occasional flat-topped hills; the soil is derived mainly from limestone, and is rich; the whole county is exceedingly well watered; Duck River flows from east to west a little south of the center of the county; the tributaries which enter it from the north are Spring Creek, North Fork, Garrison Fork, with its tributary Wartrace Creek; Barren Fork may be considered the main stream, but the name of Duck River is not affixed to it until after its junction with Garrison Fork; the

tributaries from the south are Sinking Creek, Big Flat Creek, Thompson's Creek, besides many smaller streams; there is scarcely a farm in the county that does not have one or more springs of pure limestone water; limestone is the prevailing rock; the soil is calcareous and highly productive; the timber is ash, poplar, walnut, butternut, elm, red-bud, sumac, dogwood, black gum, and extensive forests of red cedar, covering, in the aggregate, several square miles; fences are built mostly of cedar rails. Productions: Corn, wheat, oats, rye, bluegrass, timothy, herd's grass, German millet, Hungarian grass, and in the eastern part of the county, cotton. Stock raising is carried on extensively. Many mules are shipped South. The bluegrass lands cover one-half the surface of the county. The smaller industries claim a good share of attention. Cotton is manufactured to some extent. The farms are in a high state of cultivation; amount of negro labor inconsiderable. Nashville, Chattanooga & St. Louis Railway furnishes ample facilities for the shipment of produce. The most important towns and villages are Shelbyville, Bellbuckle, Wartrace, Unionville, Richmond, Flat Creek, Normandy, Fairfield, Vannatta, Palmetto, Hawthorne, Rover, Fall Creek, Haley's Station, and Bedford. No minerals of importance except good building stone. In agriculture it is scarcely surpassed by any county in the State. The crops reported by the census of 1890 were: Indian corn, 1,735,572 bushels, grown on 61,480 acres; wheat, 489,007 bushels, grown on 39,168 acres; oats, 157,877 bushels, grown on 10,962 acres; cotton, 280 bales, grown on 1,004 acres. Bedford takes the fifth place in the State in the production of corn, second in the production of wheat, and ninth in the production of oats. In 1890 it produced 47,325 gallons of sorghum molasses. The live stock was: Horses, 8,818; mules, 4,707; asses, 264; working oxen, 48; milch cows, 5,545; other cattle, 10,230; sheep, 14,126—value of live stock, \$1,550,060. In 1890 it took the fourth rank in the State in the number of horses, eighth in the number of mules, fifth in the number of asses, and third in the number of sheep. Good farms are worth from \$30 to \$50 per acre on the level or rolling lands. On the hilly lands from \$10 to \$25 per acre. Schools are good. Probably the best classical school in the South is at Bellbuckle. The school tax is 30 cents on the \$100 worth of property.

CANNON COUNTY.

Organized, 1836. *County seat*, Woodbury. Population in 1890, 12,197; of which 11,250 were white and 947 colored; percentage of whites, 92.24. Area, 220 square miles, or 140,800 acres; inhabitants to the square mile, 59.80. Acres of improved land, 77,569; unimproved, 76,211. Taxable property in 1897, \$129,420; number of acres assessed for taxation, 159,162; valued at \$1,135,475; value per acre, \$7.13. The average elevation of the county in the part included in the Central Basin is 650 feet; on the Highlands, 900 feet. More than half of this county lies in the Central Basin, and the remainder, on eastern and southern edges, on the Highland Rim. Spurs shoot out of the Highlands into the valley, one of which, in the northern part of the county, extends nearly through it from east to west, and forms the watershed between the streams that enter directly into the Cumberland, and those which flow in an opposite direction into Stone River. From the north, beginning on the east, Stone River is fed by Rockhouse, Carpenter's, Rush, and Lock creeks: from the south, Hill's Creek and Brawley's Fork, the latter having several tributaries known as Espy's Cave, Horse Spring Fork, and Burgess Creek, the three making Carson's Fork, which empties into Brawley's Fork, one-half mile south of the Woodbury and Murfreesboro turnpike, and the latter into Stone River, five miles west of the county seat. Barren Fork, of Collins River, rises on the Highlands, which forms the eastern edge of the county, and flows east into Warren County. Nearly all these streams supply good water power. Stone River, by reason of its swiftness and constancy, and volume of water, is especially suited for milling purposes. The soils, on the Highlands, are light colored, sometimes of a pale yellow, often blue, and occasionally red. These soils, for the most part, are thin and unproductive, occupying level areas, and covered with a rank barren grass which affords good summer grazing. Fruits, herd's grass, and tobacco grow well upon the Highlands, but these soils are not so well suited for general farming as the soils of the part lying in the Central Basin, which are rich, but the lands rolling. On the Highlands the timber consists of black jack, chestnut, red oak, and post oak. In the part of the county lying in the Central Basin poplar, walnut, white oak, sugar

tree, ash, beech, red elm, hackberry, buckeye, and cherry are common forest trees. Sycamore grows on all the streams. The census of 1890 reports the following productions for the county: Indian corn, 874,683 bushels, grown on 29,721 acres; wheat, 115,241 bushels, grown on 12,332 acres; oats, 52,655 bushels, grown on 3,504 acres; rye, 5,124 bushels, grown on 816 acres. No portion of the State grows blue grass more kindly and generously than some of the knobby lands of Cannon County. All over the slopes and tops of the swelling hills a lovely carpet of blue grass is seen, and even upon the glady places it grows with vigor between the interstices of the rocks, and furnishes good grazing. There are many fine meadows along the streams, which bring heavy crops of hay year after year, without any apparent diminution in the quantity or quality of the hay. Clover grows with a singular luxuriance upon the lands in the Central Basin portion of the county. The live stock in 1890 was: Horses, 3,491; mules, 2,046; asses, 55; working oxen, 365; milch cows, 2,557; other cattle, 4,017; sheep, 6,568; value of live stock, \$640,810. Nothing in the way of minerals, except building stone, is of any value in this county. Lands are worth in the best part of the county from \$20 to \$50 per acre; on the Highlands, from \$2 to \$10 per acre. The Central Basin part of the county resembles Bedford in all except in the lack of cedar forests. The towns and postoffices are Woodbury, Auburn, Mechanicsville, Porterfield, Short Mountain, Prater, Leoni, Cateston, Burt, Bradyville, Burgen, Talome, Holly Springs, Broxton, Gason, Gassaway, Ingalls, and Sapolio. Public schools are established throughout the county.

CHEATHAM COUNTY.

Organized, 1856. *County seat*, Ashland. Population, 8,845; white, 7,297; colored, 1,548; percentage of whites, 82.50. Area, 370 square miles, or 236,800 acres; inhabitants to the square mile, 23.90; acres of improved land, 52,250; unimproved, 90,344. Taxable property in 1897, \$1,070,968; number of acres assessed, 221,334, valued at \$948,049; value per acre, \$4.28. Average elevation, 535 feet. This county lies below Nashville on both sides of the Cumberland River, and belongs to the Highland Rim; the soils on the uplands are siliceous and calcareous. For the most part the

NARROWS OF HARPETH, CHEATHAM COUNTY.



face of the county is hilly. Adjoining Robertson and Montgomery counties, the hill land is quite productive, yielding well corn, wheat, oats, and tobacco; while the valleys contiguous to the Sycamore, Half Pone, and Barton's creeks are rich, and produce fine crops. The north side of the river is mostly broken, and the hill land mainly valuable for the timber, though much of it is suited for tobacco. Few counties in Middle Tennessee are more densely timbered than Cheatham. The timber trees are: The various kinds of oak, hickory, poplar, walnut, cherry, and chestnut. The white oak, poplar, and hickory trees are very large and abundant. Shingles, boards, spokes, staves, timber for axe handles and axle trees, hoop poles and lumber of all sizes, are shipped in large quantities by river and by rail. The Marrowbone Creek bottoms are not so productive as those on the streams already mentioned. On the south of Cumberland, the land on Harpeth River is exceedingly fertile, and on Sam's and Brush creeks is good. A large powder mill is in operation on Sycamore Creek. This stream runs deeply below the general level of the country; the average depth of the creek basin being 140 feet. It falls rapidly, and affords many valuable mill sites. Harpeth River and its tributaries on the south side of the Cumberland have valuable water power. On Harpeth is a very valuable one, known as the "Narrows of Harpeth." The census of 1890 shows the following crops: Indian corn, 428,177 bushels, grown on 18,188 acres; wheat, 26,100 bushels, grown on 2,627 acres; oats, 74,900 bushels, grown on 3,983 acres; tobacco, 1,894,667 pounds, grown on 2,636 acres. On many of the valley lands, especially on Harpeth River and its tributaries, herd's grass, timothy, and clover grow with an exuberant productiveness. Peanuts find a congenial soil on the gravelly bottoms of the streams. Among the fruits, apples, pears, quinces, peaches, cherries, plums, and grapes are grown successfully. The soils of this county, especially those near the railroad, are admirably fitted for truck farming. Almost every exposure and every character of soil required for the growth of the different kinds of vegetables may be found; stiff, clayey soils for strawberries; light, sandy soils for tomatoes; strong, rich soils for beans and potatoes. All these occur, and frequently on the same farm. Live stock: Horses, 1,281; mules, 1,454; asses, 15; working oxen, 231; milch cows, 1,929;

other cattle, 3,134; sheep, 2,168; value of live stock, \$344,220. Iron ore occurs in the northern part of the county near the Montgomery County line. Building stone of good quality is found among the rocks of the Niagara formation, over which the railroad passes in Harpeth River valley. Hill land, unimproved, sells from \$3 to \$5 per acre. Improved land can be bought at from \$10 to \$15 per acre. Towns and postoffices are Craggie Hope, Kingston Springs, Pegram, and many



WATERFALLS AT MANCHESTER.

others. Facilities for transportation are furnished by the Northwestern Division of the Nashville, Chattanooga & St. Louis Railway. The public schools are fairly good, but would be greatly improved by a denser population. The school tax is 40 cents on the \$100 worth of property.

COFFEE COUNTY.

Organized, 1836. *County seat*, Manchester. Population, 13,827; white, 12,127; colored, 1,700; percentage of whites, 87.71. Area, 300 square miles, or 192,000 acres; inhabitants to the square mile, 46.09; acres of

improved land, 80,319; unimproved, 103,701. Taxable property in 1897, \$1,650,051; number of acres assessed, 255,049, valued at \$1,006,673; value per acre, \$3.95. Average elevation, 950 feet. This county forms part of the Highland Rim, a small portion of it around Beech Grove being in the Central Basin; the lands around Beech Grove are not surpassed in fertility by any land in the State; the country is beautifully diversified with hill and valley, abounding in springs of pure water; the soil is admirably adapted to the production of corn, wheat, rye, barley, oats, hemp, clover, timothy, herd's grass, and orchard grass; on the Highlands some of the very finest grades of yellow tobacco were grown during the years 1896 and 1897, near Tullahoma. The census of 1890 reports the following: Corn, 649,749 bushels, grown on 27,069 acres; wheat, 77,721 bushels, grown on 8,167 acres; rye, 6,493 bushels, grown on 1,046 acres; oats, 57,530 bushels, grown on 4,952 acres. There are 600 northern families who have settled in the county during the past six years, and they are making the white soils, hitherto deemed worthless for cereals, produce from 15 to 23 bushels of wheat per acre. The timber in the Basin is beech, oak, sugar tree, elm, ash, hackberry, black walnut, white walnut, cherry, mulberry, yellow poplar, pawpaw, black locust, honey locust, buckeye, linn, white and black haw; on the upland or "barrens" black jack and hickory are the most common growth. Land in the "barrens" is cheap, improved and unimproved from \$10 to \$2 per acre; in the Central Basin improved farms are worth from \$40 to \$35 per acre. The water power is as good as can be found in the State; the principal streams are Bark Camp Fork and Garrison Fork of Duck River. With the exception of some very good building stone, there are no minerals of value in the county. Some small deposits of iron ore have been found, but they are too small to justify mining at present. Aluminous shales occur, and, where exposed, as at Copperas Cave, copperas and alum are formed by their disintegration. Sulphur springs are common. Live stock: Horses, 3,165; mules, 1,539; asses, 62; working oxen, 258; milch cows, 3,002; other cattle, 5,137; sheep, 6,105; value of live stock, \$527,880. The towns, villages, and stations are: Tullahoma, on the main line; on the Sparta Branch are Hickerson, Belmont, Manchester, Wayside, Summitville, and others. Beech Grove is an important agri-

cultural center. The McMinnville Branch of the Nashville, Chattanooga & St. Louis Railway, and the main line of the Nashville, Chattanooga & St. Louis Railway, furnish ample means of transportation. Schools in Tullahoma are excellent; in the country districts public schools are taught from three to five months. The school tax is 30 cents on \$100 worth of property.

NOTE.—The growing of tobacco on the whitish lands around Tullahoma is a new industry, begun by Jas. G. Aydelott, J. D. Raht, and others. The type of tobacco



BARN FOR CURING YELLOW TOBACCO, TULLAHOMA. TENN.

produced has all the excellent qualities of the best North Carolina yellow tobacco. It is soft and silky, fine of fibre, and has the delightful rose flavor. It runs in color from a lemon yellow to orange, mahogany, and brown, and furnishes all the grades of the best North Carolina growth. This type of tobacco has no rival for pipe smoking, plug wrappers, and cigarettes. It has built up a durable prosperity in North Carolina, and will do the same thing for Coffee, Cheatham, Lewis, Hickman, Dickson, Humphreys, Wayne, and other counties having similar soils.

CUMBERLAND COUNTY.

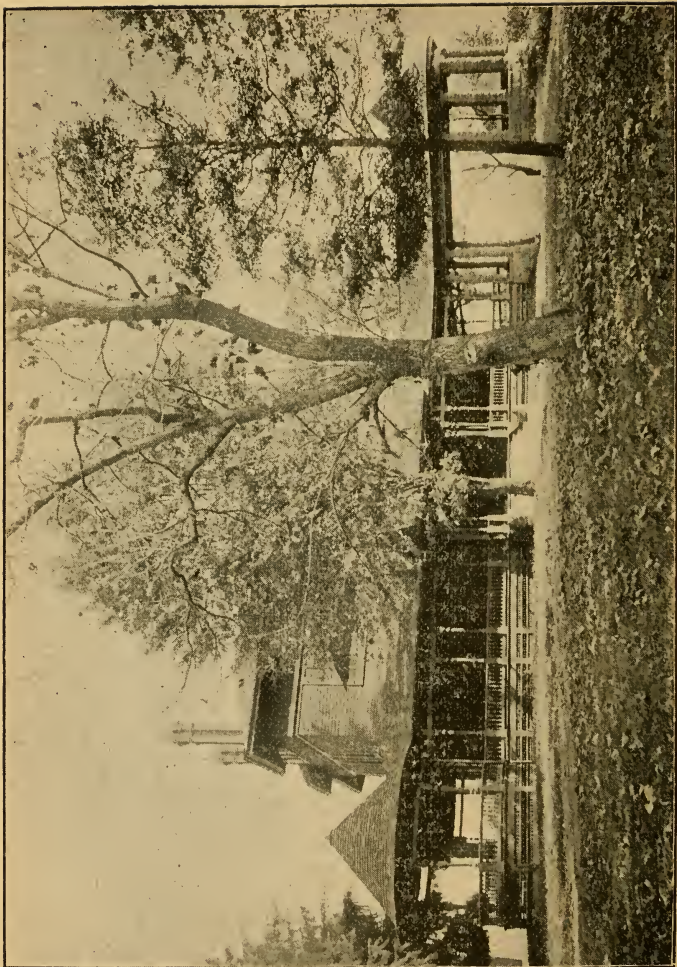
Organized, 1856. *County seat*, Crossville. Population, 5,376; whites, 5,323; colored, 53; percentage of whites, 99.01. Area, 690 square miles, or 441,600 acres; inhabitants to square mile, 8.08; acres of improved land, 21,289; unimproved, 119,141. Taxable property in 1897, \$957,868; number of acres assessed, 529,759 (by duplication, an excess of 178,485 acres over area); valued at \$917,711; value per acre, \$1.73. Average elevation, 1,800 feet. This is one of the counties of the Cumberland Table-land; drained by Big Emory and its tributaries, Daddy's Creek and Obey's River; Caney Fork flows through the western part of the county. With the exception of a small part of the head of Sequatchie Valley, this county lies on the Cumberland Table-land. The surface is generally level or undulating, and thinly wooded. In many places there are glades of greater or less extent, which are, in fact, small prairies, probably caused by annual fires, destitute of timber, and covered with coarse, rank grass. Besides the glades there are extensive flats covered mainly with post oak and black jack. The ridges and hills which, with few exceptions, are but little elevated above the general level, are often gravelly, and produce larger timber and a denser growth, among which are several varieties of oaks, chestnut, hickory, white poplar, pine, and sometimes elm and maple. The larger streams generally flow in narrow valleys below the general level, and the abutting hills are often rugged and steep. Crab Orchard Mountain has an elevation of 1,000 feet above the mountain plateau on which it rests, being in fact a mountain on top of a mountain. Beginning near Big Emory River, it extends southwestwardly, rising gradually until an elevation of 1,000 feet above the Table-land is attained above Crab Orchard Gap, through which the road from Crossville to Kingston passes. At this gap it is cut completely in twain, leaving room for a large farm between the abutting ends. Continuing its course in the same direction, but having a less elevation, it is abruptly cut into at another point from the last by Grassy Cove. This cove is one of the most remarkable topographical features of the Table-land. Here we have between the two opposing ends of the mountain a beautiful and fertile valley eight miles in its greatest diameter from northeast to southwest, and four miles

wide. It is depressed 300 feet below the average elevation of the Table-land, by which it is completely surrounded. Crab Orchard Mountain, beginning again at the southwest end of the cove, continues in a direct line to its abrupt termination at the head of Sequatchie Valley. About three miles of the head of Sequatchie Valley are included in Cumberland County, which is the only part of the county not on the Table-land. Though comprising but a small part of the area, it contains a very large part of the population and wealth. The soil is light, porous, sandy, and unproductive for cereals. The census of 1890 shows that 99,744 bushels of Indian corn were grown on 7,700 acres; 1,422 bushels of wheat, grown on 224 acres; 17,421 bushels of oats, grown on 2,170 acres. Live stock: Horses, 888; mules, 353; asses, 11; working oxen, 421; milch cows, 1,839; other cattle, 4,608; sheep, 8,372; value of live stock, \$206,800. This county is famous for its fine apples, pears, and fruits generally. It may be said with truth that there are not 20,000 acres of land in the county that are not underlaid with excellent coal. Every stream in the county that furrows its way to the lower strata exposes seams of coal. There are large outcrops of coal on Meadow Creek, Laurel Creek, Potts Creek, Daddy's Creek, Obed River, Clear Creek, and on many others. The character of the coal is very pure, and a good coking coal, but rather soft for stocking. It is said, however, that the coal taken from Brown's Bank bears stocking well, and is from 10 to 12 feet thick. Iron ore exists near the head of Sequatchie Valley. The lands are very cheap, down as low as two dollars per acre. The towns, villages, and stations are Pomona, Winesap, Burke, Jewett, Vendie, Big Lick, Grassy Cove, Mt. Gilead, Erasmus, Pleasant Hill, Crab Orchard, Northville, Howard Springs, Crossville, Lantana, and many others. The sparseness of the population has made it impossible to establish many good schools in the county. The public spirit of the citizens, however, is very high, and the schools will increase in efficiency as rapidly as the population increases. The school tax is 60 cents on \$100 worth of property. There is a large school, with excellent buildings, established at Pleasant Hill. Pomona is the center of the fruit industry, and is settled up by people of education, refinement, and culture. (See "fruits" in another place.)

DAVIDSON COUNTY.

Organized, 1783. *County seat*, Nashville. Population in 1890, 108,174; white, 66,612; colored, 41,549; all others, 13; percentage of whites, 61.59. Area, 508 square miles, or 325,120 acres; inhabitants to the square mile, 212.53; acres of improved land, 170,923; unimproved, 110,872. Taxable property for 1897, \$46,949,480; number of acres assessed, 308,631; valued at \$8,487,100; value per acre, \$27.49. Average elevation, 485 feet. The topography of the county is greatly diversified. In the northern part the surface is a series of high, poor, gravelly, siliceous spurs, jutting out from the Highlands, with minor spurs shooting out from the main axis almost as numerous as the branches of a tree. A bold ridge runs north and south for a few miles, and culminates in Paradise Hill, from which the waters flow in every direction. All that portion of the county embraced between White's Creek and the Cheatham County line is rugged, and has thin soils, except the river and creek bottoms, and some of the uplands near the Cumberland River. East of White's Creek, and embraced between that stream and the Cumberland River, on the east and south, the surface is quite hilly, though it is not so broken as that west of that creek. The soils on White's Creek are well adapted to the growth of the cereals or to blue grass. East of it there are some good, warm valley lands, with occasional ridges or spurs too steep for cultivation. The soil is mulatto in color, with many surface rocks, and grows corn, wheat, potatoes, and clover well; but it does not have the capacity to resist a drouth. The soil in a portion of Neely's Bend is dark in color, and produces the grasses abundantly. South and southwest of the city of Nashville is a series of rounded hills, sweeping in almost a semicircle about the city. These hills are very beautiful and symmetrical in form, and rise very gracefully to the height of 150 or 200 feet. Between these hills and the city the soil is mulatto in color, and rests upon a bed of limestone that comes very near the surface, and makes the soil, though rich, comparatively worthless, except on level places, because of a lack of depth. Taking the Cumberland River opposite Bell's Bend as the starting point, with Nashville as the center, and describing a segment of a circle to Mill Creek, it will inclose a body of very fertile land, with

the exception of the thin soils immediately around Nashville. This area grows a large quantity of all the crops cultivated in the Central Basin. This section embraces the best blue grass lands in the county. The native growth is poplar, walnut, maple, linden, hornbeam, buckeye, and several varieties of oak. On the west, Harpeth ridge, running east and west, comes in. South of Harpeth River the land is, for the most part, high, rolling, and thin, though there are some excellent bottoms on the river. East of Mill Creek, and south of the Cumberland, are found the best soils in the county for cotton, wheat, and clover. The color of the soil is mulatto, except in the alluvial bottoms. The timber consists mainly of poplar and white oak, with some maple and walnut. The soils may be put into three classes: (1) Siliceous, which is found on the spurs, and more especially in those portions of the county where the sub-carboniferous formations prevail; (2) the limestone soil proper, which constitutes three-fifths of all the soils in the county; (3) the alluvial, which occurs on all the streams. The siliceous soil is of a brownish yellow color, with abundant gravel in its composition, and it is often underlaid by sandstone. The native growth upon this is poplar, walnut, chestnut, beech, and oak. The heaviest and best timber in the county is found on this soil. It is especially adapted to the growth of fruits, watermelons, peanuts, and cotton. The soils of the second class are considerably mixed with arenaceous material, and are light, porous, and easily worked. They vary in color, constitution, and capacity. Upon these soils grow nearly all the blue grass and other grasses of the county, except herd's grass, which does better on the alluvial and siliceous soils. The soils of the third class are variable in their composition. Sometimes they are very clayey, and then they are stiff, and work badly, and are subject to great cracks during a drought. Other alluvial soils are sandy, and will not produce well during a dry season. When the sand and clay in these soils are mingled in proper proportions, they form the most productive and most durable soils to be found in the State. Lumber trees, except on the ridges, are growing scarce. The most valuable varieties, such as cedar, walnut, oak, sugar tree, poplar, and hickory have been picked over so often that what remains standing is very inferior. There are, on the Cumberland River and Harpeth River hills, some few

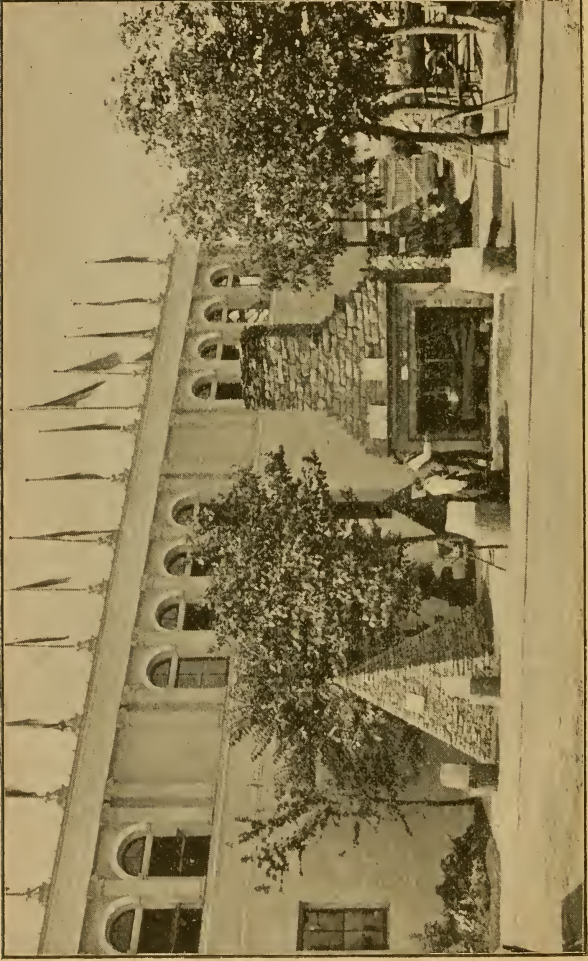


MELROSE, A COUNTRY SEAT NEAR NASHVILLE, TENN.

bodies of good timber, such as poplar, ash, hickory, chestnut, hornbeam, elm, and honey locust still standing, but they stand like the surviving members of a once powerful race, impossible to resist the demands or to stay the hand of a vigorous civilization. The farms of Davidson County rank very high, not less for the character of the improvements than for the fertility of the soil. The farm houses in many portions of the county are models of convenience, elegance, and comfort. The farms are oftentimes inclosed with rock walls, built at a cost equal, in many cases, to more than the original cost of the farm. The breeding establishments around Nashville are famed throughout the United States; many of them are well known in Europe for the high character of the stock, and the perfect fairness and integrity of their management. Racing and trotting horses, all the better breeds of asses, cattle, sheep, and hogs are found in Davidson County. As a stock producing county, it takes the first rank among all the counties in the State. Indeed, it may be said that the value of the live stock in one of the best of these breeding establishments would probably equal or surpass in value the stock in any one of a majority of the counties in the State. Statistics of live stock for the census year, 1890, reports: Horses, 7,797; mules, 4,056; asses, 242; working oxen, 57; milch cows, 8,545; other cattle, 9,547; sheep, 10,536; value of live stock, \$1,652,120. Dairy farming is claiming the attention of a large number of people in the county, and it is proving to be one of the most profitable branches of rural economy. The many cool springs of sparkling water, the length of time that green forage may be obtained, the perfect adaptability of the soil to the growing of grasses, and the excellent home market for the products of the dairy, induce many persons to engage in this business. Truck farming also plays a prominent part in the agriculture of the county. Strawberries are grown for the local market and for shipment. Irish potatoes have become a leading field crop. The census of 1890 reports the following crops: Wheat, 209,328 bushels, grown on 14,198 acres; corn, 1,220,672 bushels, grown on 41,731 acres; oats, 176,132 bushels, grown on 8,774 acres; cotton, 69 bales, produced on 363 acres. The tendency towards the cultivation of the smaller fruits and vegetables is illustrated by the fact that cotton has almost ceased to be grown in the county.

One-third of all the milk sold in the State, and one-fourth of all the butter made in 1879, were produced in Davidson County. The price of lands is very variable. Near the city of Nashville the prices have been much advanced during the past ten years by a speculative demand. Lands within five miles of Nashville rarely sell for less than \$50 per acre, and often for \$100. Beyond that distance good small farms are held at \$30 to \$60 per acre, and when well improved a much higher price is asked, especially if the land lies on any of the railroads or turnpikes leading into the city. In the extreme northern part of the county, fairly productive lands may be bought for \$15 per acre, and even less, when the improvements are not good. It is impossible, however, to give any information about the price of land in Davidson County that will be sufficiently accurate to satisfy the intending immigrant. He should make a full investigation for himself. So many extraneous matters other than its agricultural adaptabilities influence the price of land near large growing cities, that the question of fertility becomes a minor one. From its first permanent settlement in 1779, Nashville has been a noted place, not less by reason of the fertile country that surrounds it than by its central position as a great distributing point. In the decade between 1830 and 1840 it was the center of the political influence of the United States. The population of the city is estimated to be 100,000 in 1898. No place, in proportion to population, has reached a higher position in an educational point of view. There are about seventy-five schools in the city, ranging from the kindergarten to the university, to which students from every part of the county flock to be educated in the arts, sciences, and professions. Not less than \$500,000 annually are brought into the city by students who come from other localities. There are twenty public school houses in the city, many of them are architecturally beautiful, and they are supplied with every modern convenience and comfort. The amount disbursed for city schools in 1897 was \$169,271. Among the most notable institutions of learning in Nashville are Vanderbilt University, Peabody Normal School, the Nashville College for Young Ladies, Ward Seminary, St. Cecilia, Boscobel College, Montgomery Bell Academy, Wharton's Academic School, Wallace's High School. These are all for white students. Fisk University, Roger Williams University,

and Central Tennessee College are high grade institutions for the negroes. There are several medical schools and business colleges in the city all receiving good patronage. Tennessee School for the Blind, and Tennessee School for Deaf and Dumb, are within the corporate limits, and near the city there is an Industrial School supported by the State. The school tax is 25 cents on \$100 worth of property, besides the city tax. There are some excellent building stones to be found in the county, the best of which is known as the Bosley stone, quarried quite extensively in the tenth and eleventh districts. It is a compact limestone, light gray in color, of fine texture, and is easily worked. It has been used in making the fronts of some of the best buildings in Nashville. This stone is also quarried in Bell's Bend, below Nashville. Some fossiliferous red hematite iron ore is found in the hills north of Nashville. Analyses show it to contain only about 22 per cent. of metallic iron, but as it forms a combination with the carbonate of lime, it may become valuable as a flux for richer ore, and supply at the same time iron ore enough to justify the outlay for mining. Some phosphates are also found in the county, but they are not yet mined. On the main line of the Nashville, Chattanooga & St. Louis Railway are Nashville, Glen Cliff, Curry, Asylum, Antioch, Mt. View, Kimbro, Lebanon Junction. On the Northwestern division: Hardings, Vaughan's Gap, Hicks, Bellview, Newsom's Station. On the Lebanon branch: Eastin, Mill Creek, Mud Tavern, Donelson, Hermitage. On the West Nashville branch: West Nashville. Other places not on this line are Baxter's, Overton's, Paragon Mills, Una, Couchville, White's Creek, Maplewood, Madison, Edgefield Junction, Goodlettsville, Baker, Old Hickory, Eaton's Creek, and some smaller ones. The Decatur Division, the Henderson Division, and the main stem, all of the Louisville & Nashville Railroad; the Lebanon Branch, the main stem, Northwestern Division, and the West Nashville Branch, all of the Nashville, Chattanooga & St. Louis Railway, furnish ample facilities for transportation. Cumberland River, upon which Nashville is situated, furnishes water transportation nine months in the year to all points lying on water lines in the Mississippi Valley. The damming and locking of the river above Nashville by the general government will make the stream navigable for the greater part of the year.



OUTSIDE EXHIBIT, N., C. & ST. L. RAILWAY, TENNESSEE CENTENNIAL.

The Centennial Exposition, held in Nashville in 1897, from May to October, inclusive, was one of the grandest civic events in the history of the State. It caused fully 750,000 people to visit the city. The exhibit of the Nashville, Chattanooga & St. Louis Railway was regarded as one of the best ever made of the resources of a country. This exhibit is still kept as an object lesson in Nashville for all homeseekers visiting the South.

On the beautiful range of hills that girdles the city on the south, the battle of Nashville was fought on the sixteenth day of December, 1864, Gen. Thomas commanding the Federals and Gen. Hood the Confederates. Gen. Hood's army was practically destroyed by this battle. It was the last of the famous campaign, during which Gen. Hood lost fully 30,000 men. There is a Federal cemetery within six miles of Nashville, where 16,526 Federal soldiers lie buried. It is a lovely spot in the midst of a landscape possessing rare rural beauties. The Hermitage, twelve miles from Nashville, on the Lebanon Branch, the former home of Andrew Jackson, is a place that every patriotic citizen loves to visit, whether he lives in the North or in the South, for while he was a southern man he gave utterance to the sentiment "The Union must and shall be preserved." The tomb of Jas. K. Polk, on the Capitol grounds in the city, is also an object of interest to all visitors. During his presidency nearly one million square miles were added to the national domain.

THE WHOLESALE TRADE OF NASHVILLE.

A request was made of Mr. Charles W. Harmon, Superintendent of Bradstreet's Agency, in Nashville, for statistical data concerning the wholesale trade of Nashville, which brought forth the statement that the estimated volume of Nashville's traffic has decreased in the last twenty-five years along the following lines, namely: Cotton, dry goods, leaf tobacco, liquors, groceries, drugs, clothing, cigars and tobacco, books and stationery. There has been a material increase in the lines of stoves, coal, tinware, paper, saddlery, lumber, millinery, shoes, hardware, and live stock.

Mr. Harmon shows that the annual wholesale trade of Nashville amounted, at the close of 1897, to \$40,185,000, distributed as follows:

| | |
|------------------------------------|--------------|
| Dry goods and notions | \$ 2,500,000 |
| Groceries | 4,750,000 |
| Shoes | 2,500,000 |
| Liquors | 950,000 |
| Hats | 300,000 |
| Hardware | 1,650,000 |
| Drugs | 1,000,000 |
| Clothing | 925,000 |
| Flour and grain | 6,000,000 |
| Cigars and tobacco | 1,000,000 |
| Live stock | 2,250,000 |
| Stoves and tinware | 960,000 |
| Furniture | 500,000 |
| Paper and manufacture of books.... | 950,000 |
| Saddlery | 475,000 |
| Other manufactures | 5,000,000 |
| Produce | 500,000 |
| Millinery | 275,000 |
| Coal | 500,000 |
| Hides | 200,000 |
| Lumber | 2,500,000 |
| Beer | 500,000 |
| Unclassed | 4,000,000 |
| | \$40,185,000 |

There are 120 churches in Nashville, eighty for the white population and forty for the colored population. There are four cotton mills, with an invested capital of \$1,500,000; number of spindles, 51,000; number of looms, 1,500; number of operatives, 1,500; annual production, 20,000,000 yards of cloth, besides cotton yarn. There are five flouring mills, with a daily capacity of 5,550 barrels of flour and 1,500 barrels of meal. Phillips & Buttorff Company has invested \$750,000 in the manufacture of stoves, mantels, and tinware, and employs 650 hands, and turns out over \$50,000 of hardware and tinware annually. It is the largest concern in the South for the manufacture of hollow ware. There are three National Banks, and four other institutions doing a banking business, whose combined capital aggregates \$3,175,000, with a surplus of \$425,000. Other financial agencies aggregate \$250,000.

DEKALB COUNTY.

Organized, 1837. *County seat*, Smithville. Population, 15,650; white, 14,462; colored, 1,188; percentage of

whites, 92.41. Area, 300 square miles, or 192,000 acres; inhabitants to the square mile, 52.16; acres of improved land, 87,170; unimproved, 99,116. Taxable property for 1897, \$1,579,315; number of acres assessed, 241,960; valued at \$1,274,395; value per acre, \$5.26. Average elevation, 650 feet in the Central Basin portion and 900 feet on the Highlands. About two-thirds of this county lies on the Highland Rim, the remainder being in the Central Basin part of the county, and in the lands occupy the eastern and northern part of the county. The surface of the county is gently undulating, the beds of the streams are depressed but little below the general level. The western part of the county embraces several valleys of considerable size, and of great agricultural value, separated from each other by irregular ranges of hills, and there are isolated peaks and short ridges, some of which mount up to a level with the Highlands. The soil of the Highlands is siliceous, and when resting upon a red clay subsoil is very fertile. The timber of the Highlands is small, and not very dense, and includes post oak, small white oak, black oak, and hickory. The timber in the Central Basin part of the county, and in the valleys, where not culled, is thick and heavy. Poplar, beech, sugar maple, ash, linden, walnut, and many other varieties furnish a large amount of excellent timber for saw mills. The best timber, which was once near the streams, has been cut off, but there is still a bountiful supply on the slopes of the hills, and in the back valleys and coves. The county is well watered by Caney Fork and its tributaries. Some of the tributaries of Caney Fork are noted for the beautiful water falls. One of these is on Fall Creek, near Smithville, Tenn., in which the water is precipitated over a bluff to the distance of 93 feet. The falls are caused by the descent from the Highlands to the arms of the Central Basin. The census of 1890 shows the following crops: Indian corn, 901,345 bushels, grown on 32,094 acres; wheat, 104,947 bushels, grown on 12,670 acres; oats, 34,541 bushels, grown on 3,448 acres; rye, 4,739 bushels, grown on 736 acres; tobacco, 28,500 pounds, grown on 48 acres. Live stock: Horses, 3,875; mules, 2,039; asses, 62; working oxen, 703; milch cows, 2,840; other cattle, 4,546; sheep, 7,520; value of live stock, \$670,990. On the eastern side of Caney Fork, near the dividing line between this county and White, there are some beds of iron ore. The ore, a brown

hematite, was worked many years ago to some extent in a forge on the opposite side of Caney Fork. No extensive prospecting has been done to ascertain the quantity. Should an extensive deposit be found in this county, it would have special value on account of the proximity of coking coal. There are several good sulphur springs in the county. In caves and "rock houses" that occur frequently there are efflorescences and incrustations of alum and copperas. The valley lands are held at high figures, from \$25 to \$35 per acre. The knobby lands sell at prices varying from \$10 to \$15. The flat lands of the Highlands may be bought at from \$2 to \$5 per acre. The towns and postoffices are: Smithville, Alexandria, Liberty, Laurel Hill, Holmes Creek, Crawfordtown, DeKalb, Magness Mills, Hicks, Mount Sterling, and many others. There are no railroads at present in DeKalb County. The public schools of DeKalb County are improving annually. Better teachers are now employed than formerly, and more pride is taken by the citizens in building up a better system of schools. The county is liberal in its appropriation to schools. The school tax is 30 cents on \$100 worth of property.

DICKSON COUNTY.

Organized, 1803. *County seat*, Charlotte. Population, 13,645; white, 11,493; colored, 2,152; percentage of whites, 84.23. Area, 630 square miles, or 403,200 acres; inhabitants to square mile, 21.65; acres of improved land, 75,493; unimproved, 164,244. Taxable property in 1897, \$1,388,000; number of acres assessed, 292,981; valued at \$1,015,915; value per acre, \$3.46. Average elevation, 825 feet. This county is situated on the Highland Rim; its surface is mainly high tableland, cut or gashed by numerous creek valleys; the soil is siliceous and calcareous, moderately fertile, and grows tobacco, corn, wheat, oats, rye, potatoes, peanuts, and fruits in remunerative quantities. Many fine farms lie in the creek and river basins. The principal streams in the county are Harpeth River and its tributaries, Jones' Creek and Turnbull Creek; Yellow Creek and Barton's Creek, tributaries of the Cumberland; Pine Creek, Cedar Creek, and Blue Creek, tributaries of Duck River. Improved tillable lands are worth from \$6 to \$10 per acre; creek and river bottom farms from \$20 to \$30; unimproved lands from \$2 to

\$5. The principal forest growth on the plateau uplands is post oak, red oak, and hickory. In the valleys excellent poplar trees are met with, and some walnut. Black gum, white oak, beech, and sycamore are also common trees in the river basins. On the slopes many chestnut trees and chestnut oaks are found, besides a good growth of red and black oak. The census of 1890 shows that 598,267 bushels of Indian corn were grown on 24,483 acres; 28,890 bushels of wheat were grown on 3,871 acres; 104,846 bushels of oats were grown on 8,416 acres; tobacco, 388,613 pounds, were grown on 572 acres. Peanuts are extensively cultivated when the price of the product justifies it. Sorghum is made and sold in considerable quantity. This county can grow successfully all the crops grown in the State. Live stock: Horses, 2,120; mules, 2,253; asses, 33; working oxen, 575; milch cows, 3,435; other cattle, 6,187; sheep, 5,903; value of live stock, \$523,930. Dickson County has been famous for nearly a century for the character and extent of its iron ores. The deposits are numerous, extensive, and rich. Those around Cumberland Furnace are the largest, and from their extent and depth appear to be well-nigh inexhaustible. Other banks are near the line of railroad at Old Worley furnace, not far from Dickson Station, and south of it. Numerous other banks occur north of the railroad on Yellow Creek, and south of Charlotte. No furnace is now in operation in the county, but the company controlling the Cumberland Furnace property has, within recent years, erected a new 45 ton furnace. Some petroleum has been found in the county. The towns and villages on the main line are: Tennessee City, Dickson, Colesburg, Burns, White Bluff. On the Centreville Branch, in this county, are the following stations: Pomona, Tidwell, Iron Hill, and Abiff. There are many other towns and villages. Charlotte has a population of 427, and Dickson 2,500. The Northwestern Division and the Centreville Branch of the Nashville, Chattanooga & St. Louis Railway, and the Mineral Branch of the Louisville & Nashville Railroad, furnish the means for transportation. Cumberland River supplies water transportation to a part of the county. The public school interest is growing rapidly among all classes of citizens. There were 88 public schools in the county in 1895. A large normal school, in the town of Dickson, is well equipped for

educational work, and has an attendance of several hundred pupils. The school tax is 30 cents on the \$100 worth of property. Many northern immigrants have settled in this county, and have done well.

FRANKLIN COUNTY.

Organized, 1807. *County seat*, Winchester. Population, 18,929; white, 15,313; colored, 3,610; all others, 6; percentage of whites, 80.87. Area, 590 square miles, or 377,600 acres; number of inhabitants to square mile, 32.1; improved land, 113,679 acres; unimproved, 132,898. Taxable property in 1896, \$2,185,061; number of acres assessed, 339,321; valued at \$1,522,481; value per acre, \$4.48. Average elevation in valley, 869 feet; on the mountain, 1,750 feet. That portion of the county which lies on the Cumberland Table-land is generally slightly rolling, though there are deep gorges cut by the streams that rush down from the mountain. The slopes of the mountain are usually steep, and roughened with great masses of sandstone that in time have been broken off from the heavy sandstone beds above and rolled down on the benches and sides of the mountain. About half way from the top of the mountain to the valley below, heavy beds of mountain limestone appear. Many narrow strips or benches on the face of the mountain occur that are very fertile. Beautiful level coves notch the mountain sides. These coves constitute some of the best lands in the county. Reaching the foot of the mountain, the surface is comparatively level, except near the stream beds, where it is more broken and irregular. The soils of the mountain top, resulting mainly from the disintegration of sandstone, are deficient in calcareous matter. (See "soils.") They are lean, porous, and hungry. They are not well adapted to field crops generally. There are, however, a few basins in which, owing to the accumulation of vegetable humus, the soil is fairly productive in wheat, corn, rye, sorghum, and other crops suited to the latitude. But such spots are rare. For the growing of Irish potatoes, cabbage, and garden vegetables, grapes, and apples, these sandstone soils have been found to be very generous, and especially when they rest upon a thick bed of clay so as to throw the underlying sandstone five or six feet below the surface. The soils on the benches of the mountain, made up of calcareous matter

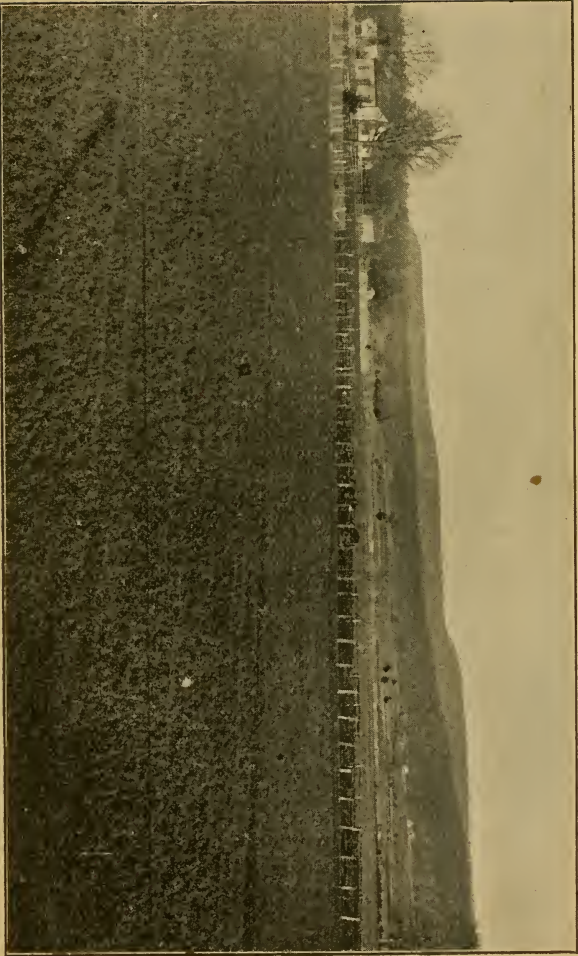
derived from the underlying limestone and the sandy detritus, that has washed down from above, have a wonderful power of production. They are very loose, and easily tilled, and, what is peculiar, the surface containing such soils rarely wash. Running along the northwestern base of the mountain is a wide belt of characteristic red land, furnishing a fine agricultural region. This belt belongs to what is known as the lithostrotion bed of the sub-carboniferous, which is the upper layer of the siliceous group. Wherever this bed is found, whether in East Tennessee, in Warren,



BIG FLOURING MILL, ESTILL, TENN.

White, Putnam, Robertson, Montgomery, Stewart, or elsewhere on the Highland Rim, the soils are excellent in quality, and very durable. The fine river lands of Elk River, which flows through the county from northeast to southwest, paralleling, to some extent, the trend of the table-lands are by many thought to be the most desirable in the county. Northwest of the red belt are what is known as the "barrens," where the soil is gray in color, and comparatively sterile. The soil will not grow Indian corn well, but recent experiments show that it will grow wheat in paying

quantities, and also a fine quality of tobacco, and for oats and orchards it does admirably. Probably the densest bodies of timber in Middle Tennessee are found on the slopes of the mountains in Franklin County. Very large poplar, hickory, white oak, black gum, and red oak are grown on these slopes. Formerly there was a large amount of walnut, but this has been exhausted. On the top of the mountain some good timber trees are found, mostly black gum, hickory, white and red oak, chestnut and chestnut oak hemlock. Here and there a body of pine occurs, and sometimes poplars, scattered through the forests, especially on the northern side of the slopes. In the red land belt, at the foot of the mountain, the timber is not large, but serviceable for fencing and fire wood. It is very small in the barrens, and the woods are open, making this portion of the county valuable for highway pasturage. Altogether valuable lumber trees are growing scarce in the county. Franklin County is well watered; the Elk, which is the arterial stream of the county, has numerous tributaries, many of them furnishing superb water power. The largest flouring mill in the United States for grinding winter wheat is driven by the water power of Elk River, at Estill Springs. This has a capacity of 2,500 barrels of flour per day. Lands vary widely in price. There are farms that cannot be bought for \$50 per acre, while there are others that may be bought for \$3 per acre, so great is the difference in the soil and locations. The census of 1890 shows that Indian corn, 810,173 bushels, were grown on 37,759 acres; wheat, 162,256 bushels, grown on 15,472 acres; oats, 73,057 bushels, grown on 6,208 acres; cotton, 113 bales, grown on 758 acres. There is probably but one other county in the State where more fruit is grown for market. Apples, especially in the coves and on the benches of the mountains, are grown in great abundance, and marketed in the fall and winter. Live stock: Horses, 3,359; mules, 2,044; asses, 78; working oxen, 338; milch cows, 3,790; other cattle, 6,466; sheep, 3,794; value of live stock, \$578,940. Coal is found in workable quantity underlying that portion of the county embraced by the Cumberland Table-land; some variegated marble is found, and excellent reddish and buff colored sandstone for building purposes; lithographic stone and hydraulic cement exist on the slopes of the mountain. Farms in the coves range from \$20 to \$40 per



FARM SCENE, BELVIDERE, FRANKLIN COUNTY.

acre; in the red land belt from \$20 to \$50; in the valleys of Elk River and Crow Creek from \$25 to \$40. Barren woodlands are worth from \$2 to \$3, and mountain lands about the same. Towns, villages and stations on main line are: Estill Springs, Decherd, Cowan, T. C. Junction, Sherwood, and Anderson. On the Fayetteville Branch are Winchester, Kasserman, Belvidere, Maxwell, Beans Creek, Huntland. On the Tracy City Branch, in the county, are: Sewanee and Monteagle. The Tracy City Branch of the Nashville, Chattanooga & St. Louis Railway, and the Fayetteville and Huntsville Division of the same line, also the main stem of the Nashville, Chattanooga & St. Louis Railway, furnish the means of transportation. The most flourishing colony of northern people in the South is established around Belvidere, in this county. They bought red lands that had been so much exhausted by the growing of cotton that four bushels of wheat and ten bushels of corn could with difficulty be produced on them. These were improved from year to year by judicious methods, and now it is not unusual for thirty bushels of wheat and sixty bushels of corn to be grown on the same lands. Originally purchased for \$6 to \$8 and \$10 per acre, they are now worth from \$30 to \$50 per acre, and there are but few of those occupied by the colonists for sale at any price. Many new citizens are settling in this county on the red soils, and are delighted with their homes. There are few, if any, counties outside of the metropolitan counties that have so many excellent schools as Franklin. Terrill College is a model, and has turned out more successful teachers for the time it has been in operation than any other normal school in the State. Forty cents on the \$100 is voted for school purposes. The county is famous for its sulphur springs. Estill Springs, Eastbrook Springs, Cascade Springs, Hurricane Springs, and many others, supply various kinds of sulphur water, but the green sulphur water is thought to be a specific for gall-stone and stomach troubles.

GRUNDY COUNTY.

Organized, 1844. *County seat*, Altamont. Population in 1890, 6,345; white, 5,909; colored, 436; percentage of whites, 93.13. Area, 400 square miles, or 256,000 acres; inhabitants to the square mile, 15.86. Taxable property in 1897, \$881,204; number of acres assessed,

305,262; valued at \$548,403; value per acre, \$1.79 (the number of acres assessed is 64,669 more than the estimated area of the county). Average elevation on mountain, 1,850 feet. The top of the mountain is usually rolling, and sometimes flat. Occasionally, elevations rise several hundred feet above the general surface. In the vicinity of streams, the surface becomes much broken by deep "gulfs." On the slopes of the mountain, where it breaks off into the lowlands, there is great ruggedness of the surface. Some of the wildest gorges in the State are to be met with along the streams, perfect pictures of untamed nature, and embellished by numerous and various evergreens. Large boulders of sandstone have become detached, and tumbled down on the sides of the mountain, in such abundance, as to make it the roughest part of the county. In the coves which scallop, in part, the western side of the county, the surface is level. The head waters of Collins, Sequatchie, and Elk rivers are also in this county. Many of the streams on the top of the table-land have sufficient volume for milling purposes, such as the Fiery Gizzard and Fire Scald. These mountain streams are very rapid, having perpendicular falls sometimes of thirty or more feet, especially where they begin to descend into the valleys. The soils of the mountain top are generally of a sandstone origin, and are lean, thirsty, and poor, but they are well-adapted to the growth of fruits and vegetables, where the rock is not too near the surface. There are some elevated bottoms that will produce corn and wheat when well drained. The benches on the sides of the mountain, where the soil is an admixture of the weathering of the mountain limestone and of the sandstone, are highly productive of Indian corn, oats, and sorghum. The cove lands are very productive when well drained. Sometimes, however, these coves are water bound, and the soil then becomes "crawfishy" and unproductive. The slopes of the mountain, and the sides of the deep "gulfs," that appear at irregular intervals throughout the county, are densely wooded with yellow poplar, sugar tree, white and black oak. On top of the mountain there are two kinds of timber of much value, the yellow pine and chestnut, both growing in some quantity. Black gum is also of frequent occurrence. There are also on the mountains much white oak and red oak of a size to make cross-ties for railroads, and the getting out of

these cross-ties gives employment to many persons living on the mountains. The census of 1890 shows the following crops: Indian corn, 93,135 bushels, were grown on 5,691 acres; wheat, 6,894 bushels, were grown on 912 acres; oats, 9,749 bushels, were grown on 992 acres. Sorghum is largely cultivated in proportion to population. Fruit is also grown extensively. Apples do remarkably well on the mountain tops, and peaches in the coves. Grapes are grown about Tracy City, and on the lands of the Swiss colony at Gruetli. A very good wine is made, by the Swiss settlers, from the native grapes and from those planted by the colony. At this colony the best practical tests have been made of the capabilities of the mountain sandstone soil. Herd's grass and orchard grass, under the management of the Swiss farmers, grow with a surprising luxuriance. The former fruitless wilderness is crowned with orchards and gardens, with meadows and rich fields of clover, rye, and even wheat. The yield of rye has been brought up to about 18 bushels to the acre; wheat, 10 to 12 bushels; Indian corn, under the best cultivation, 20 bushels. Oats make a better return than any of the other cereals, reaching, in some instances, 38 bushels per acre. Irish potatoes make an average yield of about 30 to 40 bushels per acre, and double this when the land has been properly fertilized. Millet is grown with profit. Tobacco of fine fibre and delightful flavor is grown for home consumption. Butter and cheese are made and exported in limited quantities. Mountain farms may be bought at prices ranging from \$4 to \$10 per acre. The farms in the coves are held at high figures from \$30 to \$50 per acre. Wild mountain lands are worth about \$2 to \$3 per acre. The census of 1890 reports live stock as follows: Horses, 628; mules, 232; asses, 6; working oxen, 230; milch cows, 918; other cattle, 1,872; sheep, 1,334; value of live stock, \$113,080. Coal is abundant in this county. At Tracy City 331,723 tons were mined in 1896, and there were 63,868 tons of coke made at the same place, where there are 444 coke ovens. The red and buff sandstone on the mountain is an exceedingly valuable building stone. Glass sand exists in many places. Tracy City, Altamont, Beersheba, Gruetli, Tatesville, and Tarlton are the principal towns and trading points in the county. The Nashville, Chattanooga & St. Louis Railway furnishes transportation by the Tracy City Branch, which leaves the main

line at Cowan, in Franklin County. The schools of Grundy County are improving from year to year. The school house presented by A. M. Shook to the citizens of Tracy City for a public school, is one of the handsomest in the State. Thirty cents on the \$100 is voted by the county for school purposes.

HICKMAN COUNTY.

Organized, 1807. *County seat*, Centreville. Population in 1890, 14,499; white, 11,729; colored, 2,770; percentage of whites, 80.90. Area, 610 square miles (less one district recently attached to Lewis County), or 390,400 acres; inhabitants to the square mile, 23.77; acres of improved land, 75,101; unimproved, 167,204. Taxable property for 1897, \$1,740,515; number of acres assessed, 407,827; valued at \$1,467,505; value per acre, \$3.59. Average elevation, 714 feet. This is one of the counties of the Highland Rim. Duck River flows in a westerly direction entirely through the county; its tributaries, Sugar Creek, Beaver Dam, Piney, Swan, Lick Creek, and Leatherwood, together with Cane Creek, a confluent of Buffalo River, supply every part of the county with living water. The surface of the county is usually broken, and composed of high rolling ridges and deep ravines, pointing generally toward the streams; some level, open barrens lie in the northern part of the county; the ridges are sterile and unproductive; soil siliceous, rocky, and thin, but spots occur upon which grow a rank, "barren" grass that sustains stock nine months in the year. The timber of the ridge is white oak, chestnut oak, red oak, black oak, hickory, and chestnut; in the valleys poplar, beech, maple, oak, black walnut, box elder, butternut, and red bud once prevailed in large quantities, but are growing scarce. Some rich areas of chocolate colored soil are found; this character of soil is greatly superior for the growth of clover. The census of 1890 reports Indian corn, 709,286 bushels, grown on 28,634 acres; wheat, 22,003 bushels, grown on 3,282 acres; oats, 78,994 bushels, grown on 5,535 acres; cotton, 204 bales, grown on 1,242 acres; peanuts, 44,285 bushels, grown on 1,306 acres. Hickman County, like all counties cultivated by white labor, is prosperous. The farms are usually worked well, and look well. They are generally small, and there are but few old fields turned out to grow up with broom grass, thorns,

and briers. Apples, pears, peaches, plums, and cherries grow and yield abundantly. The rich river and creek bottom lands command a good price, and sell from \$30 to \$50 per acre. The rich uplands are worth from \$20 to \$40 per acre. The hill and plateau lands may be bought for \$2 and \$3 per acre. The census of 1890 shows live stock as follows: Horses, 1,950; mules, 2,924; asses, 51; working oxen, 25; milch cows, 297; other cattle, 5,258; sheep, 6,613; value of live stock, \$577,060. Iron ore is abundant, and was worked for many years in three first-class charcoal furnaces. Phosphates have recently been discovered in that county in practically unlimited quantities. (See another part of this pamphlet for more details.) Centreville is the principal town in the county. Other villages are Warner Furnace, Lyle, Goodrich, Aetna, Cantrell, Graham, Pinewood, Sunrise, Jones' Valley, Little Lot, Graytown, Lick Creek, Little Rock Mills, Bluff Springs, Naomi, Pleasantville, Whitfield, Vernon, and Farmers Exchange. Duck River is floatable for logs and flat boats. A few small steamers have run up as far as Centreville. The Nashville, Chattanooga & St. Louis Railway, by its Centreville Branch, leaving the Northwestern Division near Dickson, furnishes the only railroad facilities. Public schools are growing in efficiency, and all prejudice once entertained against them has died out. Twenty cents on the \$100 is levied for school purposes.

HUMPHREYS COUNTY.

Organized, 1810. *County seat*, Waverly. Population, 11,720; white, 10,178; colored, 1,542; percentage of whites, 86.84. Area, 450 square miles, or 288,000 acres; inhabitants to the square mile, 26; acres of improved land, 67,724; unimproved, 170,426. Taxable property for 1897, \$1,406,529; number of acres of land assessed, 335,621; valued at \$1,083,924; value per acre, \$3.22. Average elevation, 450 feet; the hills rise to 700 feet. The topography of the county is varied—the surface being greatly carved by the numerous streams that flow into the Tennessee River. Living springs of water, pure and soft, are found everywhere. Duck River, the largest stream, is navigable for some distance from its mouth. The northern part of the county is a succession of creek basins and intervening ridges. Duck River valley is probably the best body

of land for growing Indian corn in the State. This valley, known as Big Bottom, contains 17,508 acres, and the exportation of corn from it annually varies from 150,000 to 200,000 bushels. The yield often reaches 75 bushels per acre. The hill lands are thin, and unproductive generally, the soil being largely composed of flinty gravel, but it is good for growing fine tobacco. The creek and river bottom have a rich, friable soil that may be cultivated every year without loss of fertility. The Duck River valley, as also Buffalo valley, overflows nearly every year, and a sediment several inches in thickness is deposited upon the land, keeping it up to the highest degree of fertility. The county abounds in the greatest variety of timber. Various kinds of oaks—white, red, black, and chestnut—exist in great abundance. There are also large quantities of hickory, ash, poplar, cherry, chestnut, black locust, hackberry, beech, and sycamore. Staves are made and shipped from this county for European demand. The census of 1890 shows the principal crops are Indian corn, 739,562 bushels, grown on 24,748 acres; wheat, 24,137 bushels, grown on 2,854 acres; oats, 56,680 bushels, grown on 4,233 acres; peanuts, 127,958 bushels, grown on 4,558 acres; tobacco, 22,202 pounds, grown on 37 acres. The hill lands are well adapted to all kinds of fruits grown in the State. Apples, peaches, pears, plums, cherries, and grapes grow well, and yield abundantly. There are many varieties of grapes native to the soil that flourish with astonishing vigor and fecundity. Muscadines are abundant also, and are juicy and well flavored, almost equaling in good qualities the far famed Scuppernong. It is believed by experts in vineyards and wine making that the hill lands of Humphreys will make a very high quality of wine. The census of 1890 reports live stock as follows: Horses, 1,689; mules, 2,296; asses, 38; working oxen, 425; milch cows, 2,890; other cattle, 5,694; sheep, 6,178; value of live stock, \$527,460. Some very promising indications of iron ore and good building stones are found in several places. These ores have never been examined with sufficient care to determine their extent and value. This county lies in the great Western Iron Belt, and beds of iron ore may be looked for with a reasonable expectation of finding deposits large enough to justify mining. Good bottom lands on Duck River are worth from \$75 to \$100 per acre, with the hill land adjoining thrown in. Bottoms on the Ten-

nessee River are not held at half these figures. Wooded uplands are worth from \$2 to \$5 per acre. Upland from \$5 to \$15. The towns and villages in this county are Johnsonville, Box, Waverly (county seat), Gorman, Briggs, McEwen, and many others. The Northwestern Division of the Nashville, Chattanooga & St. Louis Railway furnishes ample facilities for transportation by rail, and the Tennessee and Duck rivers by water. More attention is paid to public schools than formerly, demonstrated by the fact that 35 cents on the \$100 are paid to the school fund.

JACKSON COUNTY.

Organized, 1801. *County seat*, Gainesborough. Population in 1890, 13,325; white, 12,835; colored, 480; all other persons, 10; percentage of whites, 96.40. Area, 280 square miles, or 179,200 acres; inhabitants to the square mile, 47.22; acres of improved land, 84,479; unimproved, 100,495. Taxable property for 1897, \$1,059,159; number of acres of land assessed, 171,122; valued at \$939,400; value per acre, \$5.48. Elevation about 600 feet on the portion contained in the Central Basin, and 850 feet on the Highlands. A good idea may be gained of the topography of the county by supposing it originally to have been a high champaign region, through which the Cumberland River, flowing from northeast to southwest, has cut a deep, wide valley. The remainder of the county has been interveined with smaller streams running nearly at right angles to the course of the Cumberland River. This has given a wide valley with smaller valleys running into it, separated by high, gravelly ridges. The floors of minor valleys gradually ascend, and are finally merged into the flat highlands. The soils of the valleys are very fertile, and will produce in paying quantities all the crops that grow in the latitude. The ridge land soils are strong, but gravelly, and their surface is oftentimes too steep for tillage. The flat lands have a thin and unproductive soil, except where they have a deep red subsoil. Some of the latter are very fertile, and make the best tobacco lands in the county. The county is well watered by the Cumberland and its tributaries. The census of 1890 shows the following crops: Indian corn, 915,508 bushels, grown on 34,989 acres; wheat, 42,193 bushels, grown on 6,117 acres; oats, 67,270 bushels, grown on 5,699 acres; tobacco,

285,255 pounds, grown on 422 acres. Poplar, hickory, beech, oaks of several varieties, elm, buckeye, linden, and ash predominate. Most of the poplar trees near the river have been cut and shipped away, but there yet remain good supplies several miles back from the river. Walnut was once quite plentiful, but this has all been shipped out of the county, with the exception of some small and inferior trees. On the flat lands the timber is thin, and consists of post oaks, hickory, and red oaks mainly. The live stock is reported as follows, in the census of 1890: Horses, 2,538; mules, 1,433; asses, 38; working oxen, 1,296; milch cows, 2,906; other cattle, 4,144; sheep, 6,400; value of live stock, \$714,330. The richest river bottom farms are worth from \$30 to \$40 per acre. Other bottom lands range from \$20 to \$30 per acre. Upland farms sell at prices varying from \$5 to \$10 per acre. The towns and postoffices are Gainsborough (the county seat), Granville, Rough Point, Whiteville, North Springs, Mayfield, Flynn's Lick, and many others. The county has no means of transportation other than the Cumberland River. The nearest railroad is the Nashville & Knoxville Railroad, which passes through the adjoining counties of Smith and Putnam. The public schools are gradually gaining ground. Institutes are held every summer, and the teachers and people seem to enjoy them greatly. Only 20 cents on the \$100 was levied for the support of schools in 1895, according to the last official report published.

LEWIS COUNTY.

Organized, 1844. *County seat*, Hohenwald. Population, 2,555; white, 2,336; colored, 219; percentage of whites, 91.43. Area, 280 square miles, or 179,200 acres; inhabitants to the square mile, 9.12; acres of improved land, 11,108; unimproved, 38,603. Taxable property for 1897, \$452,383; number of acres assessed, 167,017; valued at \$407,568; value per acre, \$2.43. Average elevation on grade of railroad, 840 feet. This county is the best representative county of the ancient plateau, which formerly constituted the Highland Rim. For the most part it is nearly flat, except where the streams have cut grooves in the generally level surface. Near these streams the surface becomes rolling, and there are some steep bluffs bordering the streams. A mile or two out from the streams the lands become

flat, and the woods open. There is a strip of such land, about three miles wide, running diagonally through the county from southeast to northwest, covered for the most part with scraggy black jack oaks and barren grass. About fifteen streams either take their rise in the county or pass through it. The soils upon the flat lands are thin and leachy. Much of it will never repay cultivation, especially that which has a bluish subsoil with yellowish gravel. When the color of the subsoil is red; or yellowish red, and the clay tenacious, experience has demonstrated that it may be converted



TOBACCO AT HOHENWALD, LEWIS COUNTY.

into soils of good fertility, by keeping the fires from the woods, and allowing the leaves from the trees to form a body of humus. Wherever these forest fires are kept down, in a few years a dense growth of underbrush springs up, which shades the land and holds the leaves until they are converted into humus. There are three distinct varieties of soil in this county, the alluvial, on the streams; the cherty, on the rolling lands; and the yellow and bluish, in the thin barrens. The first, dark in color, is warmed by the summer's heat into a marvelous fruitfulness. The second may

be made fertile by proper attention; the last is good for highway pasturage, and for growing yellow tobacco. Good valley lands are in better demand in Lewis County, and at better prices, than in many of the richer counties. A prosperous Swiss colony has recently settled at Hohenwald, and they are growing tobacco of high quality with success. It is a good fruit region. Apples, peaches, pears, and grapes bear remarkably well on these soils. On the level barren lands, black jack oaks, post oaks; on the rolling highlands, chestnut oaks, red oaks, hickory, chestnut, and some pine and poplar; in the basins of streams, poplar, white oak, hickory, gum, ash, and some walnut. The census of 1890 reports the following: Corn, 103,785 bushels, grown on 5,225 acres; wheat, 3,960 bushels, grown on 624 acres; oats, 12,630 bushels, grown on 1,101 acres; cotton, 14 bales, grown on 91 acres; peanuts, 2,804 bushels, grown on 123 acres. The high elevation of this county generally assures a bountiful fruit crop. It is said to be a rare thing for a peach orchard that is planted on the ridge lands to fail of bearing. The census of 1890 shows the following for live stock: Horses, 409; mules, 392; asses, 8; working oxen, 165; milch cows, 625; other cattle, 1,134; sheep, 1,949; value of live stock, \$94,620. Unimproved lands are worth from \$2 to \$3 per acre. Improved bottom farms are worth from \$20 to \$30 per acre for the cleared bottoms. Good red upland soils are worth, when improved, from \$8 to \$12 per acre. In the southern parts of the county, on the hills bordering Chief's Creek, are some extensive beds of iron ores of the brown variety. One charcoal furnace is established in the county. Phosphates are found in workable thickness on Swan Creek. The principal towns and villages are: Lewis, Hohenwald (county seat), Napier (the seat of the charcoal furnace), Newburgh, Nutt, Kimmins, Voorhies, and many others. The Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad, the Napier Branch of the Louisville & Nashville Railroad, and the Centreville Branch of the Nashville, Chattanooga & St. Louis Railway furnish ample facilities for transportation. The schools are not numerous, and the sparseness of the population makes good schools difficult. The school tax amount to 25 cents on the \$100 worth of property.

LINCOLN COUNTY.

Organized, 1809. *County seat*, Fayetteville. Population, 27,382; white, 21,074; colored, 6,307; percentage of whites, 76.97. Area, 540 square miles, or 345,600 acres; inhabitants to the square mile, 50.71; acres of improved land, 204,139; unimproved, 130,519. Taxable property for 1897, \$4,362,202; number of acres assessed, 356,527; valued at \$3,221,667; value per acre, \$9.64. Average elevation (grade of railroad), 754 feet. Surface diversified by numerous ridges and valleys; Elk River divides the county into nearly equal parts, and has some fourteen tributary creeks within the county. The rock is mainly limestone. The soil, excepting a strip on the Alabama line, about eight miles wide, which is on the highlands, is fertile; that of Elk River and Cave Creek valleys very rich, usually producing near 1,000 pounds seed cotton to the acre. The census of 1890 reports the following: Indian corn, 1,710,217 bushels, grown on 59,127 acres; wheat, 284,322 bushels, grown on 25,893 acres; oats, 104,964 bushels, grown on 6,991 acres; cotton, 2,488 bales, grown on 15,000 acres. Fruits grow well on the elevated lands. A good deal of attention is paid to the cultivation of the grasses, for which the low lands in the county give special facilities and inducements. Millet is grown extensively, and the yield upon some of the alluvial soils is almost incredible. On the flat lands in the southern parts of the county, oak, hickory, chestnut, black jack, and sourwood are the principal growth. On the red lands, and on the broken lands, in the extreme southern part of this region, some valuable poplar timber is found. On the slopes of Elk River, and on the sides of the spurs that run down from the north, there is very much excellent timber, consisting of linden, buckeye, hickory, poplar, box elder, black walnut, wild cherry, black locust, chestnut, beech, gum, dogwood, ironwood, hornbeam, sugar tree, hackberry, cedar, and elm. The valleys, originally, were heavily timbered, but these for the most part have been cleared up and put in cultivation. The census of 1890 reports the following live stock: Horses, 6,762; mules, 6,046; asses, 61; working oxen, 111; milch cows, 6,244; other cattle, 11,794; sheep, 11,701; value of live stock, \$1,466,950. A few miles east of Fayetteville there is a quarry of reddish variegated marble, which, though not so fine in texture as that of East Tennessee, is a very

valuable stone, and is suitable for inside finishing as well as for outside work. It is sometimes injured by small balls of iron pyrite. Prices of land range from \$3 per acre for the flat uplands to \$50 for the valleys. Fayetteville has a population of 2,410, and is situated near the junction of Norris Creek with Elk River. Molino, Mulberry, Petersburg, and Oregon are all thriving villages. Elora, the junction of the two railroad branches, is a promising place. The Fayetteville & Huntsville Division of the Nashville, Chattanooga & St. Louis Railway furnishes ample facilities for transportation. Public schools are not as popular in Lincoln County as they should be. The school tax is only 15 cents on the \$100.

MARSHALL COUNTY.

Organized, 1836. *County seat*, Lewisburg. Population in 1890, 18,907; white, 14,365; colored, 4,538; percentage of whites, 75.99. Area, 350 square miles, or 224,000 acres; inhabitants to the square mile, 54. Acres of improved land, 146,757; unimproved, 81,481 acres. Taxable property for 1897, \$2,953,912; number of acres assessed, 229,467; valued at \$2,483,671; value per acre, \$10.82. Average elevation of grade, 750 feet. Duck River flows nearly west through the county. Elk Ridge, a high elevation in the southern part of the county, sends out numerous spurs, which give the surface north of it, and south of Duck River, a high rolling character. There are, however, in this part of the county, many wide bottoms, between which are glady places where the rocks cover the surface like a shield. The lands south of Elk Ridge are more broken than those north of it, but they are better adapted to the growth of cotton, corn, and the grasses. The lands on the north side of Duck River are comparatively level. There are but few glady places in this part, and the rocks rarely ever crop out at the surface. The soils of this county have always been regarded as equal in fertility to any in the State. That part of the county which lies south, on Richland Creek, probably is altogether the finest farming lands in the county, and this statement is especially true of the Cornersville district. Here are the best blue grass soils. The farms are kept in a high state of cultivation, and everything about them denotes the thrift and industry of the farmers. The surface in the

western part of this region is a gently rolling plain, and it grows more broken towards the head of Richland Creek, though the soil is fertile to the crests of the ridges. The soil on the ridges is composed largely of a flinty and siliceous gravel, and is very friable, durable, and easy to work. The soils on the north side of Duck River are fertile, but have a more reddish hue than those elsewhere in the county. They are very strong and durable. In that part of the county nearly every farm is fenced with cedar rails. Cotton is largely grown near Chapel Hill. The county is well supplied with water powers, suitable for propelling flouring mills and carding machines, and sufficient for other manufactories, should they be erected. The timber of Marshall County has always been one of its greatest resources. There are cedar forests, the largest probably now in the State. Originally, there were about 80 square miles covered with a dense cedar growth, but much of this has been cut off. A great deal of it has been used for fencing purposes. The farmers prefer a cedar fence to a stone one. It is much easier to move, and it is not so liable to fall down. It is said that there are cedar fences in the county, that were built as early as 1812, still in a sound condition. The best cedar timber is the product of a good soil. Where cedar timber does not grow, the region is covered with oaks of different species, poplar, ash, elm, linden, beech, sugar tree, walnut, cherry, locust, hackberry, buckeye, and on the southern slopes of Elk Ridge, chestnut. The eastern side of the county, though destitute of cedar forests, has a good supply of white oak, sugar tree, hickory, and formerly of walnut. The latter has been mostly cut down and shipped out of the county. The census of 1890 shows that 1,403,592 bushels of Indian corn were grown on 48,903 acres; 196,877 bushels of wheat were grown on 20,724 acres; 136,646 bushels of oats were grown on 8,884 acres; 452 bales of cotton were grown on 3,009 acres. Potatoes and garden vegetables are grown in quantities for home consumption, and some for shipment, especially Irish potatoes. Blue grass, clover, timothy, and herd's grass all find congenial soils in the county, and grow luxuriantly. Much millet is grown for hay. Apples, peaches, cherries, and other fruits are plentiful. The hilly lands of the county make an excellent fruit region. Peaches rarely ever fail on the sandstone hills. Apples and peaches

are largely made into brandy, and sold, and both are dried to some extent. Statistics for the eleventh census shows the following live stock: Horses, 7,449; mules, 4,565; asses, 326; working oxen, 64; milch cows, 4,624; other cattle, 8,488; sheep, 11,130; value of live stock, \$1,365,715. Limestone and sandstone rocks, suitable for building purposes, are the only thing in the way of minerals that the county possesses. Farming lands rate very high in this county. The best farms readily command \$50 per acre, and a few even more. Hill lands range from \$10 to \$25 per acre, according to the value of the timber and the fertility of the soils. Cedar forests are held at still higher prices. Indeed, it is now difficult to buy a good cedar forest at any reasonable price. The thriving towns and villages are Belfast, Lewisburg (county seat, population 631), South Berlin, Silver Creek on the line of railway. Other towns not on the line are Cornersville, Roberson, Globe, Mooresville, Farmington, Verona, Rich Creek, Caney Spring, Holt's Corner, Beasley, Chapel Hill, and many others. The Fayetteville & Huntsville Division of the Nashville, Chattanooga & St. Louis Railway furnishes ample facilities for transportation. Schools are very good in the thickly settled portions of the county. The school tax is 35 cents on the \$100 worth of property.

MAURY COUNTY.

Organized, 1807. *County seat*, Columbia. Population, 38,112; white, 22,090; colored, 16,022; percentage of whites, 57.96. Area, 590 square miles, or 377,600 acres; inhabitants to the square mile, 64.6; acres of improved land, 239,193; unimproved, 124,430. Taxable property for 1897, \$8,077,950; number of acres assessed, 377,663; valued at \$5,344,575; value per acre, \$14.15. Average elevation, 650 feet. In point of country wealth Maury ranks first in the State. An orographic view of the county would present the picture of a section of a river valley running almost due east and west with the dip to the west, and fringed to the north and south by smaller valleys that furrow the sides of irregular ranges of knobs or hills that lie along the northern and southern boundaries of the county. To the west these hills broaden out into the uplands known as the "barrens," forming a part of the Highland Rim. The bed of this valley is occu-

ped by Duck River, which flows through the whole extent of the county, dividing it almost equally. This river drains the entire county; all other streams in the county flow into it. It is not navigable, though it is floatable through the entire extent of the county, and was, in former years, much used for the transportation of corn and lumber. The timber is the same as in Marshall and Bedford counties, with the exception of cedar forests. There are four leading divisions of lands, the "barrens," the creek bottoms, the cedar lands, and the rich limestone and clay soil, the latter constituting the bulk of the county. Probably the finest farming lands in the State, and the best improved, are those lying west of Columbia, between the Little Bigbee and Big Bigbee creeks, including the region around Mount Pleasant. With such varieties in quality, land ranges in prices from \$100 per acre for small, highly improved places, in good neighborhoods, down as low as \$2 for wild lands in the "barrens," plenty of which can be had at that price. It is hard to give an idea as to prices of lands, but excellent places, with fairly good improvements and conveniently situated, have sold for \$35 to \$40 per acre, and medium lands near them at \$20 and \$25 on the usual time, one-third cash, balance in one and two years. The census of 1890 reports the following: Indian corn, 2,363,414 bushels, grown on 82,093 acres; wheat, 346,716 bushels, grown on 26,711 acres; oats, 299,068 bushels, grown on 14,642 acres; cotton, 1,677 bales, grown on 15,150 acres. Irish potatoes are also grown largely as a field crop. Maury is the largest corn producing county in the State. A considerable quantity of poultry, eggs, and butter is shipped every year, and adds largely to the revenues of the household. Fruits, especially peaches, apples, and plums, are grown with good success. Grapes are also successfully grown upon suitable soils and exposures, and yield abundantly. There is not one acre in forty or fifty actually thrown out of cultivation, and gone to waste from exhaustion. It should be borne in mind that with high farming and good culture, the yield of the various crops might be increased two or three times what it is under the slipshod farming practiced all over the State. It is as a live stock region that the greatness of Maury County in the future must lie. There is not in all the Americas a fitter place for the rearing of

improved animals. Everything—the soil, the hills, the streams, the grasses and grains, the sheltering woods, and the abundant mast, all decide the destiny of this county. All the grasses grow bountifully upon well selected soils. Timothy, herd's grass, orchard grass, blue grass, clover, Randall grass, Italian rye grass, and many other yield satisfactory crops. Barley and rye are sown to some extent for winter and spring grazing. It must equal, and even surpass, the blue grass region of Kentucky, when men of capital take the live stock business in hand and push it to its utmost limits. Much has been done already in the way of breeding trotting horses, and raising improved breeds of cattle and sheep, and the tendency is all towards a higher aim. Probably the largest Jersey cattle herd south of the Ohio River is in Maury County. The census of 1890 shows: Horses, 9,567; mules, 10,345; asses, 477; working oxen, 137; milch cows, 7,417; other cattle, 13,190; sheep, 12,567; value of live stock, \$2,336,700. Some good deposits of iron ore have been found within a few miles of Mt. Pleasant. Around that place has recently been discovered extensive easily mined and valuable beds of phosphates. This discovery was made in December, 1894, and mining was begun in the following July 17. In the year 1897 about 110,000 tons of this phosphate was shipped to every part of the country. For more practical description see "phosphates" in this pamphlet. Some excellent building stone is found in the county, it being a whitish limestone. The towns and villages of this county are Britton, Park's Station, Columbia (county seat), Carter's Creek, Ewell's Station, Godwin, Hurricane Switch, Culleoka, Ashwood, Mt. Pleasant, Sandy Hook, Rockdale, and others are on the line of railroad. Those not on the line of any railroad are Hampshire, Lipscomb, Frierson, Williamsport, Saw Dust Valley, Duck River Station, Water Valley, Santa Fe, Lodebar, Hardison's Mills, Spring Hill, and others. The Decatur Division of the Louisville & Nashville Railroad, the Nashville, Florence & Sheffield Division of the same road, and the Fayetteville & Huntsville Branch of the Nashville, Chattanooga & St. Louis Railway furnish ample means of transportation. Columbia has always been noted for its schools of high character for the education of young ladies. There are many excellent private schools in the various towns. Public schools

do not seem to be popular, judging from the fact that the school tax from the last published official report is only 13 cents on the \$100 worth of property.

MOORE COUNTY.

Organized, 1872. *County seat*, Lynchburg. Population, 5,975; white, 5,434; colored, 541; percentage of white, 90.95. Area, 170 square miles, or 108,880 acres; inhabitants to the square mile, 33.15; acres of improved land, 45,503; unimproved, 24,426. Taxable property for 1897, \$609,536; number of acres assessed, 70,410; valued at \$518,994; value per acre, \$7.37. Elevation, 750 feet in the part lying in the Central Basin, and 950 feet on the highlands. The surface of this county is greatly diversified. On the eastern border it is a high, flat, slightly rolling plain, which breaks off to the south and west into ridges and ravines, some of the latter having a depth of 300 to 400 feet below the plain. These ridges are spurs which shoot out into the valleys of the Elk and Mulberry and their tributaries, the valleys constituting a part of the broken southern division of the Central Basin, which is partially cut off by Elk Ridge. About one-half of the county lies upon the Highland Rim, and the remainder in the Central Basin. These ridges are very fertile on the slopes, and often to their very summits. Elk Ridge runs east and west between Duck and Elk rivers. It is narrow and irregular, but very productive, almost as much so as bottom land. This ridge is a type of the others. Elk River, Mulberry, and Hurricane all furnish mill sites. The slopes of the ridges were once heavily timbered with yellow poplar, oak, chestnut, walnut, sugar tree, linden, and black locust, with an undergrowth of pawpaw, dogwood, and other growths indicative of a fruitful soil. The flat lands are generally poorly timbered with black jack oaks and scrubby post oaks, though occasionally fine groves of chestnut timber and red oaks are found, and especially where the lands are slightly rolling. The census of 1890 reports the following: Indian corn, 457,806 bushels, grown on 14,963 acres; wheat, 73,169 bushels, grown on 6,784 acres; oats, 27,386 bushels, grown on 2,114 acres; rye, 8,862 bushels, grown on 1,188 acres. Moore stands at the head of all the counties in Tennessee in the yield of corn per acre. Blue grass grows well on the slopes of the ridges and in the bottoms. The bottom

lands also produce generously of Hungarian grass, German millet, timothy, clover, and herd's grass. The natural advantages offered for dairy farming are very superior. The live stock interest is a considerable one in the county, and the grades of cattle, hogs, and sheep are being constantly improved. Statistics from the eleventh census shows: Horses, 1,373; mules, 1,150; asses, 20; working oxen, 13; milch cows, 1,486; other cattle, 2,488; sheep, 2,194; value of live stock, \$332,780. With the exception of good building stone, there are no minerals in the county worth noticing. The range of prices of lands in this county run from \$2 to \$3 for flat lands on the highlands, to \$8 and \$10 on the ridges, and \$25 to \$35 in the valleys. Towns and post-offices are Scivally, Ridgeville, Lynchburg, Leickhart, Fuga, and many others. There are no railroads at present in the county. Public schools are not what they should be, and there is a want of interest among many persons that is deplorable. Public sentiment on this question is demonstrated by the fact that only 10 cents on the \$100 worth of property is levied for school purposes.

OVERTON COUNTY.

Organized, 1806. *County seat*, Livingston. Population in 1890, 12,039; white, 11,767; colored, 272; percentage of whites, 97.74. Area, 540 square miles, or 345,600 acres; inhabitants to the square mile, 22.3; acres of improved land, 81,547; unimproved, 132,282. Taxable property for 1897, \$764,732; number of acres of land assessed, 232,859; valued at \$698,661; value per acre, \$3. Average elevation, 850 feet on the Highland Rim, and 1,000 to 1,800 feet on the knobby and mountainous portion. The southeast corner of this county rests upon the Cumberland Table-land, and presents the characteristics common to that division of the State. Between the east and west fork of Obey's River there is a ridge or arm very irregular in outline extending northward for fifteen miles. This ridge is of the same elevation as the table-land, but in places drops down to "terraces" or "benches," which occupy a large part of the county; their elevation is about half of the table-land; verdant valleys and coves nestle between these spurs which fringe the table-land. The soils are rich wherever limestone appears above the terraces. The timber is dense and heavy; poplar, oak, shellbark hick-

ory, sugar maple, etc., are found in the rich soils. The bench lands, away from the vicinity of limestone, are leachy and thin, and chestnut trees, oaks, etc., prevail. Half the lands are almost worthless, except for pasturage; unimproved lands range in price from \$1 to \$10; ten dollars is perhaps the average, and \$20 per acre is perhaps the highest limit for farms that are for sale. The county is well watered by Obey's River and its tributary, West Fork, and Roaring River, a confluent of the Cumberland. Coal is found near Obey's River. Petroleum has been found in large quantities. The census of 1890 reports: Horses, 2,423; mules, 1,270; asses, 38; working oxen, 824; milch cows, 3,414; other cattle, 6,167; sheep, 9,636; value of live stock, \$459,770. The census of 1890 shows the following: Corn, 516,710 bushels, grown on 28,932 acres; wheat, 27,889 bushels, grown on 6,558 acres; oats, 88,282 bushels, grown on 10,177 acres; rye, 1,010 bushels, grown on 211 acres; tobacco, 32,545 pounds, grown on 60 acres. In all the valley lands grasses are prolific in their growth and yield. The sorghum crop is also large, and the county stands along with the first in the production of maple sugar and sorghum molasses. The towns and postoffices are: Beaver Hill, Bushing, Cliff Springs, Eagle Creek, France, Garrott, Grey, Hanging Limb, Hilham, Lovejoy, Monroe, Netherland, Oak Hill, Oakley, Ward, Waterloo, West Fork, and many others. Overton County has no railroad at present. In a thinly settled region like Overton County, it is almost impossible to maintain good schools. The want of such schools is depressing to the public spirited men, of whom Overton County has its fair proportion. Good schools, well sustained, would soon destroy the apathy now felt by a majority of the people in regard to schools. The school tax from last published report was 15 cents on the \$100 worth of property.

PERRY COUNTY.

Organized, 1821. *County seat*, Linden. Population, 7,785; white, 7,114; colored, 671; percentage of whites, 91.38. Area, 400 square miles, or 256,000 acres; inhabitants to the square mile, 19.46; acres improved land, 44,383; unimproved, 137,243. Taxable property for 1897, \$884,098; number of acres assessed, 275,824; valued at \$729,537; value per acre, \$2.64. Average ele-

vation, 400 feet in Tennessee River basin; 800 feet on Buffalo Ridge. The surface of the county is a series of ridges. Buffalo Ridge, west of Buffalo River, and running parallel with it, traverses the county north and south. The ridge sends out to the west eight subordinate ridges nearly to Tennessee River, a distance of about nine miles. Between these subordinate ridges streams of pure freestone water flow in parallel lines over beds of gravel, and empty into the Tennessee River. On the eastern side of Buffalo Ridge are short, parallel spurs running down to Buffalo River. These spurs are seldom over a mile in length, and the troughs which they form carry the water from the eastern slope of Buffalo Ridge to Buffalo River. The portion of the county east of Buffalo River is also fluted with ridges and valleys similar to those on the western side of the river, and many beautiful streams bordered by fertile bottoms empty into Buffalo River, which, throughout the county, maintains its parallelism with the Tennessee River. The soils of the bottom lands are gravelly, but fertile. The gravel with which the soils are charged makes the land very loose. By reason of this friability, the soils are especially adapted to the growth of peanuts, and this crop for a number of years has been the staple crop of the county. The soils on the ridges are rather thin, and soon wash away when put in cultivation. Buffalo valley is one of the most productive in the State. Perry County is one of the best timbered counties in Middle Tennessee. White oak, poplar, and hickory of magnificent size are found growing, not only in the valleys, but on the minor ridges which run from Buffalo Ridge to the Tennessee River. Chestnut oak grows in great abundance everywhere on the ridges, and some chestnut is found on Buffalo Ridge. The largest supplies of virgin poplar forests in Middle Tennessee are probably in this county. The census of 1890 reports the following: Indian corn, 359,788 bushels, grown on 14,721 acres; wheat, 14,898 bushels, grown on 1,826 acres; oats, 30,837 bushels, grown on 2,423 acres; peanuts, 182,801 bushels, grown on 4,962 acres; cotton, 129 bales, grown on 469 acres. Perry takes the first rank, and has for many years, in the production of peanuts, not only in the quantity produced, but in the yield per acre, and in the quality of the nuts. The census of 1890 gives the following in reference to live stock: Horses, 1,070; mules, 1,522;

asses, 10; working oxen, 456; milch cows, 1,923; other cattle, 2,945; sheep, 4,966; value of live stock, \$318,610. Iron ore is abundant in the county. There is an excellent deposit on Cedar Creek, one of the tributaries of Tennessee River. Almost every ridge shows some indication of iron ore. White phosphates belonging to the subcarboniferous formation are found in many parts of the county. They sometimes run as high as 85 per cent. in bone phosphate. Creek and river bottoms command high prices, sometimes as high as \$35 per acre. Ridge lands, unless well timbered, are very cheap, bringing from \$2 to \$4 per acre. Good timbered lands readily bring \$4 per acre if convenient to water transportation. The most thriving towns and villages in this county are: Linden, Cedar Creek Landing, Denson's Landing, Britt's Landing, Tom's Creek, Allen, Farmers' Valley, Peter's Landing, and many others. Perry County has no railroad at present, but the Tennessee River furnishes water transportation. The public school feeling is growing rapidly. The superintendent in his last published report says: "At last the county court has awakened from its ignorant slumber, and is now making some liberal appropriation for our schools." The tax for schools is 40 cents on the \$100.

PUTNAM COUNTY.

Organized, 1842. *County seat*, Cookeville. Population in 1890, 13,683; white, 13,045; colored, 638; percentage of whites, 95.34.* Area, 460 square miles, or 294,400 acres; inhabitants to the square mile, 29.75; acres of improved land, 75,944; unimproved, 121,507. Taxable property in 1897, \$1,101,000; number of acres assessed, 227,682; valued at \$930,840; value per acre, \$4.08. Average elevation about 680 feet in the western part of the county, and 1,700 feet on the Cumberland Table-land portion. Putnam County in its shape is a long parallelogram, extending east and west forty miles, while in width it is only about twelve miles. The eastern end, comprising about one-eighth of its area, is on the Cumberland Table-land. The east and west forks of Obey's River flow north, Spring Creek northwest, Falling Water nearly west, Calf Killer River southwest, and just across the line, in Cumberland County, are the head springs of Emory, which flows east into Clinch River about Kingston. These streams, except the last, in their descent from this elevated plateau,

have cut through the western escarpment, forming many deep ravines and sequestered valleys, with towering ridges projecting between. The scenery here is remarkable for its wildness and sublimity. As one approaches the central part of the county, the valleys become wider, and the ridges and spurs run out into lower hills, or disappear entirely. This is the clay region, a broad belt of which extends along the western base of the table-land. This belt is about fourteen miles wide, and is the best part of the county. Its surface is diversified with hill and dale, the beds of most of the streams being considerably below the general level of the country. The county becomes more level, and the lands less fertile, towards the west, until the part of the county designated by the significant name "barrens" is reached. The surface is generally level, except in the neighborhood of the streams, and the timber is thin, and of small size. The soil of the table-land portion is much like that of Coffee County, and the red belt is very much like that around Decherd, in Franklin County, while the soils of the mountain do not differ from those described in Grundy County. Lands in this county are very cheap, in proportion to their productive capacity. Good red lands, highly productive, may be bought at prices ranging from \$3 to \$15 per acre, according to location and improvements. The valley lands are worth from \$15 to \$30. The barren lands range in price from \$2 to \$5 per acre, and the mountain lands about the same. The coves and slopes of the mountains furnish some very valuable poplar and walnut timber. In the valleys, in the western parts of the county, are also some excellent timber. The timber of the "barrens" is light, and is composed of black jack oak, red oak, hickory, and post oak. On the red lands are some valuable timber trees, but most of the forest in this part of the county has been denuded of its best timber. Hickory is quite abundant on the red lands, and frequently good poplars are interspersed with the red oaks. The census of 1890 reports the following: Indian corn, 589,428 bushels, grown on 27,265 acres; wheat, 37,603 bushels, grown on 6,889 acres; oats, 76,039 bushels, grown on 8,349 acres; tobacco, 45,960 pounds, grown on 65 acres. The adaptation of the county to sheep husbandry has induced many good farmers to introduce the improved breeds, Southdowns, Cotswolds, and Leicester. These, when crossed upon the native breeds, produce a type

well suited for the barrens and the mountain fastnesses in the eastern parts of the county. Many beef cattle are raised in the county, which are driven to the mountain tops early in spring, and find a supply of mountain grasses for their subsistence until the frosty days of October or November set in. Statistics from the census of 1890 reports the following live stock: Horses, 2,883; mules, 1,374; asses, 31; working oxen, 916; milch cows, 2,833; other cattle, 4,482; sheep, 8,091; value of live stock, \$483,870. Coal exists in workable seams in the eastern part of the county. Some iron banks occur. Lithographic stone of fine quality exists two and a half miles northeast of Allgood, a station on the Nashville & Knoxville Railroad. This stone has been tested by some of the best lithographic establishments in the United States, and has been pronounced to be equal to the German stone. The quantity is practically inexhaustible. (See description in another part of this pamphlet.) The towns and villages of importance are : Buffalo Valley, Double Springs, Allgood, Cookeville, Standing Stone, all on the line of railway. Burton, Silver Point, Dry Valley, Calf Killer, Bloomington, Buffalo Valley, Pine Fork, and many others. The Nashville & Knoxville Railroad furnishes transportation for the central parts of the county. Public schools are gradually improving.

RUTHERFORD COUNTY.

Organized, 1804. *County seat*, Murfreesboro. Population in 1890, 35,097; white, 20,595; colored, 14,502; percentage of white, 58.68. Area, 590 square miles, or 377,600 acres; inhabitants to the square mile, 60; acres of improved land, 226,089; unimproved, 140,862. Taxable property in 1897, \$6,363,540; number of acres assessed, 372,406; valued at \$4,521,400; value per acre, \$12.14. Elevation, 620 feet. This county occupies the very center of the great Central Basin of Tennessee, and also the geographical center of the State. Taking Murfreesboro as a center, with a radius of ten miles, and describe a circle, the included area will be a basin within the great Central Basin. Elevations appear in the distance, showing that the circumference of this circle is bounded by a cordon of hills, rising some two or three hundred feet above this circular interior basin, which appears as a level plain. The soils of the county were originally exceedingly fertile, but improvident

cultivation has impaired their productiveness in a large part of the county. Nevertheless, the soils are easily and cheaply reclaimed. Resting, for the most part, on a red clay subsoil, they have the capacity to retain all fertilizing material put upon them. The lands are well adapted to clover, and two or three crops of this forage plant will bring the poorest old worn out field to a condition to be profitably cultivated. The first crop of clover needs the application of some fertilizer, or of stable manure. After this, the clover takes care of itself, leaving a thick mulch upon the surface, which soon enriches the soil. There are two principal soils in the county, black and brown, or mulatto, the latter predominating, to a large extent, in both quantity and quality. Under this latter soil is found the red subsoil already mentioned. In some localities shaly limestones crop out, rendering the surface unfit for tillage. It is estimated that only one-fifth of the land is rendered worthless for cultivation by these rocky areas. The county is watered by the east and west forks of Stone River, and other tributaries, which furnish ample water privileges. The native forest growth consists of the various kinds of oaks, poplar, cedar, hickory, beech, buckeye, sycamore, black and yellow locusts, ash, elm, walnut, hornbeam, mulberry, cherry, dogwood, sassafras, pawpaw, cucumber tree, sugar tree, aspen, hackberry, linden, box elder, coffee tree, black and sweet gum, and chittem or yellow wood. The prevailing timber, however, is oak, cedar, poplar, hickory, and beech. The census of 1890 reports the following: Indian corn, 1,925,083 bushels, grown on 71,427 acres; wheat, 270,937 bushels, grown on 24,952 acres; oats, 171,333 bushels, grown on 10,668 acres; barley, 1,177 bushels, grown on 86 acres; rye, 2,466 bushels, grown on 366 acres; cotton, 4,770 bales, grown on 25,025 acres. In the production of corn Rutherford is only surpassed by one other county in the State, Maury. It takes the seventh place in the production of wheat, and the sixth place in the production of oats. In 1889 it fell to the fourteenth place in the production of cotton. It stands now second only to Giles County, among the counties in Middle Tennessee, in the production of cotton. A large amount of good stock is raised in Rutherford County. Statistics of 1890 shows the following: Horses, 10,516; mules, 5,136; asses, 485; working oxen, 79; milch cows, 7,279; other cattle, 12,566; sheep, 12,521; value of live stock, \$1,680,-

420. Rutherford County takes the first rank in the State in the number of horses, second in the number of asses, and fifth in the number of milch cows; Davidson County first and Maury second. Rutherford takes the third place in the value of live stock, Maury having the first and Wilson the second. There are no minerals in this county worthy of mention, with the exception of building stone. In proportion to the intrinsic value, the land in this county is probably as cheap as any in the State. Good productive farms, convenient to the market and railroads, and good macadamized roads, are worth from \$20 to \$30 per acre. In remote parts of the county good farming lands may be bought for prices ranging from \$15 to \$25 per acre. In no county in the State could good, intelligent immigrant farmers do better. The habit of cropping on shares has not been beneficial to the agriculture of Rutherford County. The towns and villages are Lavergne, Smyrna, Wade, Florence, Russell, Murfreesboro, Winstead, Rucker, Christiana, and Fosterville, all on the line of the railroad. Other towns not on this line of road are Midland, Eagleville, Versailles, Rockvale, Everglade, Patterson, Crescent, Overall, Snell, Almaville, Rocky Fort, Hoover, Millersburg, Jordan's Valley, Carlocksville, Wayside, Pinkard, Kirtrell, Compton, Milton, Jefferson, Lowe, Readyville, and many others. The main line of the Nashville, Chattanooga & St. Louis Railway furnishes ample means for transportation. The region around Murfreesboro, on the last day of 1862, and the two first days of 1863, was the theater of some of the bloodiest battles of the civil war. The rains were continuous, and the cold severe. Not fewer than 25,000 men were killed, wounded, and missing from both armies during these three dreadful days. A national cemetery, beautifully kept, near the town contains the remains of 6,145 of the Federals who fell. The Confederate soldiers found burial elsewhere. The school facilities in the county are good in the larger towns, but the schools in the rural districts are not taught as long as they should be to promote the best interests of the county. The school tax is 30 cents on the \$100, as given in the last published report.

SMITH COUNTY.

Organized, 1799. *County seat*, Carthage. Population in 1890, 18,404; white, 15,406; colored, 2,998; per-

centage of whites, 83.71. Area, 360 square miles, or 230,200 acres; inhabitants to the square mile, 51; acres of improved lands, 121,135; unimproved, 83,034. Taxable property for 1897, \$3,075,030; number of acres assessed, 193,581; valued at \$2,557,711; value per acre, \$12.88. Average elevation, 600 feet. Although this county is usually classed among those which belong to the Central Basin, it is rimmed on the north and east by the highlands. Many of the spurs, though narrow, run far in towards the center of the county, filling it with ridges, and giving it an uneven surface. This is especially the case with those portions that lie north of the Cumberland River and east of Caney Fork. South and west of these streams the hills are not so high, but the surface is rolling and hilly. The county is remarkably well watered by Cumberland River, Caney Fork, and their tributaries. Nearly all of these streams have wide and exceedingly fertile valleys. No county in the State has soils more fertile than those in Smith County. The alluvial bottoms are exceedingly productive, while the hills and ridges, where the soil is derived from the Nashville and Lebanon limestones, are fertile almost beyond belief. The calcareous gravel that abounds on these sloping lands, gives the soil a vitality and durability of constitution that are not surpassed by any soils in the Mississippi valley. The soils upon the ridges, where the subcarboniferous rocks are found, are not so productive, but they abound in the very best timber. The county is very well watered by the Cumberland and Caney Fork, and their tributaries. Poplar is the most valuable tree in the county. This grows to be an enormous size, often five to six feet in diameter. White oak is a valuable timber tree, as well as hickory; elm and beech also are common forest growths. Walnut was once abundant, but as a lumber tree it has been exhausted. Statistics from census of 1890 shows the following: Corn, 1,271,853 bushels, grown on 42,261 acres; wheat, 122,857 bushels, grown on 14,786 acres; oats, 132,127 bushels, grown on 8,158 acres; tobacco, 991,758 pounds, grown on 1,202 acres. Timothy, herd's grass, and clover are extensively sown and cut for hay. The yield is large. For the raising of live stock but few counties are better adapted by nature. Statistics of live stock from the census of 1890 reports the following: Horses, 5,817; mules, 3,105; asses, 123; working oxen, 571; milch cows, 3,612; other cattle, 5,916; sheep, 8,264;

value of live stock, \$932,690. There are no minerals in this county other than building stone and mineral springs. Good valley farms are worth from \$25 to \$50 per acre. Hillside farms about two-thirds as much. Ridge land varies in price from \$4 to \$10 per acre, according to the timber and accessibility. Towns and villages on the Nashville & Knoxville Railroad are Holmes Gap, Brush Creek, Sykes, Hickman, Junction, Gordonsville, Carthage, Lancaster. Other towns not on the line are New Middleton, Enoch, Rome, Dixon's Springs, Pleasant Shade, Kempville, Donoho, Elmwood, Chestnut Mound, Stonewall, and others. The Nashville & Knoxville Railroad furnishes transportation. The schools of the county are improving every year in efficiency, though much remains to be done in that direction.

VANBUREN COUNTY.

Organized, 1840. *County seat*, Spencer. Population in 1890, 2,863; white, 2,794; colored, 69; percentage of white, 97.66. Area, 340 square miles, or 227,600 acres; inhabitants to the square mile, 8.42; acres of improved land, 21,578; unimproved, 53,643. Taxable property for 1897, \$297,184; number of acres assessed, 218,894; valued at \$285,831; value per acre, \$1.30. Average elevation, 1,800 feet. This county, lying partly on the Cumberland Table-land and partly on the mountain slopes and in the valleys, presents great diversity in surface, soil, and productions. The table-land part embraces the southeastern part of the county. The slopes on the sides of the table-land, and its spurs and outlying ridges, are an important feature, and occupy a considerable part of the area of the county. These are too rugged for cultivation, and are valuable chiefly for the timber. Spurs of greater or less magnitude extend outward at irregular distances apart, sometimes inclosing valleys or coves of considerable size, in some of which the best lands in the county are found. Beyond the range of these spurs are the red clay lands, extending north to the Caney Fork and west to Rocky River. The surface is generally broken or undulating. All of the streams, except the larger creeks, are underground. Bordering Caney Fork and Rocky River, which form the boundary of the county on the north and west, are bold bluffs of limestone extending down to the water's edge. A description of the soil of the table-land is

given in Grundy County. The coves have the richest soil of all the lands in the county. In some of them the soil overlying the clay subsoil is ten feet deep. Very heavy crops of the cereals are taken from them year after year without any loss in their productive powers. In the valleys the soil is a dark, rich loam, resting on a subsoil of strong clay, and with good tillage it is inexhaustible. Census of 1890 reports the following crops: Indian corn, 134,515 bushels, grown on 7,388 acres; wheat, 10,813 bushels, grown on 1,830 acres; oats, 11,853 bushels, grown on 1,245 acres; rye, 363 bushels, grown on 91 acres. The table-land is thinly wooded usually, but much of the timber is valuable, chiefly oaks and chestnut. The mountain sides, "gulfs," and ravines are densely timbered with chestnut, poplar, ash, maple, walnut, buckeye, cherry, linden, beech, and other varieties. Much of this timber is valueless, by reason of its inaccessibility, and for want of transportation. Statistics for 1890 shows live stock as follows: Horses, 453; mules, 307; asses, 13; working oxen, 168; milch cows, 768; other cattle, 2,106; sheep, 2,049; value of live stock, \$123,080. Coal underlies three-fifths of the county, in seams from a few inches to six feet in thickness. It has only been mined for local purposes. Some iron ore occurs along the northern border of the county, but it has never been thoroughly prospected with a view of development. Chalybeate springs are numerous on the mountain, many of them having excellent water. Mountain lands are worth from \$1 to \$5 per acre. Farms on the benches of the mountains sell for \$10 to \$15 per acre; in the valley, from \$20 to \$30 per acre. The principal towns and postoffices are Spencer, Cane Ridge, Rocky River, Cummingsville, Bone Ridge, Laurelburgh, Meade, Sopha, Sparkman, Sweetgum, and many others. This county has no railroad at present. The public school interest lags, by reason of the paucity of population, and to the further fact that Burritt College, at Spencer, furnishes excellent opportunities for education.

WARREN COUNTY.

Organized, 1807. *County seat*, McMinnville. Population in 1890, 14,413; whites, 12,391; colored, 2,022; percentage of whites, 85.97. Area, 440 square miles, or 281,600 acres; inhabitants to the square mile, 32.75; acres of improved land, 108,004; unimproved, 110,550.

Taxable property for 1897, \$2,026,925; number of acres assessed, 250,587; valued at \$1,309,290; value per acre, \$5.22. Average elevation on grade of railroad, 950 feet; on the highest mountain, 1,910 feet. Excluding the portion on the Cumberland Table-land, the county may be said to be rolling highland, but sufficiently cut by streams, with tolerably deep valleys to give contrast and variety to the surface. The eastern portion is made rough by the spurs and outliers of the table-land, and supplies many mountain valleys, coves, and often wild, picturesque gorges, precipices, and waterfalls. The southeastern part of the county lies on the Cumberland plateau, and has the elevation, soil, and physical features which pertain to that region. Three-fourths of Warren County consists of red lands similar in character and fertility to those in Franklin County. The remainder of the land is mountainous, but some of the best lands are to be found in the coves. These soils are naturally very fertile, but slovenly cultivation has allowed great gulleys to wash down, by which the very cream of the soils has been in many places carried away. In many respects, these red soils are to be preferred to the soils of the Central Basin. They have a greater capacity for resisting drouth. They are more certain in the production of a fair average crop, whether the season be wet or dry. The subsoil also is very retentive of all fertilizing material that may be applied to the soil, and the subsoil is never leachy, as it sometimes is in the Central Basin. Clover is a great renovator of such soils, and it is used extensively for that purpose by the best farmers in the county. Some excellent soils are found in the coves of the mountains, where they are made friable and warm by a due admixture of sand. Upon such soils grasses grow with a rank luxuriance. The north sides of the mountain spurs are also very fertile. On the north side of Ben Lomond the principal trees are ash, yellow poplar, linden, buckeye, sugar tree, hickory, white oak, red oak, black walnut, wild cherry, and black locust, all indicative of a high degree of fertility in the soil. The timber on the southern face of the mountain is more scraggy in character, but a larger proportion of cedar is seen. Occasionally at the foot of the mountains is found a strip of land that is sterile. It may be recognized by fine, water-worn gravel, which has been liberated by the decay of the conglomerate rocks that cap the mountain. On such lands green

briers, persimmon, and sourwood prevail. Usually, however, the first bench is very fertile, being composed of the washings from the mountain limestones, intermingled with sand enough to ameliorate the stiffness of the clay. On the top of the mountain is a sandstone soil, such as has already been described in the accounts given of Franklin County. The county is well watered by Collins River, Barren Fork, Charles Creek, Mountain Creek, Caney Fork, and others, and the water power is very valuable, much of which has been utilized in cotton and woolen manufacture. The census of 1890 reports the following crops: Indian corn, 662,038 bushels, grown on 33,195 acres; wheat, 62,111 bushels, grown on 8,898 acres; oats, 97,681 bushels, grown on 7,784 acres. One of the greatest and most profitable crops in this county is the apple crop. This fruit is grown more extensively in this county than in any other in the State. It is not an uncommon thing to see an orchard covering 50 to 100 acres, and a few are even larger than this. The best location for an orchard is said to be the upper bench on the mountain side, where the limestones and sandstones meet. In such situations the fruit is never frosted nor liable to rot. Grapes are grown quite successfully. The county is a great producer of live stock. The census of 1890 shows: Horses, 3,529; mules, 1,618; asses, 30; working oxen, 272; milch cows, 3,406; other cattle, 6,003; sheep, 7,561; value of live stock, \$583,300. Coal is found in the southeastern part of the county, and one mine is open and in operation near Viola. The quality of coal is good, being quite hard. It is an excellent grate coal, but has never been employed in the making of coke. There is a great range in the price of farming lands in Warren County. The fertile lands of the valleys, and of the mountain slopes, readily command from \$25 to \$35 per acre. Farms on the red soil region range in price from \$10 to \$30, according to improvements and location. Mountain lands are worth from \$2 to \$10 per acre. The towns and villages on the line of railroad are Smartt, McMinnville, Rowland, Rock Island. Towns not on the line of road are Viola, Thaxton, Irving College, Verville, Shellsford, Goodbars, Pine Bluff, Increase, Trousdale, Davenport, Cross Roads, Horse Shoe Falls, Dibrell, Leeds, Luckey, and many others. The McMinnville Branch of the Nashville, Chattanooga & St. Louis Railway furnishes transportation. The public schools

in Warren are fairly good in the towns and large villages. The tax for that purpose is 30 cents on the \$100 worth of property.

WAYNE COUNTY.

Organized, 1817. *County seat*, Waynesboro. Population in 1890, 11,471; white, 10,600; colored, 871; percentage of whites, 92.41. Area, 710 square miles, or 454,400 acres; inhabitants to the square mile, 16.24; acres of improved land, 61,401; unimproved, 170,976. Taxable property for 1897, \$1,137,770; number of acres assessed, 473,767; valued at \$799,563; value per acre, \$1.66. Average elevation, 950 feet; in the Tennessee River valley, 350 feet. This county is situated on the extreme western side of the Highland Rim, with its northwestern corner projecting into the western valley of the Tennessee. It is a high elevated plateau furrowed by deep, winding ravines or "hollows," with intervenient high rolling ridges cut transversely in places by other ravines, which give the surface of the county the appearance of what sailors call a "chopped sea." The county is watered by the tributaries, directly or indirectly, of the Tennessee River, which washes a portion of the western boundary of the county, and furnishes the only outlet by water. The lands in Wayne County may be divided into three classes, viz.: Mineral, agricultural, and grazing. The soil upon these mineral lands is well suited for tobacco, peanuts, and fruits. The agricultural lands are mostly confined to the river and creek bottoms. They are heavily charged with a black, flinty, angular rock. The soil is alluvial, and highly productive. The third class of land, which is put down as grazing land, is flat and open, covered during the summer with a rank, wild grass, which supplies nearly all the food for the stock (other than work stock) in the county for eight and ten months in the year. This land is worth from \$2 to \$3 per acre. Wheat, corn, cotton, peanuts, sorghum, and hay grow well in this county. The census of 1890 reports the following: Corn, 531,605 bushels, grown on 25,365 acres; wheat, 16,256 bushels, grown on 2,482 acres; cotton, 474 bales, grown on 2,356 acres; peanuts, 15,325 bushels, grown on 449 acres; sorghum, 22,497 gallons, grown on 382 acres. Very few counties in the State are more abundantly supplied with timber. The southern part is covered with a dense forest of yellow pine. On the ridges white oak, black oak, chestnut,

poplar, and chestnut oak prevail. The white oak timber, near the river, is largely consumed in the manufacture of pipe staves for the French and Spanish markets. The census of 1890 reports live stock as follows: Horses, 2,179; mules, 1,877; asses, 62; working oxen, 663; milch cows, 3,085; other cattle, 5,339; sheep, 10,440; value of live stock, \$463,750. Good river and creek bottom lands are worth from \$15 to \$30 per acre; upland farms about half as much. Mineral and timbered lands range from \$2 to \$4 per acre. Hydraulic rock of an excellent quality occurs near Clifton in inexhaustible quantities. Iron ore (limonite) is abundant, and yields from the furnace about 44 per cent. There are not less than 30 square miles containing iron ore. Only one furnace is in operation. The only town on the line of road is Mannie. Others not on the line are Cypress Inn, Pleasant Valley, Weatherford, Martin's Mills, Waynesborough (county seat), Sorby, Flat Woods, Clifton, Stout, and many others. Nashville & Florence Division of the Louisville & Nashville Railroad, and the Centreville Branch of the Nashville, Chattanooga & St. Louis Railway furnish a small amount of railway transportation. The Tennessee River supplies water transportation. Clifton is the only shipping point on the river. The public schools of Wayne County are not what they should be. The tax levied for their support is only 15 cents on the \$100 worth of property.

NOTE.—It may be said of Wayne County that its resources of iron and timber are probably greater than in any other county in the State. Immigrants will also find farming lands very cheap, and lands well adapted to the growth of a fine quality of tobacco and fruits cheaper than in any other section of the State.

WHITE COUNTY.

Organized, 1806. *County seat*, Sparta. Population, 12,348; white, 11,513; colored, 835; percentage of white, 93.24. Area, 490 square miles, or 314,600 acres; inhabitants to the square mile, 23.53; acres of improved land, 90,016; unimproved, 86,565. Taxable property for 1897, \$1,397,832; number of acres assessed, 238,787; valued at \$1,143,194; value per acre, \$4.78. Average elevation on grade of railroad, 927 feet in the western part of the county, and 1,800 feet in the eastern. Bon Air station

reaches an elevation of 1,625 feet on grade. In its topographical features the county is divided into three parts: the table-land or mountain, the valleys and coves, and the barrens. These three divisions give great diversity of elevation, soils, and productions. The eastern side of the county, comprising about one-fifth of its area, lies on the Cumberland Table-land, and has all the characteristics of this natural division of the State. At about half the height of the table-land is the terrace, or "bench." This terrace has the same elevation as the tables or tops of most of the



EXHIBIT OF BON AIR COAL, BON AIR, N., C. & ST. L. R'Y.

little mountains or outliers. It affords sites for some beautiful farms and orchards, where all varieties of fruit common to the country are produced. The Calf Killer valley occupies a belt across the county, and is twenty-five miles long, with an average breadth of four miles. The surface is generally rolling, and there are no bottoms along the river. An interesting topographical feature is presented by the sink holes, which are very numerous in this valley. Other valleys furnish fine farming lands. Sugar maple, beech, ash, walnut, buckeye, linden, wild cherry, and immense yellow

poplars are abundant in the forests. In the valleys, the soil is generally good, being a dark brown loam, on a subsoil of strong clay. In the barrens the lands are level and thin. Caney Fork and Calf Killer are the principal streams. The water privileges of the county are abundant and very superior. The falls of Caney Fork supply over 8,000 horse power within a stretch of two miles. The census of 1890 reports the following crops: Indian corn, 586,178 bushels, grown on 29,516 acres; wheat, 39,636 bushels, grown on 6,367 acres; oats, 83,506 bushels, grown on 8,090 acres. Poultry and eggs form no inconsiderable quantity of the shipments made from the county. Statistics from the census of 1890 shows the following: Horses, 3,134; mules, 1,179; asses, 23; working oxen, 300; milch cows, 2,768; other cattle, 6,576; sheep, 5,324; value of live stock, \$479,660. The best farms in White County are held at prices ranging from \$20 to \$40 per acre. Good upland farms, somewhat broken, may be bought for \$15 per acre. Mountain lands and mountain farms at \$3 to \$6 per acre. Coal is abundant. Bon Air Coal Mines supply excellent coal, for which there is a good demand. (See coal statistics in this pamphlet.) There are beautiful building stones, and large flagging stones. The thriving towns and villages on this line of road are: Walling, Holder, Doyle, Moores, Sparta, East Sparta, Price, Rock House, and Bon Air. Those not on the line—Camp Ground, Darkey Springs, Cassville, Fancher's Mills, Amanda, Cherry Creek, Baker's Cross Roads, Shingle, Newark, Dodson, Perilla, Solon, and others. The McMinnville Branch of the Nashville, Chattanooga & St. Louis Railway furnishes transportation. The public school interests in White County are keeping pace with its progress. The tax levied for this purpose is 40 cents on the \$100, which is surpassed only by those of Anderson, Cumberland, Weakley, and Gibson counties in the entire State. White County offers many advantages to immigrant farmers in soils, crops, markets, and in the cheapness of lands; to cotton manufacturers, in the abundance and cheapness of water powers, coal, and timber; to the pomologist, in the adaptability of the soils and situation for the growing of fruits; to the apiarist, in the healthfulness of the bees, and in the large quantities of honey they produce. The same may be said of Warren, Coffee, and Franklin counties.

WILSON COUNTY.

Organized, 1799. *County seat*, Lebanon. Population in 1890, 27,148; white, 19,798; colored, 7,350; percentage of white, 72.93. Area, 536 square miles, or 343,040 acres; inhabitants to the square mile, 50.65; acres of improved land, 199,045; unimproved, 145,267. Taxable property for 1897, \$4,450,930; number of acres assessed, 355,023; valued at \$3,530,240; value per acre, \$9.94. Elevation above the sea, taking grade of railroad, 544 feet. This county ranks among the first in the Central Basin. The lands are based almost wholly on limestone. The county has the Cumberland River on its northern side. The surface, summarily, outside of the valleys, of which there is a good supply, may be said to be rolling, with high hills and ridges frequently in the eastern part. There is very little waste land. With the exception of a few cedar glades, and some rocky points, all can be cultivated. The soil of the county, excepting those of the alluvial bottoms, and a dark cedar soil sometimes met with, is mulatto colored, warm and rather sandy. The crops in the order of their importance are corn, wheat, oats, hay and barley. The census of 1890 reports the following: Indian corn, 1,780,547 bushels, grown on 62,659 acres; wheat, 313,290 bushels, grown on 33,250 acres; oats, 249,906 bushels, grown on 14,690 acres; tobacco, 74,011 pounds, grown on 118 acres; hay, 21,588 tons, grown on 14,190 acres; cotton, 82 bales, grown on 459 acres; barley, 4,412 bushels, grown on 278 acres. This county stands third in the State in the production of Indian corn; fifth in the production of wheat, and in the number of acres of improved lands. Stock raising is largely engaged in by the farmers. The census of 1890 reports live stock as follows: Horses, 10,472; mules, 6,162; asses, 639; working oxen, 66; milch cows, 7,274; other cattle, 12,326; sheep, 17,239; value of live stock, \$1,769,150. The timber of the county is very valuable. Oak, ash, and hickory timber, besides large forests of cedar give great value to the forest products. Good farms are worth from \$25 to \$40 per acre. Hilly farms from \$10 to \$20 per acre. There are no minerals of importance in the county with the exception of good building stone. That is found quite plentifully among the layers of the silurian rocks. Some mineral springs exist, one of which, called Horn Spring, has a considerable reputation for its curative properties. The principal

towns and villages on the Lebanon Branch are Green Hill, Mt. Juliet, Silver Springs, Leeville, Lebanon, and Tucker's Gap. Spring Creek, Shop Spring, Cherry Valley, Watertown, and Catamount are on the Nashville & Knoxville Railroad. Other towns not on the railroads are Cainsville, Cottage Home, Round Top, Greenvale, Statesville, McCulloch, Simmons Bluff, Henderson's Cross Roads, Oak Point, Baird's Mills, Vesta, Partlow, Rural Hill, Dodoburgh, Linwood, Commerce, Bellwood, Austin, Caruthers, Lockport, Silver Spring, and many others. The Lebanon Branch of the Nashville, Chattanooga & St. Louis Railway, and the Nashville & Knoxville Railroad furnish transportation. Cumberland University, located at Lebanon, has been noted for more than a half century for the excellence of its law department. It has educated more lawyers than any other institution in the South, and is justly entitled to take the first rank in this particular. Public schools do fairly well in the thickly settled districts, but the average school terms amount to only 80 days in the year. The tax levied for the support of public schools is 30 cents on the \$100.



FURNACE AT SOUTH PITTSBURG

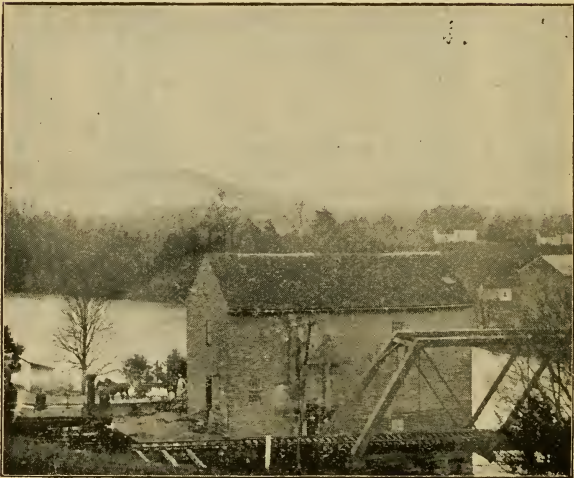
RELATIVE RANK OF THE DIFFERENT COUNTIES IN THE STATE AS TO FARM PRODUCTS AND STOCK.

(CENSUS OF 1890.)

| | | |
|-------------------------------------|----------|-----------|
| Maury, first in corn | bushels | 2,363,414 |
| Rutherford, second in corn | bushels, | 1,925,083 |
| Wilson, third in corn | bushels, | 1,780,547 |
| Williamson, first in wheat | bushels, | 527,615 |
| Bedford, second in wheat | bushels, | 489,007 |
| Obion, third in wheat | bushels, | 465,055 |
| Maury, first in oats | bushels, | 279,068 |
| Knox, second in oats | bushels, | 273,172 |
| Wilson, third in oats | bushels, | 249,906 |
| Bedford, first in rye | bushels, | 15,950 |
| Maury, second in rye | bushels, | 9,185 |
| Marshall, third in rye | bushels, | 9,150 |
| Davidson, first in barley | bushels, | 27,943 |
| Maury, second in barley | bushels, | 4,836 |
| Sumner, third in barley | bushels, | 4,677 |
| Carter, first in buckwheat | bushels, | 1,526 |
| Sullivan, second in buckwheat .. | bushels, | 708 |
| Washington, third in buckwheat. | bushels, | 642 |
| Shelby, first in cotton..... | bales, | 35,666 |
| Fayette, second in cotton | bales, | 21,117 |
| Tipton, third in cotton | bales, | 17,635 |
| Montgomery, first in tobacco | pounds, | 9,351,200 |
| Robertson, second in tobacco | pounds, | 8,605,730 |
| Weakley, third in tobacco | pounds, | 4,444,230 |
| Perry, first in peanuts | bushels, | 182,801 |
| Humphreys, second in peanuts .. | bushels, | 127,958 |
| Benton, third in peanuts..... | bushels, | 91,090 |
| Davidson, first in Irish potatoes.. | bushels, | 309,444 |
| Maury, second in Irish potatoes.. | bushels, | 225,618 |
| Sumner, third in Irish potatoes.. | bushels, | 150,889 |
| Davidson, first in sweet potatoes.. | bushels, | 125,015 |
| Shelby, second in sweet potatoes.. | bushels, | 87,525 |
| Knox, third in sweet potatoes.... | bushels, | 44,988 |
| Wilson, first in wool..... | pounds, | 55,793 |
| Sumner, second in wool..... | pounds, | 48,837 |
| Bedford, third in wool..... | pounds, | 46,156 |
| Davidson, first in hay..... | tons, | 31,690 |
| Maury, second in hay..... | tons, | 28,065 |

| | | |
|--|----------|-----------|
| Wilson, third in hay..... | tons, | 21,588 |
| Williamson, first in grass seed.... | bushels, | 57,176 |
| Rutherford, second in grass seed. | bushels, | 13,285 |
| Maury, third in grass seed..... | bushels, | 9,364 |
| Gibson, first in butter..... | pounds, | 751,883 |
| Davidson, second in butter..... | pounds, | 749,356 |
| Rutherford, third in butter..... | pounds, | 709,992 |
| Knox, first in cheese..... | pounds, | 7,589 |
| Sullivan, second in cheese..... | pounds, | 7,541 |
| Johnson, third in cheese..... | pounds, | 5,370 |
| Davidson, first in milk..... | gallons, | 3,082,582 |
| Knox, second in milk..... | gallons, | 2,673,630 |
| Shelby, third in milk..... | gallons, | 2,559,472 |
| Hardeman, first in cow peas..... | bushels, | 10,273 |
| Fayette, second in cow peas..... | bushels, | 6,279 |
| Madison, third in cow peas..... | bushels, | 5,106 |
| Sullivan, first in beans..... | bushels, | 1,581 |
| Hawkins, second in beans..... | bushels, | 1,435 |
| Union, third in beans..... | bushels, | 1,426 |
| Johnson, first in maple sugar.... | pounds, | 865 |
| Overton, second in maple sugar... | pounds, | 856 |
| Hamblen, third in maple sugar... | pounds, | 841 |
| Maury, first in sorghum..... | gallons, | 93,944 |
| Giles, second in sorghum..... | gallons, | 93,565 |
| Rutherford, third in sorghum.... | gallons, | 87,518 |
| Maury, first in honey..... | pounds, | 74,875 |
| Tipton, second in honey..... | pounds, | 43,776 |
| Greene, third in honey..... | pounds, | 42,834 |
| Tipton, first in value of orchard products. | \$ | 109,880 |
| Monroe, second in value of orchard products | | 109,755 |
| Davidson, third in value of orchard products | | \$95,597 |
| Maury, first in value of live stock..... | \$ | 2,336,700 |
| Wilson, second in value of live stock..... | \$ | 1,769,150 |
| Rutherford, third in value of live stock... | \$ | 1,680,420 |
| Wilson, first in sheep..... | | 17,239 |
| Sumner, second in sheep..... | | 15,620 |
| Bedford, third in sheep..... | | 14,126 |
| Maury, first in swine..... | | 50,957 |
| Wilson, second in swine..... | | 49,420 |
| Rutherford, third in swine..... | | 47,800 |
| Wilson, first in dozens of eggs..... | dozen, | 839,922 |
| Rutherford, second in dozens of eggs. | dozen, | 669,744 |
| Weakley, third in dozens of eggs... | dozen, | 546,077 |
| Rutherford, first in horses..... | | 10,516 |
| Wilson, second in horses..... | | 10,472 |
| Maury, third in horses..... | | 9,567 |
| Maury, first in mules..... | | 10,345 |

| | |
|-------------------------------------|-------|
| Shelby, second in mules.....7.. | 6,444 |
| Lincoln, third in mules..... | 6,046 |
| Wilson, first in asses..... | 539 |
| Rutherford, second in asses..... | 485 |
| Maury, third in asses..... | 477 |
| Jackson, first in working oxen..... | 1,296 |
| Hardin, second in working oxen..... | 1,294 |
| McNairy, third in working oxen..... | 1,134 |
| Davidson, first in milch cows..... | 8,545 |
| Giles, second in milch cows..... | 7,651 |
| Gibson, third in milch cows..... | 7,521 |



FACTORY SCENE AT McMINNVILLE.

DISTANCE FROM NASHVILLE AND ELEVATIONS ABOVE THE SEA OF THE PRINCIPAL POINTS IN MIDDLE TENNESSEE.

PLACES ON THE MAIN LINE OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|--------------------------|--------------------------|-------------------------------------|
| Nashville, at depot..... | | 435 |
| Glenclyff | 4.9 | 462 |
| Asylum | 7.7 | 505 |
| Antioch | 9.8 | 513 |
| Mt. View | 12.2 | 570 |
| Kimbrow | 13.7 | 607 |
| Lavergne | 15.8 | 564 |
| Smyrna | 20.2 | 520 |
| Wade | 22 | 548 |
| Florence Station | 25.5 | 544 |
| Russell | 28 | 550 |
| Murfreesboro | 31.6 | 583 |
| Winstead | 36.2 | 617 |
| Rucker | 38.3 | 665 |
| Christiana | 41.4 | 696 |
| Fosterville | 45.3 | 842 |
| Bellbuckle | 50.5 | 856 |
| Wartrace | 54.9 | 830 |
| Haley | 57.9 | 843 |
| Cortner | 60.5 | 817 |
| Normandy | 62.1 | 834 |
| Tullahoma | 69 | 1,070 |
| Estill Springs | 76.8 | 937 |
| Decherd | 81.9 | 965 |
| Cowan | 86.9 | 973 |
| Sherwood | 96 | 700 |
| Anderson | 101.1 | 680 |
| Bass | 106.3 | 666 |
| Stevenson | 112.4 | 646 |
| Bolivar | 117.5 | 646 |
| Bridgeport | 122 | 660 |
| Shellmound | 129.4 | 636 |
| Ladds | 133.1 | 717 |

| | Miles from Nashville. | Elevation above sea level, feet. |
|-------------------|--------------------------|-------------------------------------|
| Whiteside | 136.9..... | 868 |
| Etna Mines | 138 | 921 |
| Hooker | 141.2..... | 863 |
| Wauhatchie | 145.1..... | 691 |
| Lookout | 147.2..... | 676 |
| Cravens | 149.5..... | 676 |
| Chattanooga | 151.1 (el. at U. D.) | 681 |

LEBANON BRANCH OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|----------------------|--------------------------|-------------------------------------|
| Easton | 3.5..... | 512 |
| Mill Creek | 5 | 409 |
| Mud Tavern | 7 | 410 |
| Donelson | 8.1..... | 515 |
| Hermitage | 11.2..... | 442 |
| Green Hill | 15.6..... | 484 |
| Mt. Juliet | 17.6..... | 530 |
| Silver Springs | 21.5..... | 515 |
| Leeville | 23.6..... | 560 |
| Tucker's Gap | 25.8..... | 653 |
| Lebanon | 30.9..... | 522 |

McMINNVILLE, SPARTA & BON AIR DIVISION OF
THE NASHVILLE, CHATTANOOGA & ST.
LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|-------------------|--------------------------|-------------------------------------|
| Tullahoma | 69 | 1,070 |
| Hickerson | 74.3..... | 1,013 |
| Belmont | 77.3..... | 1,047 |
| Manchester | 80.7..... | 1,035 |
| Wayside | 85.8..... | 1,115 |
| Summitville | 88.2..... | 1,117 |
| Morrison | 93.3..... | 1,076 |
| Smartts | 98.5..... | 1,014 |

| | Miles from Nashville. | Elevation above sea level, feet. |
|----------------------|--------------------------|-------------------------------------|
| McMinnville | 103.2..... | 905 |
| Rowland | 110.4..... | 976 |
| *Rock Island | 115.4..... | 886 |
| Walling | 117 | 909 |
| Holder | 118.9..... | 906 |
| Ward's Station | 120 | 942 |
| Doyle | 121½ | 964 |
| Moore's | 127 | 957 |
| Sparta | 129.5..... | 920 |
| East Sparta | 129.5..... | 987 |
| Price | 133.2..... | 1,238 |
| Rock House | 134.8..... | 1,297 |
| Bon Air | 138.3 (at depot) | 1,625 |
| Bon Air | 138.3 (the town) | 1,800 |

NOTE.—The falls of Caney Fork is a short distance below Rock Island. This is the finest water power in Middle Tennessee. The following elevations are taken from Safford's report:

| | |
|-------------------------------------|-----------|
| Foot of falls | 662 feet. |
| Top of falls | 756 feet. |
| Average of country back from stream | 900 feet. |

SHELBYVILLE BRANCH OF THE NASHVILLE,
CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|-------------------|--------------------------|-------------------------------------|
| Shelbyville | 62.9..... | 771 |

TRACY CITY AND SEWANEE BRANCH OF THE
NASHVILLE, CHATTANOOGA & ST. LOUIS
RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|------------------|--------------------------|-------------------------------------|
| Sewanee | 95.2..... | 1,864 |
| Monteagle | 101 | 1,928 |
| Tracy City | 107 | 1,985 |

SEQUATCHIE VALLEY DIVISION OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|-----------------------|--------------------------|-------------------------------------|
| Copenhagen | 125.3..... | 634 |
| South Pittsburg | 127 | 639 |
| Kimball | 130.2..... | 626 |
| Jasper | 134.2..... | 626 |
| Sequatchie | 138 | 638 |
| Victoria | 141.4..... | 682 |
| Whitwell | 145 | 662.5 |
| Shirleyton | 148.2..... | 667.5 |
| Condra | 150.8..... | 684 |
| Daus | 154.7..... | 721 |
| Dunlap | 159.4..... | 726 |
| Mt. Airy | 164.7..... | 756 |
| Pailo | 167.3..... | 761 |
| College | 170.7..... | 809 |
| Lee | 174.3..... | 852 |
| Pikeville | 179.3..... | 875 |

INMAN BRANCH OF THE NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|-------------|--------------------------|-------------------------------------|
| Inman | 146.3..... | 674 |

Near the head of Sequatchie valley, above Pikeville, occurs one of the highest points in Middle Tennessee. It is called Hinch Mountain, which is 3,000 feet high. This mountain lies between Grassy Cove on the north, and Sequatchie valley on the south. There are many points on Crab Orchard Mountain that have an elevation of 3,000 feet. Crossville, the county seat of Cumberland County, is 1,927 feet above the sea, and Pomona, near that place, celebrated for its fine apples, has an elevation of 1,963 feet. The highest point on the Nashville, Chattanooga & St. Louis Railway is at Gibson's Switch, on the Tracy City Branch, which is 1,949 feet above the sea.

FAYETTEVILLE & COLUMBIA DIVISION OF THE
NASHVILLE, CHATTANOOGA & ST. LOUIS
RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|--------------------|--------------------------|-------------------------------------|
| Winchester | 85 | 945 |
| Kasserman | 89 | 1,005 |
| Belvidere | 90.9..... | 947 |
| Maxwell | 93.9..... | 905 |
| Beans Creek | 96.3..... | 865 |
| Huntland | 97.8..... | 922 |
| Elora | 103.5..... | 909 |
| Flintville | 108.5..... | 884 |
| Brighton | 110.1..... | 905 |
| Kelso | 113.8..... | 718 |
| Fayetteville | 120.7..... | 656 |

FROM FAYETTEVILLE TO COLUMBIA.

| | Miles from Columbia. | Elevation above sea level, feet. |
|----------------------|-------------------------|-------------------------------------|
| Howell | 37.3..... | 732 |
| Petersburg | 34.3..... | 727 |
| Belfast | 25.2..... | 814 |
| Lewisburg | 19.5..... | 727 |
| South Berlin | 15 | 775 |
| Silver Creek | 12.9..... | 702 |
| Bryant Station | 11.5..... | 671 |
| Parks | 9.7..... | 650 |
| Hills | 7.1..... | 600 |
| Columbia | | 644 |

NORTHWESTERN DIVISION OF THE NASHVILLE,
CHATTANOOGA & ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|---------------------|--------------------------|-------------------------------------|
| Harding | 6.5..... | 480 |
| Vaughan's Gap | 9 | 680 |
| Belleview | 12.3..... | 592 |
| Newsom | 16 | 537 |

| | Miles from Nashville. | Elevation above sea level, feet. |
|---|--------------------------|-------------------------------------|
| Pegram | 19.7..... | 533 |
| Kingston Springs | 24 | 505 |
| Craggie Hope | 26 | 578 |
| White Bluff | 30 | 819 |
| Burns | 37 | 810 |
| Colesburg | 39 | 862 |
| Dickson | 41.5..... | 791 |
| Pond | 44.3..... | 895 |
| Tennessee City | 49.6..... | 822 |
| McEwen | 56.9..... | 837 |
| Briggs | 59.9..... | 672 |
| Gorman | 61.5..... | 627 |
| Waverly | 66.5..... | 525 |
| Box | 74.8..... | 380 |
| Johnsonville | 77.4..... | 368 |
| *Low water at Johnsonville, U. S. data | | 322 |
| *High water at Johnsonville, U. S. data ... | | 370.8 |
| Eva | 80 | 362 |
| Camden | 86 | 444 |
| Lipe | 90.3..... | 452 |
| Hollow Rock | 96.2..... | 435 |
| Rosser | 100.8..... | 484 |
| Huntingdon | 105 | 424 |
| Hico | 112 | 399 |
| McKenzie | 116.7..... | 470 |
| Gleason | 124.5..... | 407 |
| Dresden | 131.9..... | 426 |
| Ralston | 138 | 429 |
| Martin | 141 | 414 |
| Gardner | 143.9..... | 337 |
| Shoffner | 149.5..... | 311 |
| Terrell | 147 | 311 |
| Paducah Junction | 150 | 330 |
| Union City | 153.9..... | 338 |
| Woodland Mills | 159.6..... | 360 |
| State Line | 161.1..... | 387 |
| Hickman (on grade of railroad). 167.5.... | | 306 |
| Hickman (of the hills) | | 600 |

*The railroad survey gives low water at Johnsonville, 319.2; high water in 1892, 368.0. March 28, 1897, the water in Tennessee River rose ten inches higher than ever before known.

THE CENTREVILLE & ALLEN'S CREEK DIVISION
OF THE NASHVILLE, CHATTANOOGA &
ST. LOUIS RAILWAY.

| | Miles from Nashville. | Elevation above sea level, feet. |
|-------------------------|--------------------------|-------------------------------------|
| Pomona | 46.3..... | 875 |
| Tidwell | 48 | 883 |
| Iron Hill | 49.8..... | 835 |
| Abiff | 52 | 902 |
| Bon Aqua | 52.6..... | 840 |
| Lyle | 56.1..... | 870 |
| Cantrell | 59.1..... | 848 |
| Rodemer | 61.4..... | 791 |
| Graham | 65 | 565 |
| Nunnelly | 66.9..... | 688 |
| Goodrich | 68.4..... | 544 |
| Grinders | 72.3..... | 758 |
| Centreville | 75.2 (at depot). | 501 |
| Centreville | 75.2 (town proper) | 801 |
| Etna | 84.7..... | 697 |
| Lewis, or Kimmins | 87.9..... | 958 |
| Hohenwald | 94.2..... | 968 |
| Nancy | 101.7..... | 692 |
| Riverside | 103.3..... | 653 |
| Mannie | 105.1..... | 682 |

ELEVATIONS ON THE ST. LOUIS & SOUTHEASTERN
ROADS FROM NASHVILLE TO GUTHRIE.

(Taken from Safford's Geology.)

| | Miles. | Feet. | |
|--|--------|-------|------------------------------|
| Nashville, at depot..... | 0.0 | 435 | (grade) N., C. & St. L. Ry. |
| Nashville, low water of Cumb. R. | | 365 | " " " |
| Nashville, high water of Cumb. R. | | 422 | " " " |
| Edgefield depot..... | 0.5 | 428 | " L. & N. R. R. |
| Summit..... | 4 | 562 | " " " |
| Dry Creek..... | 9.5 | 406 | (bottom) " " |
| Edgefield Junction..... | 9.5 | 438 | (grade) St. L. & S. E. R. R. |
| Summit..... | 11.3 | 517 | " " " |
| Goodlettsville..... | 12.5 | 457 | " " " |
| Mansker's Creek..... | 13.5 | 441 | (surface) " " |
| Mansker's Creek..... | 14.6 | 468 | " " " |
| Foot of "Ridge"..... | 17 | 563 | " " " |
| Summit of "Ridge"..... | 18.5 | 895 | " " " |
| Summit of "Ridge"..... | 18.6 | 877 | (grade) " " |
| Point..... | 22 | 822 | " " " |
| Point..... | 25.3 | 748 | " " " |
| Springfield..... | 29 | 659 | " " " |
| Sulphur Fork..... | 30.5 | 570 | " " " |

| | Miles. | Feet. | |
|--------------------|--------|---------------|----------------------|
| Sulphur Fork | 30.5 | 512 (surface) | St. L. & S. E. R. R. |
| Point | 32 | 672 (grade) | " |
| Point | 36 | 681 | " |
| Red River | 41.5 | 484 | " |
| Red River | 41.5 | 399 (bottom) | " |
| Point | 45.5 | 592 (grade) | " |
| Guthrie, Ky. | 46.7 | 554 | " |

ELEVATIONS ON THE LOUISVILLE & NASHVILLE RAILROAD.

(From Safford's Geology.)

| | Miles from Nashville. | Feet. | |
|----------------------------------|--------------------------|---------------|---------------|
| Edgefield Junction..... | 9.5 | 438 (grade) | L. & N. R. R. |
| Mansker's Creek | 11.5 | 389 (bottom) | " |
| Summit..... | 13 | 528 (surface) | " |
| Drake's Creek | 15.5 | 449 | " |
| Summit..... | 18 | 593 | " |
| W. Station, Camp Creek | 20.5 | 445 | " |
| Station, Camp Creek | 23.5 | 441 | " |
| Gallatin | 26 | 528 | " |
| Summit..... | 27 | 573 | " |
| E. Station, Camp Creek | 27.7 | 503 | " |
| Point about foot of "Ridge" ... | 30.7 | 694 | " |
| Margin of Highlands..... | 31.7 | 951 | " |
| Summit of grade at end of tunnel | 32.3 | 833 (about) | " |
| Valley, Drake's Creek..... | 33.4 | 800 (surface) | " |
| W. Fork, Drake's Creek..... | 36.5 | 708 | " |
| Summit..... | 39 | 853 | " |
| State Line | 45 | 755 | " |

| | Miles. | Feet. | |
|---|--------|--------------|---------------|
| Nashville, Old Terminus Cherry Street..... | | 469 (grade) | L. & N. R. R. |
| Brown's Creek | 2.5 | 475 | " |
| Overton's Gap..... | 6 | 621 | " |
| Atkinson's Gap..... | 9 | 737 | " |
| Little Harpeth River..... | 11.5 | 649 (bottom) | " |
| Little Harpeth River..... | 11.5 | 668 (grade) | " |
| Summit..... | 13.5 | 763 | " |
| Harpeth River..... | 18.3 | 602 (bottom) | " |
| Franklin Depot..... | 18.6 | 642 (grade) | " |
| Summit | 23 | 759 | " |
| West Harpeth River..... | 25 | 682 (bottom) | " |
| Summit (Duck River Bridge)..... | 29 | 841 (grade) | " |
| Spring Hill Station..... | 31.5 | 770 | " |

| | Miles. | Feet. | |
|--|--------|---------------|---------------|
| Carter's Creek..... | 35 | 621 (bottom) | R. R. Survey. |
| Duck River..... | 42.5 | 528 | " |
| Duck River, High Water..... | 42.5 | 571 | " |
| Columbia | | 657 | " |
| Summit..... | 46 | 709 (surface) | " |
| Lick Creek | 47.5 | 626 | " |
| Summit..... | 49.5 | 707 | " |
| E. Branch of Bigby | 53 | 602 | " |
| Mt. Pleasant Sugar Fork of Bigby | 54 | 625 | " |
| Bigby Creek..... | 58 | 660 | " |
| Foot of Ridge..... | 59.5 | 702 | " |
| Top of Ridge, commencement of Highlands | 65 | 1,019 | " |

FROM COLUMBIA TO TENNESSEE AND ALABAMA LINE.

| | Miles. | Feet. | |
|---------------------------------|--------|-------|-----------------------|
| Columbia Depot..... | | 657 | (grade) L. & N. R. R. |
| Point..... | 1.6 | 696 | (surface) .. |
| Lytle's Creek..... | 2.5 | 624 | " .. |
| Point..... | 3.5 | 710 | " .. |
| Point..... | 6 | 624 | " .. |
| Point..... | 8.5 | 766 | " .. |
| Pleasant Grove..... | 9.8 | 739 | (grade) .. |
| Adam's Fork..... | 12.7 | 693 | (surface) .. |
| Elk Ridge, Dodson's Gap..... | 15.8 | 937 | " .. |
| Elk Ridge, Dodson's Gap..... | 15.8 | 898 | (grade) .. |
| Robertson's Fork..... | 18.5 | 716 | (surface) .. |
| Richland Creek..... | 26.5 | 691 | (grade) .. |
| Pulaski..... | 33.5 | 648 | " .. |
| Richland Creek..... | 39.5 | 630 | " .. |
| Richland Creek..... | 39.5 | 593 | (surface) .. |
| Madry Hill..... | 42.5 | 924 | (top) .. |
| Madry Hill Tunnel..... | 42.5 | 736 | (grade) .. |
| Elk River..... | 46.5 | 598 | " .. |
| Elk River..... | 46.5 | 553 | (surface) .. |
| Tennessee and Alabama Line..... | 47.8 | 654.5 | " .. |



A TENNESSEE BOY.

INVITATION TO THRIFTY FARMERS WITH SOME MONEY.

To one who has carefully read this pamphlet it is hardly necessary to say that it describes a region which has not its superior, naturally, in the United States. The industrious homeseeker with some money is invited to come to it. Here he may purchase a home with a small outlay. Here he may grow all the agricultural products of the temperate zone, except some tropical fruits. Here he may enjoy the most pleasant climate in America, where the cold is rarely severe, and the heat of summer is tempered by most delightful breezes. The heat never reaches as high a point as it does in the Northwestern States. Here the winters are short; the growing season long; the number of the crops greater than in any other State; the supply of good water unlimited; the climate exceedingly healthful; the markets convenient, and the prices paid to farmers for all the leading products of agriculture greater than are paid to the farmers of the North Central States. The beauties and attractions of Middle Tennessee cannot be "distilled into expression by words, nor painted upon the widest canvas." Nor can all its advantages as a home be pointed out. One must feel the inspiration of its sweet air; look upon its glorious landscapes; cultivate its fertile and versatile soils; drink from its bubbling fountains; enjoy the shade of its magnificent trees; watch the majestic flow of its imperial rivers; be regaled by the wealth of its flowers transcendant in their beauty, and unmatched in their fragrance; walk through the lordly forests; taste of the luscious fruits and melons; partake of its hospitable society; and enjoy the health-inspiring

breezes before he can appreciate the advantages, the comforts, and the blessings of Middle Tennessee.

All the charms, advantages, adaptabilities, and capabilities of every land are shared to a greater or less extent by the citizens of that region traversed by the Nashville, Chattanooga & St. Louis Railway. Whatever quality of soil one may wish to cultivate, he will be able to find it on this line. Whatever crop he may wish to cultivate, suited to the latitude, may be successfully grown. Whatever elevation, up to 2,000 feet above the sea, in which he may wish to make his home, he will be able to find it. He may grow grain and grasses, fruits and flowers, tobacco and peanuts, hemp and flax, sorghum and potatoes. He may engage in the breeding of stock, in truck farming, lumbering, dairying, mining, manufacturing, poultry raising, bee culture, and many other industries well suited to the intelligent and enterprising immigrant. There have been fully 1,000 northern families that have settled in Middle Tennessee within the past five years. They are satisfied with the homes, and are thrifty and healthy. Taxes are very low, being 30 cents on the \$100 for State purposes, and from one and a half to two times as much in the aggregate for county, school, and road taxes. Lands are assessed from one-third to two-thirds their value. Write for further information about special localities to the following agents:

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EAST TENNESSEE.

A. W. Sidebottom and W. R. Crabtree, Chattanooga, Tenn.; Thos. H. Hill, Sequachee; W. A. Brame, Victoria; W. L. Melcher, Sequachee.

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A WORD AS TO THE OBJECTS TO BE ATTAINED.

The Nashville, Chattanooga & St. Louis Railway has no lands for sale to immigrants, nor has any of its employes, but it will do all in its power to protect immigrants from being imposed upon either in the qualities of the land offered, or in the prices asked. The object in employing an immigrant and industrial agent is that he may give such truthful information to home-seekers about the country as to attract them to it, and thus induce a healthful development all along its line. All manufacturing enterprises, such as cotton, wool, fertilizers, iron, furniture, agricultural implements, tobacco, and many others for which there is raw material, will be given every encouragement by the management of the railroad. For general and special information relating to manufacturing, mining, and agricultural industries, write to the general immigration and industrial agent,

J. B. KILLEBREW,
Nashville, Tenn.

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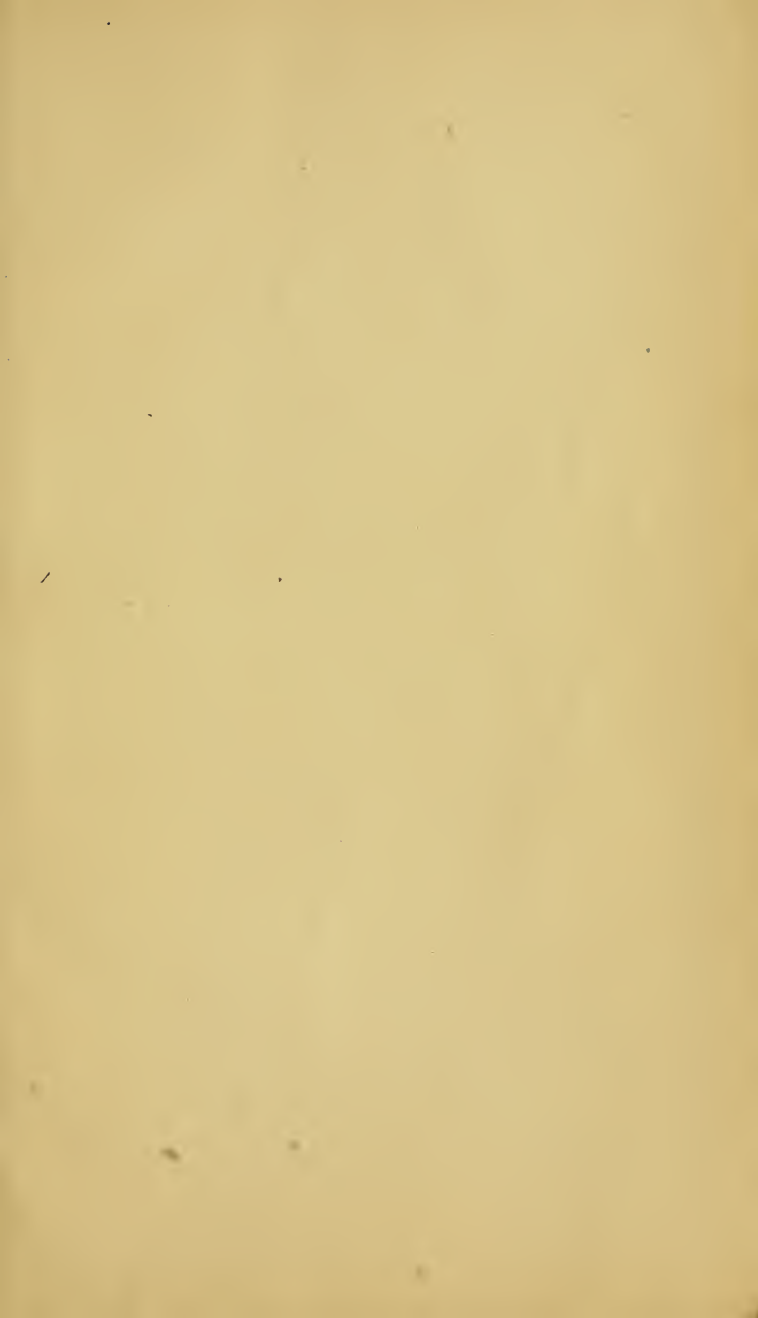
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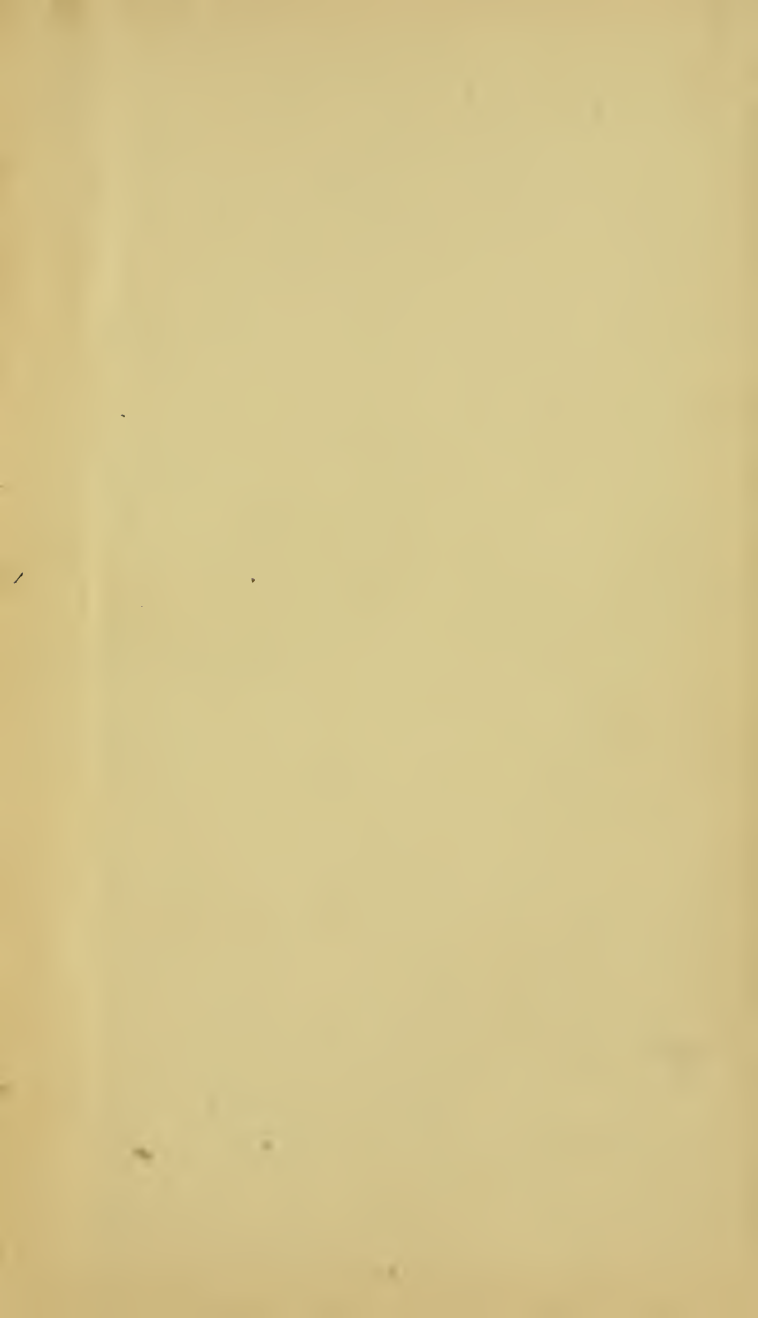
* By "description" is meant organization, county seat, population, area, taxable property, elevation above sea, topography, streams, minerals, crops, fruits, towns, schools, etc.

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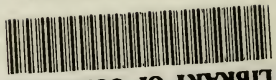
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