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*The* FARMERS'  
CENTENNIAL HISTORY  
<sup>OF</sup> OHIO



1803

1903

ISSUED BY

THE DEPARTMENT OF AGRICULTURE





403

THE  
FARMERS'  
CENTENNIAL HISTORY

OF

OHIO State Board of Agriculture, 1903

1803-1903

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THE DEPARTMENT OF AGRICULTURE



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COLUMBUS, December 31, 1903.

HON. W. W. MILLER,

Secretary, Ohio State Board of Agriculture, Columbus, O.:

DEAR SIR:—I respectfully transmit herewith manuscript of "The Farmers' Centennial History of Ohio." As you will note, this bulletin contains a brief summary of the growth of the agricultural, horticultural and live stock industries of the State during the century, with the latest statistics in reference thereto. A short history of Ohio, arranged chronologically, has been included, with other matters of general interest. Every effort has been made to give correct dates, and, when practicable, original documents have been consulted.

I desire to express my thanks to Prof. William R. Lazenby, Prof. Herbert Osborn and Rev. William Leon Dawson for valuable assistance when preparing the lists of native trees and grasses, animals and fishes and Ohio birds.

Trusting the work will meet your approval, I am,

Yours respectfully,

JEAN DICK CHEETHAM, *Librarian.*

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111

LIST OF MEMBERS OF THE OHIO STATE BOARD OF AGRICULTURE  
FROM THE ORGANIZATION OF THE BOARD TO DATE.

(NOTE.—The act creating the State Board of Agriculture, passed in 1846, provided for fifty-three members and named them. The act was amended in 1847, reducing the number of members to ten. Five members were elected each year for a term of two years until 1898, when the act was so amended as to provide for the election of two members each year for a term of five years.)

Names.	Year of Service.	Residence.
John B. Bayless.....	1846	Jefferson County.
Henry C. Brish.....	1846	Seneca County.
Frederick Bonner.....	1846	Greene County.
Joseph Burns.....	1846	Coshocton County.
John Chaney.....	1846	Fairfield County.
G. W. Cowden.....	1846	Trumbull County.
Absalom Dun.....	1846	Butler County.
John Eckels.....	1846	Hancock County.
Elias Florence.....	1846	Pickaway County.
John Fuller.....	1846	Erie County.
Geo. W. Gibbons.....	1846	Muskingum County.
William Gill.....	1846	Pickaway County.
H. N. Gillett.....	1846	Lawrence County.
L. C. Goble.....	1846	Putnam County.
David Gregory.....	1846	Delaware County.
Anson Howard.....	1846	Champaign County.
John Johnson.....	1846	Miami County.
Aaron Johnson.....	1846	Perry County.
Greenbury Keen.....	1846	Portage County.
Billius Kirtland.....	1846	Mahoning County.
Newton Larsh.....	1846	Preble County.
Liba Lindley.....	1846	Athens County.
Jas. Loudon.....	1846	Brown County.
John McElderry.....	1846	Tuscarawas County.
Wm. McFadden.....	1846	Harrison County.
Beatty McFarland.....	1846	Jefferson County.
John Martin.....	1846	Columbiana County.
Isaac Moore.....	1846	Lake County.
Gilman C. Mudgett.....	1846	Paulding County.
Samuel Myers.....	1846	Crawford County.
Isaac Neiswanger.....	1846	Belmont County.
Simon Perkins.....	1846	Summit County.
Henry Protzman.....	1846	Montgomery County.
W. R. Putman, Jr.....	1846	Washington County.
Felix Renick.....	1846	Ross County.
Jas. L. Reynolds.....	1846	Stark County.
Benj. Ruggles.....	1846	Belmont County.
Sam'l Spangler.....	1846	Fairfield County.
David Stevens.....	1846	Richland County.
Abraham Studdebaker.....	1846	Darke County.
Dowty Utter.....	1846	Clermont County.
John I. Vanmeter.....	1846	Pike County.
Richard Warner.....	1846	Medina County.
Jesse Wilson.....	1846	Shelby County.
J. M. Millikin.....	1846	Hamilton.
J. T. Pugsley.....	1846	Convenience.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Continued.

Names.	Years of Service, Inclusive.	Postoffice.
Allen Trimble .....	1846-51	Hillsboro.
M. L. Sullivant.....	1846-53	Columbus.
Sam'l Medary .....	1846-53	Columbus.
Darius Lapham .....	1846-50	Cincinnati.
Arthur Watts .....	1846-52	Chillicothe.
J. P. Kirtland.....	1846-48	Cleveland.
A. E. Strickle.....	1846-49	Wilmington.
M. B. Bateham.....	1847-51	Columbus.
John Coddling .....	1847-49	Granger.
C. Springer .....	1848-52	Meadow Farm.
J. M. Edwards.....	1848-52	Canfield.
J. G. Gest.....	1848-54	Spring Valley.
F. R. Elliott.....	1849-51	Cleveland.
J. T. Pugsley.....	1850-51	Convenience.
S. Halloway .....	1850-51	St. Clairsville.
William Case .....	1852-53	Cleveland.
Philo Adams .....	1852-53	Huron.
R. W. Musgrave.....	1852-57	Sulphur Springs.
R. W. Steele.....	1853-56	Dayton.
William H. Ladd.....	1853-56	Richmond.
D. McIntosh .....	1853-54	Shalersville.
J. T. Worthington.....	1853-56	Chillicothe.
Joseph Sullivant .....	1854-55	Columbus.
John K. Greene.....	1854-57	Cincinnati
James L. Cox .....	1854-55	Zanesville.
B. Stedman .....	1854-57	Cleveland.
Alexander Waddle .....	1855-60	South Charleston.
Abel Krum .....	1855-58	Cherry Valley.
Lucien Buttles .....	1856-59	Columbus.
G. W. Baker.....	1856-57	Marietta.
John M. Milliken.....	1857-62	Hamilton.
Luther Smith .....	1857-58	West Liberty.
Thomas S. Webb.....	1857-58	Massillon.
Norton S. Townshend.....	1858-63	Avon.
L. Q. Rawson.....	1858-59	Fremont.
James M. Trimble.....	1858-61	Hillsboro.
John Reber .....	1858-61	Lancaster.
D. E. Gardner.....	1859-64	Toledo.
William Dewitt .....	1859-64	Cleveland.
C. W. Potwin.....	1859-62	Zanesville.
T. C. Jones.....	1860-67	Delaware.
Henry B. Perkins.....	1860-63	Warren.
David Taylor .....	1861-66	Columbus.
Jacob Egbert .....	1862-63	Lebanon.
Nelson J. Turney.....	1862-69	Circleville.
D. McMillan .....	1863-70	Xenia.
W. R. Putnam.....	1863-64	Marietta.
William F. Greer.....	1864-67	Painesville.
James Fullington.....	1864-69	Irwin Station.
William B. McClung.....	1864-71	Troy.
James W. Ross.....	1865-70	Perrysburg.
R. R. Donnelly.....	1865-68	Wooster.
James Buckingham .....	1865-72	Zanesville.
J. Park Alexander.....	1867-70	Akron.
Norton S. Townshend.....	1868-69	Avon.
William Lang .....	1868-71	Tiffin.
D. C. Richmond .....	1869-74	Sandusky.
R. P. Cannon .....	1870-75	Aurora.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Continued.

Names.	Years of Service, Inclusive.	Postoffice.
James B. Jamison.....	1870-77	Cadiz.
L. G. Delano.....	1870-75	Chillicothe.
L. B. Sprague.....	1871-76	Springfield.
Simpson Harmount.....	1871-76	New Philadelphia.
John A. Warder.....	1871-76	Cleves.
W. S. Hickox.....	1872-73	Mansfield.
B. W. Carlisle.....	1872-79	Hooker's Station.
Justus C. Stephens.....	1873-74	Kenton.
John M. Pugh.....	1874-79	Columbus.
L. B. Wing.....	1875-80	Newark
Russell C. Thompson.....	1875-76	Sylvania.
Leo Weltz.....	1876-83	Wilmington
D. L. Pope.....	1876-81	Welshfield
Charles Smith.....	1877-80	Marion.
E. T. Stickney.....	1877-78	Republic.
A. E. Stone.....	1877-78	<b>Gallipolis.</b>
Peter Murphy.....	1877-80	Hughes' Station.
W. N. Cowden.....	1878-83	Quaker City.
R. Baker.....	1879-82	Elyria.
Arvine C. Wales.....	1879-82	Massillon.
R. H. Hayman.....	1880-81	Portsmouth.
O. P. Chaney.....	1880-82	Canal Winchester.
C. D. Bailey.....	1881-88	Gallipolis.
J. C. Levering.....	1881-86	Levering.
William S. Foster.....	1881-88	Urbana.
L. B. Harris.....	1882-87	Upper Sandusky.
J. H. Brigham.....	1882-89	Delta.
L. N. Bonham.....	1883-86	Oxford.
H. Talcott.....	1883-87	Jefferson.
N. A. Sims.....	1883-85	Columbus.
T. P. Shields.....	1884-87	Watkins.
John Pow.....	1884-89	Salem.
S. H. Hurst.....	1884-89	Chillicothe.
J. J. Sullivan.....	1887-88	Millersburg.
Joseph H. Terrell.....	1887-88	New Vienna.
J. G. Russell.....	1887-90	Mt. Gilead.
H. G. Tryon.....	1888-91	Willoughby.
J. M. Black.....	1888-90	Hanover.
A. H. Kling.....	1889-96	Marion.
H. S. Grimes.....	1889-90	Portsmouth.
A. J. Clark.....	1889-98	Cambridge.
W. W. Miller.....	1889-94	Castalia.
J. W. Pollock.....	1890-93	Cedarville.
N. Ohmer.....	1890-95	Dayton.
L. G. Fly.....	1890-91	West Unity.
E. L. Hinman.....	1890-93	Columbus.
J. C. Bower.....	1891-98	Athens.
George Lewis.....	1891-94	Van Wert.
Chester Bordwell.....	1892-93	Batavia.
F. A. Derthick.....	1892-95	Mantua.
J. T. Robinson.....	1894-97	Rockaway.
G. Liggett.....	1894-1901	Watkins.
J. H. Pringle.....	1894-95	Cardington.
E. C. Ellis.....	1895-98	Crestvue.
Chester Bordwell.....	1895-1901	Batavia.
L. G. Ely.....	1896-1900	Fayette.
H. S. Grimes.....	1896-1900	Portsmouth.
Albert Hale.....	1896-99	Mogadore.

## MEMBERS OF THE STATE BOARD OF AGRICULTURE.—Concluded.

Names.	Years of Service, Inclusive.	Postoffice.
J. S. Stuckey.....	1897	Van Wert.
S. H. Ellis.....	1898-99	Waynesville.
D. J. Green.....	1899-1902	Renrock.
B. P. Baldwin.....	1899	Tiger.
Samuel Taylor.....	1899	Grove City.
T. E. Cromley.....	1900	Ashville.
T. L. Calvert.....	1900	Selma.
Wm. Miller.....	1901	Gypsum.
J. L. Carpenter.....	1901	Carpenter.
C. H. Ganson.....	1902	Urbana.
A. P. Sandles.....	1902	Ottawa.
R. O. Hinsdale.....	1903	Wadsworth.

LIST OF OFFICERS OF THE OHIO STATE BOARD OF AGRICULTURE,  
FROM ITS ORGANIZATION TO DATE; ALSO TABLES SHOWING  
PLACE OF HOLDING AND RECEIPTS OF EACH STATE FAIR.

Y'r.	President.	Treasurer.	Secretary.	Place of Fair.	Rec'pts.
1846	Allen Trimble .....	M. L. Sullivan.....	Samuel Medary.....	.....	.....
1847	Same .....	Same .....	M. B. Bateham.....	.....	.....
1848	Same .....	Same .....	Same .....	.....	.....
1849	M. L. Sullivan.....	Samuel Medary.....	Same .....	.....	.....
1850	Same .....	Same .....	Same .....	Cincinnati	\$8 036 18
1851	Same .....	Same .....	W. W. Mather.....	Columbus .....	8,204 09
1852	Arthur Watts .....	Same .....	Same .....	Cleveland .....	13,360 00
1853	Samuel Medary.....	M. L. Sullivan.....	Geo. Sprague.....	Dayton .....	13,996 37
1854	R. W. Musgrave.....	Joseph Sullivan.....	Same .....	Newark .....	8,824 58
1855	J. T. Worthington.....	Same .....	Same .....	Columbus .....	9,745 51
1856	William H. Ladd.....	Lucien Buttles.....	Same .....	Cleveland .....	16,684 20
1857	Alexander Waddle.....	Same .....	J. H. Klippart.....	Cincinnati	17,530 75
1858	John M. Milkin.....	Same .....	Same .....	Sandusky .....	9 997 70
1859	N. S. Townshend.....	Same .....	Same .....	Zanesville .....	8 958 82
1860	Alexander Waddle.....	Chas. W. Potwin.....	Same .....	Dayton .....	11,998 50
1861	Darwin E. Gardner.....	Same .....	Same .....	.....	8,036 18
1862	Thomas C. Jones.....	David Taylor.....	Same .....	Cleveland .....	11,260 64
1863	N. S. Townshend.....	Same .....	Same .....	.....	11,142 00
1864	Nelson J. Turney.....	Same .....	Same .....	Columbus .....	12,620 54
1865	Same .....	Same .....	Same .....	.....	10 658 05
1866	Wm. B. McClung.....	Same .....	Same .....	Dayton .....	14,035 80
1867	Daniel McMillan.....	Jas. Buckingham.....	Same .....	.....	18,692 98
1868	James Fullington.....	Same .....	Same .....	Toledo .....	15,606 25
1869	Same .....	Same .....	Same .....	.....	19,606 50
1870	James W. Ross.....	J. Park Alexander.....	Same .....	Springfield .....	18,252 85
1871	William Lang.....	Jas. Buckingham.....	Same .....	.....	16,460 25
1872	James Buckingham.....	Sim'n Harmount.....	Same .....	Mansfield .....	19,149 45
1873	Lincoln G. Delano.....	Same .....	Same .....	.....	22,517 50
1874	Same .....	Same .....	Same .....	Columbus .....	27 674 79
1875	R. P. Cannon.....	Same .....	Same .....	.....	20,539 30
1876	S. Harmount.....	J. M. Pugh.....	Same .....	.....	11 909 61
1877	J. B. Jamison.....	Same .....	Same .....	.....	21,151 21
1878	J. M. Pugh.....	L. B. Wing.....	Same .....	.....	11,979 50
1879	B. W. Carlisle.....	Same .....	J. W. Fleming.....	.....	30,703 35
1880	L. B. Wing.....	D. L. Pope.....	W. T. Chamberlain.....	.....	23,682 20
1881	D. L. Pope.....	Leo. Weltz.....	Same .....	.....	29,706 16
1882	R. Baker.....	W. N. Cowden.....	Same .....	.....	34,082 52
1883	W. N. Cowden.....	L. B. Harris.....	Same .....	.....	38 513 78
1884	W. S. Foster.....	Same .....	Same .....	.....	33,206 48
1885	C. D. Bailey.....	J. C. Levering.....	Same .....	.....	29,796 51
1886	L. N. Bonham.....	L. B. Harris.....	Same .....	.....	30,533 17
1887	J. H. Brigham.....	Same .....	L. N. Bonham.....	.....	30,902 10
1888	John Pow.....	J. G. Russell.....	Same .....	Centen'l year, no fair.....	.....
1889	Same .....	Same .....	Same .....	Columbus .....	19,637 41
1890	J. G. Russell.....	A. H. Kling.....	Same .....	.....	27,574 55
1891	J. M. Black.....	Same .....	Same .....	.....	33,878 64
1892	A. H. Kling.....	W. W. Miller.....	Same .....	.....	30 357 19
1893	J. W. Pollock.....	Same .....	Same .....	.....	19,350 93
1894	W. W. Miller.....	F. A. Derthick.....	Same .....	.....	27 260 25
1895	A. J. Clark.....	Same .....	W. W. Miller.....	.....	33,966 13
1896	J. C. Bower.....	A. J. Clark.....	Same .....	.....	22,531 20
1897	J. T. Robinson.....	J. C. Bower.....	Same .....	.....	30,369 48
1898	C. Bordwell.....	Same .....	Same .....	.....	31,023 26
1899	L. G. Ely.....	H. S. Grimes.....	Same .....	.....	33,749 17
1900	H. S. Grimes.....	L. G. Ely.....	Same .....	.....	31,521 35
1901	J. S. Stuckey.....	G. Liggett.....	Same .....	.....	51 576 50
1902	Samuel Taylor.....	T. L. Calvert.....	Same .....	.....	40,519 72
1903	T. E. Cromley.....	Same .....	Same .....	.....	49,292 75





## HISTORY OF AGRICULTURE IN OHIO, 1803-1903.

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The first settlers of Ohio were of necessity agriculturists. Representatives of all classes—professional men, business men, craftsmen, farmers—took up the line of march toward the land of promise, which lay beyond the mountains, and they entered in, took possession of the land, and tilled the soil. Many of these pioneers had spent their fortunes in maintaining the War for Independence, and had, as Burnett says, “retired to the wilderness to conceal their poverty.”

Upon the admission of Ohio to the Union the population was about 45,000, and 7,069,629 acres of land had been purchased from the General Government; but we have no means now of ascertaining how much of this was cultivated or how much of it was occupied by actual residents.

By 1810 the population had increased to 230,760, and 9,933,099 acres of land had been purchased from the Government, but over a third of this amount was held by non-residents.

A dense forest covered the whole State. Game was abundant; deer, bears, wild turkeys, etc., supplied the early settlers with meat.

The first houses were built of logs and covered with long, split oak shingles, held in place by logs or poles in place of nails. Logs split into flat pieces and hewn smooth were used for floors and doors. School houses and churches were also built of logs. The work of cutting down the forest trees and clearing away the underbrush was generally done in the winter, and all timber not needed for fence rails and fuel was rolled into heaps and burned. Oxen were generally used for farm work; they were less expensive than horses and more easily kept, with the additional advantage of being available for beef when unfit for work.

As soon as the farms were cleared, they were planted in wheat, corn, oats, buckwheat, flax and potatoes. Wheat was sown broadcast among the stumps and with a “drag,” scratched under the surface. Red chaff bearded wheat was introduced by the early settlers, and was one of the first varieties cultivated in the State. It was very prolific.

Corn was planted early in May. The planter carried his seed corn in a bag, which was suspended about his waist. A sharp hoe was used to raise the leafy soil, under which the corn was thrown and the ground pressed down with the hoe or foot. Sometimes a hole was made with an ax and the corn dropped in. When the corn came up, a hoe was used for clearing out the weeds and stirring the soil about the plants. White flint corn was grown in the northern part of the State, as it found a ready

market at a good price with the Hudson Bay Company; but yellow dent corn was preferred in other portions of Ohio. "The culture of maize," says an early writer,<sup>1</sup> "is nearly the only one which the early inhabitants follow, and, although it is far from being brought to perfection, and the land is still so full of roots, it is nevertheless so fertile that the stems rise ten or twelve feet, and the annual produce is from twenty-five to thirty quintals per acre. \* \* \* Nine-tenths of the interior farmers use only maize bread. They make it into loaves of eight or ten pounds' weight, which they bake in cottage ovens, or into small cakes, baked on a plank before the fire. The bread is generally eaten hot, and is not much relished by those who are unaccustomed to it."

Flax was an important crop in Ohio at one time. "It was sown, cleaned, pulled, rotted, broken, swungled, hatched, spun and woven in the home, made into linen for the household and into summer garments for men and boys." The fiber was also manufactured into paper. In 1869<sup>2</sup> Ohio produced nearly 80,000,000 pounds of flax fiber, and had ninety flax mills in operation. In 1870 the tariff on gunny cloth, grown in the East Indies, was removed, and, as a result, every flax mill in Ohio was stopped, and the amount of flax fiber reduced in 1886 to less than 2,000,000 pounds. Cotton fiber has now almost entirely taken the place of flax in the manufacture of clothing and many other purposes. A valuable oil was produced from the flax seed, for which there was a great demand for many years, but cotton seed oil and some products of petroleum have, to a great extent, taken the place of flax seed oil.

The implements used by the early agriculturists of Ohio were few and primitive. The crotch of a tree, with a tooth in front and four on each side, was the harrow made and used in that day, and the wooden mould board plow was in use for many years. Mr. James Flint, an Englishman, who traveled through Ohio in 1818, makes some interesting observations on the condition of agriculture at that time<sup>3</sup> :

"The plow is short, clumsy, and not calculated to make either deep or neat furrows. Farming establishments are small. Most cultivators do everything for themselves, even to the fabrication of their agricultural implements.\*\*\*\* I saw some people threshing buckwheat; they had dug a hollow in a field, about twenty feet in diameter and six feet eight inches in depth. In this the grain was thrashed by the flail and the straw thrown aside to rot in the field. The wheat is cleared of the chaff by two persons fanning at it with a sheet, while a third lets it fall before the wind.\*\*\*\*Light articles are carried on horseback, heavy ones by a coarse sledge, a cart or a wagon. The small implements are the ax, the pick-ax and the cradle—scythe—by far the most commendable of backwood apparatus."

Between 1810 and 1820 conditions were very unsatisfactory to the farmer. Wheat declined to twenty-five cents per bushel; corn ranged from ten to fifteen cents; oats ten cents, while potatoes ranged from ten to

1 Micheaux Travels, p. 133.

2 Dr. N. S. Townshend.

3 Flint's Letters from America.

twelve cents per bushel. And even at these prices but few cash sales were made by the farmer, but his products had to be exchanged for articles which he needed but could not produce. "Salt was eighteen dollars per barrel at lake ports, while flour was worth three dollars per barrel. Farmers throughout Stark, Wayne, Portage and other famous wheat producing counties in that vicinity would leave the 'log cabin' on Monday morning with six barrels of flour for Cleveland, and return on Saturday night, having bartered the six barrels of flour, the labor of a man and several horses during an entire week, for a single barrel of salt."<sup>1</sup> A cow could be bought at from six to eight dollars, a horse from twenty-five to forty dollars, and pork and beef from one dollar and fifty cents to one dollar and seventy-five cents per hundredweight. Almost all clothing was of home manufacture. Journeys were made on horseback by "bridle paths" and sometimes through the unbroken forest, for there were as yet no roads. The crying necessity of the country was for transportation facilities.

Governor Ethan Allen Brown recognized the importance of internal improvements and the opening up of a "cheaper way to market for the surplus produce of a large portion of our fertile country." The following quotation is made from his annual message to the General Assembly, January 8, 1819:<sup>2</sup>

"You will bear in mind that our productions, which form our only great resource, are generally of that bulky and ponderous description as to need every easement in consequence that we can afford. Experience is a faithful monitor; and the millions expended for transportation during the late war may teach a useful lesson; another may be learned from the present difference between the price of salt on the lake shore and on the Ohio. I have already evinced an anxiety on this subject, excited by a strong sense of its vital importance. Roads and canals are veins and arteries to the body politic, that diffuse supplies, health, vigor and animation to the whole system."<sup>3</sup>

The people living on the border of Lake Erie, the Ohio River and the navigable waterways of the State had a very great advantage over the settlers in the central portion; the former could, at certain periods of the year, send their produce to market by boat; but the only demand the latter had for surplus products came from the immigrants.

In 1820 the first action was taken in reference to the construction of the Ohio canals. Considerable opposition developed, however, and the act authorizing the work did not pass until 1825.<sup>3</sup> By 1837 higher prices were paid for agricultural products than ever before in the history of the State. Wheat sold at one dollar and twenty-five cents per bushel; clover seed fifteen dollars per bushel; potatoes one dollar and twenty-five cents per bushel, etc. "For thirty years these waterways were the great controlling factors of increasing commerce, manufactures and population.

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1 Dr. S. P. Hildreth.

2 Senate Journal, 1819.

3 See Ohio Canals.

The newly found markets for farm products added fifty per centum to their prices, thus enlarging the field of agriculture and bringing wealth to the State by its extension."<sup>1</sup>

In 1832 there were 560,742 bushels of wheat exported by canal from the State, and by 1847 it reached 9,200,388 bushels. An average of about 5,000,000 bushels of wheat and flour were exported annually by canal from 1840 to 1850.

With the impetus given to agriculture by the opening of the canals, improved machinery was being introduced, and the Ohio farmer was ready to take advantage of it. The corn cultivator appeared in 1824, McCormick's reaper in 1831 and Hussey's mower in 1833. In 1850 the value of machinery and implements in use on farms in this State was \$12,750,585. Corn planters, grain drills, broadcast wheat sowers, corn shellers for horse and hand power, corn and cob crushers, and one and two horse cultivators were on exhibition at the State Fair held in Cleveland in 1852. In 1859 it was said that Ohio employed more labor saving machinery than any other State in the Union. The number of improved machines has increased rapidly, changing the character of field work and making it possible to largely increase the production of cereals.

As early as 1833 there was much interest manifested in the culture of silk worms, and silk manufacturing companies were organized at Franklinton, Franklin county; Franklin Mills, Portage county; Dayton, Montgomery county, and St. Clairsville, Belmont county, and from 1835 to 1845 many yards of silk goods were manufactured in Ohio.<sup>2</sup> From the Patent Office Report for 1854 we learn that fifty thousand bushels of cocoons were raised annually in the valley of the Ohio.

About 1834 Mr. Joseph Sullivant, of Columbus, Ohio, made some experiments in the culture of the sugar beet. He procured some French sugar beet seed through the Patent Office, and planted a half acre of ground. The yield was so great that the following year he had several acres planted with seed imported directly from France. The yield was very abundant, and a number of expensive experiments were made for the purpose of extracting the saccharine matter, but he did not succeed in procuring crystallized sugar. The lack of practical experience and of facilities for extracting the sugar and crystallizing it are responsible for the abandonment of the enterprise, but Mr. Sullivant succeeded in demonstrating the value of the sugar beet as food for man and for all domestic animals, its wonderful productivity and the adaptability of Ohio soils for its cultivation.

Mr. Sullivant also made valuable experiments in hemp growing, and demonstrated the fact that good crops of hemp could be grown in

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1 Ryan's History of Ohio, p. 96.

2 See Ohio Manufacturers.

Ohio, the difficulty not being in soil, climate or cultivation, but in the manual labor required in preparing the hemp for market.

Almost all varieties of farm crops have been tried in this State. Some have succeeded and some have failed, but it will be seen from the following statistics that, notwithstanding the center of production is gradually moving westward, the staple crops of Ohio one hundred years ago are the staple crops of the State today :

PRODUCTION OF WHEAT IN BUSHEL FROM 1850 TO 1900.

(U. S. Census Report of 1900.)

Year.	Busheles.	Rank.
1850.....	14,487,351	2
1860.....	15,119,047	4
1870.....	27,882,159	3
1880.....	46,014,869	3
1890.....	35,559,208	5
1900.....	50,376,800	3

PRODUCTION OF WHEAT BY COUNTIES FOR 1899.

(U. S. Census Report for 1900)

County.	Acres.	Busheles.	Value.
Adams .....	28,637	252,200	
Allen .....	41,090	686,460	
Ashland .....	41,586	729,600	
Ashtabula .....	18,253	306,110	
Athens .....	18,077	201,260	
Auglaize .....	48,531	865,490	
Belmont .....	28,903	345,890	
Brown .....	32,073	271,330	
Butler .....	69,959	1,135,230	
Carroll .....	19,518	259,620	
Champaign .....	57,048	960,350	
Clark .....	51,439	949,900	
Clermont .....	27,211	239,670	
Clinton .....	52,364	787,640	
Columbiana .....	26,860	420,390	
Coshocton .....	37,672	441,750	
Crawford .....	35,922	792,020	
Cuyahoga .....	13,784	257,160	
Darke .....	81,001	1,511,510	
Defiance .....	21,370	235,910	
Delaware .....	31,448	551,200	
Erie .....	23,554	436,030	
Fairfield .....	57,674	804,940	
Fayette .....	60,859	1,106,880	
Franklin .....	59,239	996,290	
Fulton .....	15,952	109,900	
Gallia .....	27,771	244,810	
Geauga .....	10,648	199,170	
Greene .....	60,111	1,015,980	

## PRODUCTION OF WHEAT BY COUNTIES FOR 1899—Concluded.

County.	Acres.	Bushels.	Value.
Guernsey .....	22,298	243,970	
Hamilton .....	28,071	482,000	
Hancock .....	60,062	1,112,120	
Hardin .....	45,918	838,010	
Harrison .....	15,676	194,860	
Henry .....	22,639	239,700	
Highland .....	51,205	541,840	
Hocking .....	19,361	186,740	
Holmes .....	34,994	549,540	
Huron .....	38,234	779,520	
Jackson .....	18,390	157,470	
Jefferson .....	17,568	206,080	
Knox .....	43,514	658,200	
Lake .....	7,832	120,230	
Lawrence .....	16,336	131,920	
Licking .....	50,282	710,890	
Logan .....	47,409	880,520	
Lorain .....	27,665	517,920	
Lucas .....	7,596	63,580	
Madison .....	55,538	1,070,960	
Mahoning .....	19,730	347,580	
Marion .....	36,642	749,770	
Medina .....	29,074	579,090	
Meigs .....	28,003	328,830	
Mercer .....	50,798	977,420	
Miami .....	62,256	1,102,890	
Monroe .....	24,924	271,570	
Montgomery .....	53,944	962,360	
Morgan .....	19,937	266,400	
Morrow .....	25,197	517,590	
Muskingum .....	34,309	407,110	
Noble .....	18,128	185,990	
Ottawa .....	20,637	246,890	
Paulding .....	8,938	97,380	
Perry .....	23,540	307,460	
Pickaway .....	77,255	1,193,950	
Pike .....	27,421	266,160	
Portage .....	24,859	444,000	
Preble .....	56,000	1,066,260	
Putnam .....	59,034	1,002,810	
Richland .....	47,384	891,230	
Ross .....	62,994	786,540	
Sandusky .....	49,959	793,810	
Scioto .....	26,916	309,700	
Seneca .....	69,192	1,309,230	
Shelby .....	3,920	891,190	
Stark .....	54,682	902,040	
Summit .....	31,650	589,540	
Trumbull .....	17,256	318,670	
Tuscarawas .....	36,558	498,080	
Union .....	38,580	674,680	
Van Wert .....	39,855	656,250	
Vinton .....	14,275	133,100	
Warren .....	40,747	496,980	
Washington .....	37,225	481,960	
Wayne .....	59,485	950,570	
Williams .....	26,975	265,800	
Wood .....	36,393	572,080	
Wyandot .....	37,365	733,080	
Totals .....	3,209,074	50,376,800	\$32,855,834

Ohio ranks second in value of wheat and third in number of bushels.

## PRODUCTION OF CORN IN BUSHELS FROM 1850 to 1900.

(U. S. Census Report of 1900.)

Year.	Bushels.	Rank.
1850.....	59,078,695	1
1860.....	73,543,190	2
1870.....	67,501,144	3
1880.....	111,877,124	5
1890.....	113,892,318	6
1900.....	152,055,390	7

## PRODUCTION OF CORN BY COUNTIES FOR 1899.

(U. S. Census Report of 1900.)

County.	Acres.	Bushels.	Value.
Adams .....	47,268	1,220,820	
Allen .....	45,478	1,857,760	
Ashland .....	28,121	1,081,120	
Ashtabula .....	21,297	626,560	
Athens .....	22,713	698,380	
Auglaize .....	51,357	2,076,050	
Belmont .....	29,956	1,103,770	
Brown .....	58,929	1,739,450	
Butler .....	59,628	2,449,790	
Carroll .....	16,380	473,720	
Champaign .....	66,144	2,767,560	
Clark .....	58,780	2,528,830	
Clermont .....	51,324	1,474,350	
Clinton .....	69,201	3,219,390	
Columbiana .....	23,208	814,170	
Coshocton .....	33,655	1,094,470	
Crawford .....	40,686	1,678,560	
Cuyahoga .....	15,103	504,450	
Darke .....	88,557	3,789,930	
Defiance .....	40,542	1,985,210	
Delaware .....	52,450	2,084,900	
Erie .....	21,168	790,930	
Fairfield .....	61,388	2,500,190	
Fayette .....	76,136	3,385,220	
Franklin .....	83,712	3,382,300	
Fulton .....	44,904	1,928,190	
Gallia .....	31,057	774,810	
Geauga .....	11,977	411,440	
Greene .....	67,059	3,188,380	
Guernsey .....	25,389	833,400	
Hamilton .....	30,953	1,113,340	
Hancock .....	63,060	2,813,210	
Hardin .....	57,355	2,380,610	
Harrison .....	15,707	543,780	
Henry .....	77,990	3,879,160	
Highland .....	66,919	2,462,790	
Hocking .....	21,444	635,100	
Holmes .....	27,429	984,870	
Huron .....	33,146	1,219,100	
Jackson .....	20,286	435,170	

## PRODUCTION OF CORN BY COUNTIES FOR 1899—Concluded.

County.	Acres.	Bushels.	Value.
Jefferson .....	16,085	574,800	
Knox .....	40,660	1,471,790	
Lake .....	9,409	375,600	
Lawrence .....	30,240	673,930	
Licking .....	60,866	2,326,070	
Logan .....	60,992	2,433,010	
Lorain .....	24,198	870,690	
Lucas .....	33,532	1,346,210	
Madison .....	92,975	3,738,570	
Mahoning .....	18,561	714,860	
Marion .....	54,189	2,394,740	
Medina .....	23,160	770,110	
Meigs .....	22,234	595,990	
Mercer .....	56,409	2,283,930	
Miami .....	59,709	2,721,940	
Monroe .....	23,849	776,500	
Montgomery .....	55,651	2,290,160	
Morgan .....	19,925	787,490	
Morrow .....	32,744	1,370,160	
Muskingum .....	37,509	1,307,010	
Noble .....	21,467	797,790	
Ottawa .....	29,346	1,275,500	
Paulding .....	75,756	3,779,830	
Perry .....	22,623	765,530	
Pickaway .....	91,079	3,843,560	
Pike .....	35,304	1,053,680	
Portage .....	17,452	546,000	
Preble .....	58,815	2,544,710	
Putnam .....	75,846	3,557,350	
Richland .....	35,389	1,388,340	
Ross .....	80,804	3,192,960	
Sandusky .....	50,271	2,314,470	
Scioto .....	32,058	1,034,840	
Seneca .....	56,798	2,388,920	
Shelby .....	53,778	2,047,690	
Stark .....	35,411	1,454,180	
Summit .....	20,651	696,000	
Trumbull .....	18,138	576,470	
Tuscarawas .....	27,391	822,990	
Union .....	61,469	2,386,760	
Van Wert .....	63,224	3,057,910	
Vinton .....	18,087	487,120	
Warren .....	53,066	2,372,140	
Washington .....	29,194	926,640	
Wayne .....	43,449	1,745,170	
Williams .....	35,132	1,515,180	
Wood .....	107,686	4,752,280	
Wyandot .....	45,556	1,976,590	
Totals .....	3,826,013	152,055,390	\$48,037,895



## PRODUCTION OF OATS IN BUSHELS FROM 1850 to 1900.

(U. S. Census for 1900.)

Year.	Bushels.	Rank.
1850.....	13,472,742	3
1860.....	15,409,234	3
1870.....	25,347,549	4
1880.....	28,664,505	6
1890.....	40,136,732	7
1900.....	42,050,910	6

## ACREAGE, PRODUCTION AND VALUE OF CORN, WHEAT, OATS, BARLEY AND BUCKWHEAT, ARRANGED IN ORDER OF VALUE, AND GIVING RANK IN PRODUCTION AND VALUE, FOR CROP OF 1899.

(U. S. Census Report of 1900.)

Grain.	Acres.	Rank.	Bushels.	Rank.	Value.
Corn .....	3,826,013	7	152,055,390	7	\$48,037,895
Wheat .....	3,209,074	3	50,376,800	2	32,855,834
Oats .....	1,115,149	6	42,050,910	8	10,236,251
Barley .....	34,058	13	1,053,240	12	402,977
Rye .....	17,583	16	257,120	16	128,072
Buckwheat .....	13,071	10	164,305	10	87,242

## ACREAGE AND PRODUCTION OF SPECIFIED CLASSES OF HAY AND FORAGE IN 1899, AND TOTAL VALUE OF SAME.

Kind.	Acres.	Tons.	Value.
Wild, Salt and Prairie grasses.....	3,548	3,563	
Millet and Hungarian grasses.....	13,048	19,552	
Clover .....	617,516	773,857	
Other cultivated grasses .....	2,276,898	2,627,989	
Grains cut green for hay .....	60,813	77,749	
Sown for forage .....	40,639	123,068	
Cornstalks .....	32,658	563,149	
Total .....	3,047,919	4,132,871	\$29,047,919

Ohio ranks fourth in value of hay and forage crop.

PRODUCTION AND VALUE OF CLOVER SEED AND OTHER GRASS SEEDS  
FOR 1899.

Name.	Bushels.	Value.
Clover seed .....	336,318	\$1,358,494
Other grass seed .....	52,403	60,195
Total .....	388,721	\$1,418,689

Value of Farm Productions for 1899 .....\$257,065,826  
Value of Live Stock on Farms June 1, 1900..... 125,954,616

PRODUCTION OF POTATOES FROM 1850 TO 1900.

(U. S. Census Report of 1900.)

Years.	Acres.	Bushels.	Value.
1850 .....		5,057,769	
1860 .....		8,695,101	
1870 .....		11,192,814	
1880 .....		12,719,215	
1890 .....	185,393	15,804,931	
1900a .....	167,590	13,709,238	\$5,750,068

a Crop of 1899.

Ohio ranks fifth in value of crop, sixth in acreage, and seventh in production.

## ACREAGE AND PRODUCTION OF SWEET CORN, TOMATOES, CUCUMBERS AND OTHER VEGETABLES FOR 1899.

(U. S. Census Report of 1900.)

Name.	Acres.	Bushels.	Number.	Bunches.
Sweet Corn.....	16,659	1,400,772		
Tomatoes .....	10,800	1,853,674		
Cucumbers .....	1,432	313,035		
Beets .....	178	61,621		
Carrots .....	80	30,802		
Parsnips .....	47	14,062		
Radishes .....	175			5,157,410
Turnips .....	64	15,577		
Green Beans ..	306	36,750		
Green Peas ....	748	61,517		
Pumpkins .....	75		142,800	
Squashes .....	84		202,890	
Watermelons ..	1,959		2,507,240	
Muskmelons ...	2,256		2,660,510	
Cabbages .....	6,970		19,501,140	
Lettuce .....	190	93,943		
Spinach .....	22	6,698		
Asparagus .....	118			226,130
Celery .....	954			1,575,800

Ohio ranks third in value of her vegetable productions, which amounted to \$12,354,407.

## ACREAGE, PRODUCTION AND VALUE OF SWEET POTATOES AND ONIONS FOR 1899.

(U. S. Census of 1900.)

Name.	Acres.	Bushels.	Value.
Sweet Potatoes .....	3,796	249,767	\$158,103
Onions .....	5,067	1,671,442	826,212
Total .....			\$984,315

## ACREAGE, PRODUCTION AND VALUE OF TOBACCO IN 1899 AND OTHER STATISTICS.

(U. S. Census of 1900)

Name.	Acres.	Pounds.	Value.
Tobacco .....	71,422	65,957,100	\$4,864,191
Broom Corn .....	802	537,160	
Hops .....	3	2,910	
Willows .....	14		1,144

## OHIO STATE BOARD OF AGRICULTURE.

Of all the agencies which have been at work for the last half of the century in promoting the interests of agriculture, the most valuable has been the Ohio State Board of Agriculture, the establishment of which was due to the efforts of some of the most prominent, intelligent, public spirited men in the State, who worked together harmoniously to accomplish this end, irrespective of politics or profession.

The first law that could be classed under "agricultural legislation" was passed by the General Assembly February 25, 1833, and was entitled "An act to authorize and encourage the establishment of agricultural societies in the several counties of the State." The law was amended in 1839, but it soon proved inadequate to the wants of the agriculturists of the State, and on February 2, 1845, "A bill for the encouragement of agriculture" was introduced in the Senate by Mr. Wetmore, representing Portage and Summit counties. Final action was not secured on the bill until March 10, near the close of the session (the Legislature adjourned March 13), when it was indefinitely postponed by a vote of twelve to thirteen.<sup>1</sup> This was a very serious disappointment to the friends of the measure, and as a result a State agricultural convention was called, to meet in the Senate chamber, Columbus, June 25-26 of that year. The convention was well attended by representative agriculturists from all parts of the State, and some stirring resolutions were passed, among them the following:<sup>2</sup>

"Resolved, That the next General Assembly be requested to enact a law providing for the election by delegates from the different county or district societies, of a permanent State Board of Agriculture, to consist of seven members, residing in different parts of the State, who shall have the general supervision of all plans for the promotion of agriculture throughout the State, give instructions for the management of county or district agricultural societies, and obtain reports from the same, procure the analysis of soils, lectures, etc., and generally perform such acts as may tend to promote improvements in agriculture, horticulture and domestic industry, also make an annual report to the legislature, embracing an account of their own proceedings, together with an abstract of the reports from the county societies.

"Resolved, That a State Board of Agriculture consisting of nine members be elected by this Convention, who shall discharge the duties of said Board, as contemplated in the preceding resolution for one year, or until their successors be appointed.

"Resolved, That a committee of ten be appointed by the chair to nominate to the Convention suitable persons to constitute said Board."

A committee was thereupon appointed and the following gentlemen were named and duly elected as a "State Board of Agriculture": M. L.

<sup>1</sup> Senate Journal 1845, pp. 406, 850, 851.

<sup>2</sup> Ohio Cultivator, 1845 pp. 98-100.

Sullivant, Samuel Medary, Franklin; Allen Trimble, Highland; Greenbury Keen, Portage; Samuel Spangler, Fairfield; Darius Lapham, Hamilton; Dr. J. P. Kirtland, Cuyahoga; J. H. Hallock, Jefferson; Joseph Vance, Champaign. The convention adjourned, to meet again at the call of the "State Board of Agriculture."

On the 22d of October, 1845, in response to a call issued "by the advice of Messrs. Ridgeway, Medary and Sullivant," there was a meeting of the "Ohio State Board of Agriculture," at which it was decided to prepare memorials, petitions, etc., for the presentation to the next General Assembly. The "Board" adjourned until December 10th, on which date the committees on agriculture of the two branches of the Legislature were present, "and a full and free interchange of opinions was had in regard to the several plans for the promotion of agriculture contemplated in the resolutions and memorial of the State convention and the petitions daily coming in from different parts of the State, asking for legislative action in behalf of agriculture."<sup>1</sup> On December 15, 1845, Mr. Wetmore again presented to the Senate "A bill for the encouragement of agriculture," which, with some changes, was passed February 27th, 1846, and the act of 1839 to authorize and encourage the establishment of agricultural societies in the State was repealed thereby, except as to the payment of liabilities incurred.

This law created the State Board of Agriculture, consisting of fifty-three members.

Section 6 of the act provided that "there shall be held in the city of Columbus on the first Wednesday after the first Monday in December an annual meeting of the Ohio State Board of Agriculture, together with the president of each county agricultural society, etc."

The Ohio State Board of Agriculture, created by the above named act, held its first meeting in the city of Columbus on the first Wednesday in April, 1846, in compliance with the provisions of the law. Out of the fifty-three members but nine were present, while ten were required to make a quorum. We do not find the fact recorded, but, according to tradition, a messenger was sent after Mr. Chaney, the member whose home was nearest Columbus, and by hard riding during a part of a very stormy night Mr. Chaney reached this city before midnight, and a legal organization of the Board was effected. Ex-Governor Allen Trimble was elected president, Samuel Medary secretary and M. L. Sullivant treasurer.

The first annual meeting of the Board was held in Columbus Wednesday, December 9, 1846. The roll was called by the secretary, and the following members of the Board answered to their names: Allen Trimble, Samuel Medary, Darius Lapham, A. E. Strickle, Samuel Meyers, H. N. Gillett, Isaac Moore and Arthur Watts.

Credentials were presented by the following gentlemen as presidents or delegates of county societies: Alexander Waddle, of Clark and

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<sup>1</sup> Ohio Cultivator, 1845, p. 100.

Madison; A. Ruff, Greene; T. B. Fisher, Delaware; N. Spindler, Knox; W. I. Thomas, Miami; Samuel Meyers, Columbiana; J. F. Beaver, Trumbull; Jonathan Smith, Licking; A. H. Lewis, Portage; J. J. Coombs, Gallia; William Hogue, Belmont. As these delegates were ex-officio members of the Board at this meeting, there was a quorum present, and the regular business was taken up.

A resolution was passed, requesting the General Assembly to reduce the number of members of the Board. On February 8, 1847, the law was amended, and the number of members reduced to ten. The following gentlemen were appointed: Allen Trimble, M. L. Sullivant, Samuel Medary, Darius Lapham, A. E. Strickle, Arthur Watts, M. B. Bateham, John Coddling, Jared P. Kirtland and Isaac Moore.

Section 3 of the amended law provided "that the sum of two hundred dollars be and the same is hereby appropriated from the treasury for the use of the board."

The annual meetings of the Board were held in December until 1862, when the time was changed to January, in compliance with the amended law of February 20, 1861.

The law for the "encouragement of agriculture" was again amended January 13, 1898. This amendment provides for the election of two (instead of five, as under the old law) members of the Board each year, and makes the term of service five years (instead of two).

In 1880 the system of monthly crop reporting by townships was inaugurated by the Board.

In 1881 a law was passed, making the Secretary of the State Board of Agriculture the inspector of commercial fertilizers in Ohio.

May 7, 1902, an act was passed by the General Assembly, constituting the State Board of Agriculture the State Board of Live Stock Commissioners of Ohio, and a few days later an act was passed placing nursery and orchard inspection under the control of the Board.

## OHIO STATE FAIR.

At the annual meeting of the Ohio State Board of Agriculture December 6, 1848, it was decided to hold a State Fair in September, 1849, at Cincinnati, but owing to an outbreak of cholera in that city during the summer it was decided to postpone it for a year. Arrangements were made to hold it September 11, 12 and 13, 1850; but another epidemic of cholera caused a postponement until October 5, 6 and 7, of that year, when the first Ohio State Fair was held at Camp Washington, near Cincinnati. It was a great success; the attendance was large and the receipts amounted to \$8,036.18. The fair was without a permanent home for some years. It was held in Columbus in 1851; Cleveland, 1852; Dayton, 1853; Newark, 1854; Columbus, 1855; Cleveland, 1856; Cincinnati, 1857;

Sandusky, 1858; Zanesville, 1859; Dayton, 1860, 1861; Cleveland, 1862, 1863; Columbus, 1864, 1865; Dayton, 1866, 1867; Toledo, 1868, 1869; Springfield, 1870, 1871; Mansfield, 1872, 1873. In 1874 the State Fair was located in Columbus, occupying the grounds of the Franklin County Agricultural Society (now Franklin Park) until 1886, when it was permanently located on the Ohio State Fair Grounds, comprising one hundred and fifteen acres, situated just north of the city. These grounds have been improved and beautified and fine buildings erected for the accommodation of exhibitors in every department. The four live stock buildings have the best arrangements for the care and exhibition of animals and are the largest and most commodious in the United States.

The Board has held fairs annually since 1850, except in 1888, when the "Ohio Centennial Commission" was authorized to, and did, hold its exposition on the State Fair Grounds.

### COUNTY AGRICULTURAL SOCIETIES.

That the pioneer farmers of Ohio realized the importance of combination and association in their work is evidenced by the existence of agricultural societies very early in the history of the State. According to Hon. Elisha Whittlesey, the Trumbull County Agricultural Society was organized in 1818. In an address delivered before the Mahoning County Agricultural Society in 1860, he makes the following statement:<sup>1</sup>

"My belief is that the first agricultural society in this State \* \* \* was organized in Youngstown. A notice, given at the request of several gentlemen interested in agricultural science, was published in the *Chronicle*, at Warren, on the 26th of November, 1818, requesting a meeting of the farmers of Youngstown and adjacent towns at James Hillman's, in Youngstown, on the 2d of December following, for the formation of an agricultural society. 'Farmers from a distance are requested to attend, as views are entertained that this society will embrace the agricultural interests of the whole county.' That notice, I have no doubt, was drawn by Judge George Tod, who was enthusiastically devoted to agriculture, horticulture and gardening. \* \* \* On the day appointed the meeting was held. George Tod, William Rayen and Calvin Pease were appointed a committee to prepare and report articles of association. The report was made in due time, and the first article was as follows: 'The name of this society shall be The Agricultural Society of Trumbull County, and the objects of the society are the promotion and improvement of agriculture, rural economy and domestic manufactures.' At the second meeting George Tod was elected president. The society continued in existence four years, and stimulated the farmers, or many of them,

<sup>1</sup> Ohio Agricultural Report, 1860, pp. 426, 427.

to adopt improvements in cultivation; and the females vied with each other in fabricating various articles of domestic wear." This was many years before the erection of Mahoning county, which occurred in 1846.

The Agricultural and Mechanical Society of Washington (Ohio) and Wood (Virginia) counties was organized April 28, 1819. The association held a fair at Marietta October 18, 1826. A procession was formed in front of the court house, and, escorted by a band of music, marched to the front of the Congregational church, where President Barker delivered an address. A dinner was served and the awards were announced after the members of the society had regaled themselves. "For many years the court house was used for floral hall, and the streets adjacent, or some convenient vacant lots, were used for the display of stock."

The Cincinnati Society for the Promotion of Agriculture, Manufactures and Domestic Economy was organized July 24, 1819, with General William Henry Harrison as President. On July 27th the following editorial appeared in *Liberty Hall and Cincinnati Gazette*:

"The Association for the Promotion of Agriculture and Domestic Manufactures, which was the object of the meeting at the court house on the 24th instant, merits the patronage and active co-operation of the whole community, and more particularly of those who are engaged in agricultural pursuits. Town and country, if not equally, are both essentially interested in the success of this society, and we think those patriotic citizens who have set it on foot are entitled to the thanks of the whole country."

The society held a meeting June 27, 1820, and agreed upon premiums to be offered at their fair, to be held at E. Hutchinson's, on the last Tuesday of September, 1820, as follows:

	First.	Second.	Third.
For linen, not less than 25 yards in piece.....	\$15.00	\$10.00	\$5.00
Woolen cloth, not less than 12 yards, and three quarters of a yard wide.....	15.00	10.00	5.00
Bull calves, not more than 1 year old.....	15.00	10.00	5.00
Heifer calves not more than 1 year old .....	10.00	5.00	3.00
Milch cows, form of animal, quantity and quality of milk to be considered .....	15.00	10.00	5.00
Merino rams:			
Best full blood.....	8.00		
Best half blood .....	5.00		
Common rams, long wool breed.....	5.00	3.00	
Hogs, best breed, size and proneness to fatten early to be considered .....	15.00	10.00	5.00
Work oxen .....	15.00	10.00	5.00
Stud colts, not more than 3 years old.....	25.00		
Brood mares .....	15.00	10.00	5.00



From the above it would appear that Hamilton county held the first fair, and this premium list, the first issued in the State, is worthy of preservation. It is valuable for comparison.

The Ashtabula County Agricultural Society was organized January 16, 1823, and the first cattle show and fair was held in Austinburg the following October, at which premiums amounting to forty dollars were offered.

The Portage County Agricultural Society was organized May 9, 1825, at Ravenna, and the first fair was held October 18th of the same year.

The Athens County Agricultural Society was organized in 1828, and the following is the preamble to the constitution of the society:<sup>1</sup>

"We, whose names are annexed, convinced of the benefits resulting to communities from the operations of well regulated agricultural societies, in the means and facilities afforded by them for the attainment and diffusion of useful, practical information, and the spirit of emulation and improvement in the culture of the soil and the domestic manufacture of its products, do form ourselves into an Association for the above mentioned purposes, to be called the Athens County Agricultural Society."

The first fair was held at Athens in October of the same year.

A number of counties organized societies under the law of 1833, but it was not until the passage of the law of 1846, which created the Ohio State Board of Agriculture and placed county societies under its care and management, that a general interest was manifested; the old societies promptly reorganized under the new law and in a few years every county in the State had its agricultural society.

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<sup>1</sup> History of Athens County, p. 183.

## FARMERS' INSTITUTES.

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Farmers' institutes have aided greatly in the education of the farmers of Ohio. The institute idea was suggested by that life-long friend of agriculturists, Dr. Norton S. Townshend. Under date of February 15, 1845, he made the following suggestions:<sup>1</sup>

"Had we a State Agricultural Society, with a good board of managers, or should the Legislature constitute a State Board of Agriculture, then either of these might select a sufficient number of competent individuals to lecture on all the sciences having relations with agriculture. To one lecturer might be assigned Geology and Mineralogy, with their relations to draining, well-digging, etc., etc.; to another Chemistry, with its innumerable applications; to another Botany and Vegetable Physiology as applied to gardening, orcharding, and field culture; to another lecturer, Zoology, Comparative Anatomy and Physiology, showing their bearing upon the management of domestic animals; to another the principles of Pathology and Therapeutics and their relation to the treatment of the diseases of animals, and all the operations of a surgical nature which the farmer is required to perform; then to another Natural Philosophy and the application of its principles in the perfecting of farming implements, etc., etc.

"And why will not all who are qualified commence lecturing in their own neighborhoods, and invite their neighbors to hear? Immense good might be done; at any rate, an interest could be excited if nothing more."

Mr. M. B. Bateham, editor of the *Ohio Cultivator* (later a member of the State Board of Agriculture), in the issue of October 15, 1846, says:

"In regard to lectures, we hope that the State Board will take some action upon the subject, and that several competent persons may be engaged to lecture in different parts of the State, where desired, during the coming winter. We know of no way by which more good could be accomplished at the present time."

The State Board of Agriculture at its second meeting, held October 28, 1846, adopted the following resolution:<sup>2</sup>

"Resolved, That the Board respectfully and earnestly ask gentlemen possessing the requisite knowledge of science and agriculture, in different parts of the State, to assist in the great work of promoting agricultural improvement by delivering lectures to farmers, as they may be desired or have opportunity, especially during the season of fall and winter, and in places where clubs or societies may be formed for such purposes."

No definite action was taken for a long time, but during all these years Dr. Townshend was teaching the doctrine of higher education for the farmer with unflagging zeal in addresses to county agricultural societies, farmers' clubs, etc. We cannot refrain from quoting here a paragraph

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<sup>1</sup> *Ohio Cultivator*, 1845, p. 31.

<sup>2</sup> *Ohio Agricultural Report*, 1846, pp. 17, 18.

from an address delivered by him at the annual meeting of the State Board of Agriculture held in 1874:<sup>1</sup>

“What we want is to abandon the old idea that farming has no higher aim than getting a living, and instead of it to adopt the better one that the chief end of farming is the culture and improvement of the farmer and his family; and while it does this, it should, as a secondary result, give support and pay expenses. Farming needs a new departure, or to take a new start, and with a higher aim and purpose, so that it may secure to the farmer the same improvement in intellectual and social position that men expect to secure through the professions of law or medicine. These professions educate men by their daily work, and so will farming when taken hold of in earnest and in the right way.”

In 1880 Dr. W. I. Chamberlain was elected secretary of the State Board of Agriculture, and in an address to the Board, made September 14, 1880, he asked for definite authority “to co-operate with county or other local agricultural societies and granges in calling and organizing farmers’ institutes or agricultural conventions during the present fall and winter. My own work would be to attend and address such meetings, take part in the discussions and secure in advance competent lecturers and speakers, so as to create interest, insure the success of the meetings, diffuse agricultural information and help secure better results in agriculture all through our State. This plan of holding farmers’ institutes has been pursued in Michigan for a number of years with the most beneficial results.”

A resolution was at once adopted appropriating one thousand dollars (\$1,000) out of the earnings of the State Fair for the purpose of inaugurating farmers’ institutes in Ohio, and during the winter of 1880-81 the good work began. Twenty-seven institutes were held during the winter with three speakers, President Edward Orton and Dr. N. S. Townshend, of the Ohio State University, and Secretary W. I. Chamberlain.

The interest manifested in these institutes by the farmers of the State was very encouraging to the friends of agriculture, and on March 22, 1881, the General Assembly increased the appropriation for the encouragement of agriculture one thousand dollars (\$1,000) to enable the Board to carry on the work.

On April 26, 1890, the General Assembly passed “An Act to provide for the organization and support of farmers’ institute societies.” This law provided from the general fund of each county a per capita allowance of five mills, but not to exceed two hundred dollars in any county; two-fifths of this amount to go to the State Board of Agriculture for the payment of per diem and expenses of speakers appointed by the Board, and three-fifths to go to the local societies for their expenses.

This substantial recognition of the work gave fresh impetus to it. During the season of 1895-96, one hundred and fifty-seven regular farmers’ institutes were held under the auspices of the Board, and eighty-

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1 Ohio Agricultural Report, 1874, p. 115.

seven counties took part in the work. But the Board had now reached that point where it was impossible, with the means at its command, to increase the number of institutes, although the demand was constantly growing. Again the General Assembly came to its aid, and on the 27th of April, 1896, amended the "Act providing for the organization and support of farmers' institute societies," making the per capita allowance six mills, instead of five mills, and dividing it equally between the State Board of Agriculture and the local societies, limiting the amount available in any county to two hundred and fifty dollars.

In 1902-03 there were two hundred and forty, two-day, farmers' institutes held, with an average attendance of seventy-three thousand nine hundred and twenty-one and a total expense of sixteen thousand, five hundred and ten dollars and seventy-five cents.

In addition to the regular farmers' institutes held under the auspices of the State Board of Agriculture, a large number of independent institutes have been held each year, some of which have reported to this department, but many have failed to do so, hence we are unable to give even an approximate estimate of the number of independent meetings held.

The State Farmers' Institute held its first session in Columbus, Tuesday, January 11, 1887 (the annual meeting of the State Board of Agriculture was held on the 12th) and it has held annual two-day sessions in Columbus since that time during the week of the annual meeting of the Board. No county institutes are held during the continuance of the State Institute; this gives all interested an opportunity of attending it. A good program is always provided and the farmers, horticulturists and stock breeders of the State are present in large numbers.

It would be impossible to estimate the good that has resulted from the work of the Ohio State Board of Agriculture, either directly as a department of agriculture, or indirectly through farmers' institutes, state and county fairs, county agricultural societies, etc., in raising the standard of agriculture, in improving live stock of all classes, farm products, fruits, methods of cultivation, increasing production, etc., etc.

AGRICULTURAL EDUCATION.

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Ex-Governor Allen Trimble, President of the State Board of Agriculture for several years, was an earnest advocate of agricultural education, and in his report to the Board for 1848 he says:<sup>1</sup>

"I cannot close this report without again calling the attention of the General Assembly and our farming population to the importance and necessity, if we should succeed in our undertaking, of elevating agriculture among us to its true dignity and importance, by providing some efficient means of preparing our young men, at least, for adopting a more improved and perfect system of agriculture."

In 1854 the first step was taken in this direction when the Ohio Agricultural College was established at Oberlin, and arrangements were made to deliver winter courses of lectures, annually, to young farmers on the branches of science most intimately connected with agriculture. There were four departments in charge of the following gentlemen:<sup>2</sup>

"Dr. James Dascomb, chemistry in its application to soils, manures, animal and vegetable life, domestic arts, etc.

"Dr. N. S. Townshend, comparative anatomy and physiology, with special reference to the feeding and breeding of stock; history and description of domestic animals; veterinary medicine and surgery, entomology, etc.

"Dr. John S. Newberry, geology and mineralogy, botany, etc.

"Professor James H. Fairchild, natural philosophy; agricultural mechanics; farm implements; meteorology; elements of engineering and land surveying; rural architecture; landscape gardening and farm book-keeping."

Only a few young men took advantage of these lectures at Oberlin, so during the winters of 1855 and 1856 they were held in Cleveland, but evidently with no better success, as they were then discontinued.

In 1833 Mr. Freeman G. Cary opened what was known as Pleasant Hill Academy. After operating this academy for a number of years, Mr. Cary decided to change the name of the institution to "Farmers' College" and adopt a course of study for the education of the young farmers of the State. To defray the expenses of this undertaking, "a fund was raised by the sale of shares, a suitable farm was purchased, commodious buildings erected and a large attendance of pupils secured."<sup>3</sup> In Septem-

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1 Ohio Agricultural Report, 1848, p. 15.

2 Ohio Cultivator, 1854, p. 286.

3 Howe's Historical Collections, vol. 1, p. 108.

ber, 1856, the agricultural department of the Farmers' College, at College Hill, Ohio, went into operation under three appropriate professorships.

The Ohio Agricultural and Mechanical College opened its doors for the reception of students in 1873, with ten departments, agriculture heading the list. In 1878 the General Assembly passed an act changing the name from the Ohio Agricultural and Mechanical College to the Ohio State University, and the department of agriculture has become the College of Agriculture and Domestic Science, offering to the student six courses of study:

1. A four years' course in Agriculture.
2. A four years' course in Horticulture and Forestry.
3. A two years' course in Agriculture and Horticulture.
4. A winter term's course in Dairying.
5. A four years' course in Domestic Science.
6. A two years' course in Domestic Science.

The student in this college is not only given a scientific course of study, but also a thoroughly practical training. He is taught to analyze the soil and study its physical properties; the best manner of tillage and the most improved methods of drainage and irrigation; the management of live stock, etc., etc.

An act was passed by the General Assembly of Ohio, April 17, 1882, authorizing the establishment of an agricultural experiment station. A few days later Governor Charles Foster appointed the three members of the Board of Control, who were called together on April 25th, when they effected an organization by the election of proper officers, and Professor W. R. Lazenby was appointed director. The trustees of the Ohio State University, having offered the free use of necessary land, of laboratories, apparatus, implements, etc., the station was located on the University grounds. The first annual report, which was made in 1882, gave an account of the work accomplished during the year and stated that the station was "prepared to test varieties; to analyze and test fertilizers and manures, soils, water, milk, cattle foods, etc.; to examine seeds that are suspected of being unsound or adulterated; to identify and name weeds and other plants; to investigate and describe, when known, the habits of injurious and beneficial insects, and other work of a similar character that properly comes within its province."

In 1892 the station was removed to Wooster, where it is now pleasantly located and is well equipped for its work.

THE OHIO STATE GRANGE.

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The Ohio State Grange was organized in 1872 and it has demonstrated to the farmers of Ohio the advantages of organization and co-operation. Women are admitted to full membership, and fathers, mothers and children are often members of the same society. The National Grange, which was organized some years previous to this branch, declares its purpose to be: "To develop a better and higher manhood and womanhood among ourselves, to enhance the comforts and attractions of our homes and strengthen our attachments to our pursuits, to foster mutual understanding and co-operation, to maintain inviolate our laws, and to emulate each other in labor to hasten the good time coming, etc."

The outlook for the farmer of Ohio today is very encouraging. The university, the experiment station, the institute, the literature furnished by the State and the United States, the agricultural papers, the circulating library, the **agricultural and scientific publications** (many of which are within reach of the most modest income) furnish abundant mental stimulus for him; while the State and county fairs illustrate the progress that is being made, and make a supplemental training. The grange, the club and the society are all no doubt beneficial in many ways, but one of their most **valuable offices is the cultivation of the social side** of the farmer; and Mother Nature, if she is but given an opportunity, will train the æsthetic side.

Fertile farms, improved machinery and fine stock; cozy, comfortable homes, with all modern conveniences; interurban railways and telephones; free rural delivery; centralized schools, district high schools, free circulating libraries, all combine to make the position of the Ohio agriculturist of 1903 an enviable one.

## HISTORY OF HORTICULTURE IN OHIO.

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Many of the early immigrants to the Northwest Territory brought with them, from their old homes, young fruit trees—apples, peaches, pears, cherries—or grafts from some choice varieties.

One of the oldest orchards west of the Alleghany Mountains was planted on the Dana farm, at Marietta, in 1790.

The first nurseries were established in 1790, one on Wheeling Island, by Ebenezer Zane, and the other opposite the mouth of Yellow Creek, by Jacob Nessley, who was the first person in the west to propagate new varieties of apples. He cultivated grafted fruit trees for sale. The "Gate" apple originated on his farm. "Zane's Greening," "Western Spy," "Ohio Redstreak," and "Bently Sweet" originated in Belmont county, and the "Culp," "Wells" and "Golden Pippin" in Jefferson county, "Johnson's Sweet" in Harrison county and the "Goff" in Logan county.

In 1796, Israel Putnam, Jr., returned to New England, and while there secured grafts of the choicest apples there, most of them having been taken from the celebrated old orchard on the estate of General Israel Putnam, at Pomfret, Conn. Upon their arrival at Marietta they were put into the hands of his brother, Mr. Aaron W. Putnam, for him to distribute and graft a nursery of seedling stock for himself and his brother. The following is a list of the grafts brought to Ohio by Mr. Putnam:<sup>1</sup>

Putnam Russet.	Striped Sweeting.
Seek-no-farther.	Honey Greening.
Early Chandler.	Kent Pippin.
Late Chandler.	Cooper Apple.
Gilliflower (red).	Striped Gilliflower.
Pound Royal.	Black Gilliflower.
Natural (Seedling).	Prolific Beauty.
Rhode Island Greening.	Queening.
Yellow Greening.	English Pearman.
Golden Pippin.	Green Pippin.
Long Island Pippin.	Spitzenberg.
Tallman's Sweeting.	

Another pioneer nurseryman was John Chapman, familiarly known as "Johnny Appleseed." As early as 1806 we hear of him<sup>2</sup> "on the Ohio River with two canoe loads of appleseeds, gathered from the cider presses of western Pennsylvania, and with these he planted nurseries along the

<sup>1</sup> This list was given to Mr. Bateham, editor of the "Ohio Cultivator," by W. R. Putnam, a son of Mr. W. A. Putnam, and was published in the "Cultivator" in 1846.

<sup>2</sup> Ohio Archaeological and Historical Society's Publications, vol. IX, p. 291.



Muskingum River and its tributaries." He planted his first nursery on George's Run, in Jefferson county.

Most of the early orchards in the Western Reserve were from seedling trees, but later, as opportunity offered, the trees bearing indifferent fruit were grafted. Mr. Dille, of Euclid, at an early date grafted his orchard with choice varieties of fruit, and from these many others obtained grafts. Judge Fuller came at an early date from New York, and brought many varieties of fruit with him, which were widely distributed through the northern part of the State. George Hoadly was another prominent horticulturist of that day; he made a specialty of the pear, and was probably the first to cultivate it to any great extent.

In 1824 Professor J. P. Kirtland and his brother established a nursery at Poland, which was then located in Trumbull county. They brought from New England over one hundred of the best varieties of apples, cherries, peaches, pears, etc.; and a year or two later they brought over one hundred varieties from New Jersey and others were secured from New York. Dr. Kirtland, by his system of hybridization, produced over thirty varieties of cherries.

Mr. Andrew H. Ernst, of Cincinnati, another active horticulturist, introduced about six hundred varieties of apples and about seven hundred varieties of pears, the object being to test by experience the varieties best adapted to the soil and climate of Ohio.

About 1818 Mr. Nicholas Longworth, of Cincinnati, planted his first vineyards, using the Schuylkill or Cape grape. This experiment was not a success, and in 1823 he succeeded in securing a native vine—the Catawba—in the possession of Major Adlum, of Georgetown, D. C., which was very promising as a wine grape. We may therefore call Mr. Longworth the founder of the Catawba grape and wine industry in Ohio. He was an enthusiast in the work. He had at one time over one hundred varieties of grapes growing in his vineyards for experimental purposes alone.

Mr. Longworth was also very successful in the cultivation of the strawberry, and he was the first to make known to the world the value of planting the pistillate and the staminate plants. Among the improved varieties of the strawberry produced by him are the Extra Red, Superior and Prolific.

The first movement toward the organization of a State association was a call for a convention of nurserymen and fruit growers, to be held in Columbus, in 1847, and the Ohio State Pomological Society was organized. In 1867 the Ohio State Pomological Society united with the Grape Growers' Association, and the more comprehensive title was adopted, by which it is now known, the Ohio State Horticultural Society.

The horticultural interests of the State have had a steady growth. In addition to the State association, there have been many county and

city societies organized, all laboring with the same object in view—improvement in every line of their work. Horticulture has been given a place in the curriculum of our institutions of learning. It now has a department assigned it in all the agricultural journals and in many family newspapers.

Recognizing the importance of the fruit industry, and realizing the necessity of aiding the horticulturists of the State in checking the ravages of insect pests and dangerous communicable diseases, the General Assembly passed an act on April 14, 1900, creating a division of nursery and orchard inspection, placing it under the control of the Ohio Agricultural Experiment Station, at Wooster. But in 1902 the division was, by legislative enactment, transferred to the Ohio State Board of Agriculture. Mr. A. F. Burgess was appointed chief inspector and entered upon the duties of the office May 15, 1902. The following information relative to the work accomplished by the chief inspector and his assistants has been secured from his report of the work from May 15 to December 31, 1902:

Number of nurseries inspected from July 10 to Dec. 31.....	239
Number of certificates issued to nurserymen.....	231
Number of trees and shrubs destroyed on premises by owners.....	5,000

Nursery stock condemned and destroyed by owners:

Trees .....	14,633
Shrubs .....	303
Trees, shrubs, plants and vines fumigated.....	537,429

According to the United States Census Report for 1900, Ohio ranks fourth in the value of her fruit products. The valuation for 1899 was \$8,911,220, California, New York and Pennsylvania only exceeding this amount.

The following tables, made up from the Census Report for 1900, may be of interest in this connection:

NUMBER OF ORCHARD TREES, QUANTITIES OF FRUITS AND TOTAL VALUE OF ORCHARD PRODUCTS IN OHIO FOR 1899.

Fruit.	Trees.	Bushels.	Rank.	Barrels.	Pounds.	Value.
Apples .....	12,952,625	20,617,480	3			
Apricots .....	5,348	449				
Cherries .....	697,270	192,954	7			
Peaches & nectarines	6,363,127	240,686				
Pears .....	921,412	244,565	6			
Plums and prunes....	892,441	81,435	9			
Unclassified .....	61,579	21,704				
Cider .....				400,578		
Vinegar .....				71,901		
Dried and evaporated fruits .....					1,191,170	
All orchard products.....						\$6,141,118

## NUMBER OF GRAPEVINES, WITH PRODUCT AND VALUE FOR 1899.

Number of vines.....	13,772,800
Pounds of grapes .....	79,173,873
Gallons of wine .....	350,615
Total value of grapes and wine .....	\$992,745

## VALUE, ACREAGE AND PRODUCTION OF SPECIFIED KINDS OF SMALL FRUITS IN 1899.

Fruit.	Acres.	Quarts.	Rank.	Total Value.	Rank.
Blackberries and dewberries .....	3,397	4,905,430	5		
Currants .....	765	1,153,920	4		
Gooseberries .....	539	767,760	5		
Raspberries and Logan berries .....	6,795	8,745,950	3		
Strawberries .....	9,373	17,916,080	3		
Unclassified .....	252	246,890			
Total value of small fruits				\$1,767,357	2

## NURSERY FARMS, NUMBER, VALUE AND PRODUCT IN 1899.

Number of nursery farms .....	147
Value of farm property .....	\$1,163,545
Amount of sales of nursery products .....	538,012

## FLOWER AND PLANT FARMS, NUMBER, VALUE AND PRODUCT IN 1899.

Number of flower and plant farms .....	505
Value of farm property .....	\$2,970,336
Amount of sales of flowers and plants .....	1,399,957

## BOARD OF LIVE STOCK COMMISSIONERS OF OHIO.

On June 4, 1902, Dr. Paul Fischer was appointed State veterinarian by the Board of Live Stock Commissioners of Ohio, and from his report for this year we get the following information:

There was an outbreak of Texas fever near Piqua. Forty-two head of cattle were exposed on six farms, where the southern cattle had been pastured; seventeen died; a number of others were attacked, but recovered.

One case of glanders was brought to the notice of the Board, and the animal was voluntarily destroyed by the owner.

A few herds of cattle in Ohio have been tested with tuberculin at the request of owners, and the results of these tests indicate that tuberculosis exists, particularly in the dairy districts and in the vicinity of the large cities.

An outbreak of infectious keratitis occurred in Ohio from a herd of imported Canadian cattle, but it was controlled by quarantine.

Three flocks of sheep reported as affected with scab.

A small number of cases of actinomycosis.

One carload of cattle exposed to anthrax was shipped from Kentucky. The car was held in quarantine and no damage resulted.

Two supposed outbreaks of blackleg were reported.

## LIVE STOCK—HORSES.

It is a very difficult matter to trace clearly the horse stock of Ohio to its source. At a very early day good horses were introduced into different portions of the State, but previous to the introduction of railways most of the stock bred in Ohio, which gave any indication of superiority, was sent at once to the eastern market.

The Marietta settlers brought the first horses into Ohio, but about 1807 the introduction proper began in the central and eastern portion of the State. These horses were all of large size, heavy and slow in their movements; they were chiefly from Pennsylvania and of the breed known as the Conestoga—probably of Flemish origin. We are indebted to two religious sects—the Dunkards and the Mennonites—whose members are agriculturists, for the best strains of these heavy draft horses.

The French began to settle in Stark county as early as 1828, and they brought with them some excellent crosses of the Norman horse. Prior to 1830, horses claiming to be of "Selim," "Florizel," "Eclipse," "Post Boy," and "Timoleon" stock were to be found in that county. These, crossed with the Norman and the Conestoga, produced an excellent class of horses for farm purposes.

The Virginians brought with them the lighter and better breeds. "Of the blooded stock first brought to the Scioto Valley region," says Col. S. D. Harris, in his contribution to Frank Forester's "History of the Horse in America," "were several mares introduced from the South Branch of the Potomac, Va., by John I. Van Meter, and later, the stallion 'Spread Eagle,' from the same region." A few fine saddle horses of the "Diomed" stock came from the same quarter.

The horse known as "Printer," introduced into Fairfield county, was "a longish bodied, low and very muscular animal," a breed which old Mr. Van Meter said he "knew when a boy in Virginia and which are nearly identical with the present Morgan stock." It is said that many of these animals were excellent quarter nags, good in short races.

In Steubenville and vicinity the stallion "Salisbury," a large French draft horse, was bred to the good Flemish and Conestoga mares of the Pennsylvania wagoners who did the most of the "carrying business" in that day.

Two other famous stallions of this region were "Shylock," of medium size and a good roadster, and "Pirate," smaller in size and of good running stock.

Then came the classes of horses scattered all over eastern Ohio and western Virginia, the "Tuckahoe," the "Hiatogo," and the "Timoleon," well-knit, lively, serviceable horses.

In northern Ohio, which received its emigration from the Northeastern States, the horse stock showed more ill breeding than in any other part of the State. "They seemed to be, in too many instances, the most scrub breeding from run-out English and Flemish mares, showing a great number of narrow-chested, leggy, palè dun and sorrel animals, without constitution or action. Many of the first settlers brought tolerably good teams with them, but for want of suitable stallions the race was not kept up."<sup>1</sup>

About 1840, the stallion "Bellfounder," foaled in 1832 in New York, and owned by T. T. Kissam, was sent to Cleveland by Lewis F. Allen; from there he was taken to southwestern Ohio, where he stood for about two years; thence he was taken to central Ohio. A large number of very fine colts were secured from him which were of great value in developing the horse stock of Ohio; they proved to be the best carriage and light harness stock in that part of the State. About this time Gov. Allen Trimble, of Highland county, was engaged in propagating "Eclipse" stock in great purity, producing a class of stylish carriage horses. Soon after, "Cadmus," sire of the famous mare "Pocahontas," and also of "Walker Cadmus," was taken into Warren county for the purpose of improving the horse stock in that region.

In 1847 Messrs. William H. and James D. Ladd, of Jefferson county, brought from Vermont an excellent Morgan stallion, "Morgan Tiger," sired by "Black Hawk" out of a Sherman Morgan mare. This was probably the first of the American stock brought west for breeding purposes.

A little later Mr. N. E. Austin, of Trumbull county, introduced another Morgan stallion.

In 1849 an association of farmers in Erie county introduced the Morgan stallion "Messenger," making the third Morgan horse in the State, and this stock proved among the best of that famous race. The early Morgan horse was well adapted for all work, and was active, gentle, hardy and docile, spirited in action and graceful in movement.

In 1829 or 1830 Governors McArthur and Trimble brought from Virginia some fine thoroughbred stock, descendants of old "Sir Archie" and the "Medley's." They had established a large stock farm in Ross county, near Chillicothe, for raising thoroughbred stock.

The first importation of Norman stallions was made in 1851. Dr. Brown, of Circleville, who visited the world's fair during this year, brought home with him "Normandy," a two year old stallion, better known as "Old Bill," and Messrs. Fullington & Martin, of Milford, imported the gray colt "Louis Napoleon." A third importation was

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<sup>1</sup> Ohio Agricultural Report, 1857.

made in 1854, when Messrs. Groton & Martin succeeded in securing the bay stallion "Rollin." By the judicious crossing of these Norman stallions upon the best of the Flemish mares, a class of fine, large draft horses was produced.

The Scioto Valley Horse Company imported "White Hall," and the Butler County Horse Company secured "Gray Highlander" and "Victor" from Kentucky.

The next important importation was that of the Darby Plains Importing Company, of Union county, and was made in 1857. They secured "Defiance," an English draft stallion; "Eber," a Cleveland Bay stallion; "Lady Sykes," a thoroughbred mare; "Niger," a Clydesdale stallion; "Young Sir Tatton," a thoroughbred stallion; "Hiram," a Cleveland Bay stallion; "Mickey Free," a thoroughbred stallion; two Norman stallions and a Norman mare with foal. This was the first importation of Cleveland Bays,<sup>1</sup> Clydesdales or English draft horses. At the close of the year 1857 the Morgan, French draft, Percheron and Bellfounder breeds were well established and were really the only strains in service in Ohio.

Road horses for all work were mostly the produce of early importations from the old States of New York, New Jersey, Maryland and Virginia; the best are the descendants of imported "Messenger," "Diomel" and "Expedition." Draft horses were generally of the old Pennsylvania stock.<sup>2</sup>

As early as 1825 there were a few race tracks. Annual fall meetings were held at Cincinnati, Chillicothe, Dayton and Hamilton. By 1838 there were fifteen regular race courses in the State.

Within the last thirty or forty years the breeding of running, trotting and pacing horses has become very popular.

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## CATTLE.

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The cattle interests of the State were not neglected by the pioneers. Many of the early settlers brought their cows with them, but it is not probable that there were any thoroughbreds among them.

According to Hon. Elisha Whittlesey,<sup>3</sup> Judson Canfield, in 1803, sent a red bull of the Holderness stock—three-fourths pure blood—to Mahoning county, and this was, no doubt, the first improved, blooded animal brought to Ohio.

In 1804 Captain Jonathan Fowler, of Poland, took to the Philadelphia

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1. Ohio Agricultural Report, 1857, pp. 356-358.

2 Ibid.

3 Ohio Agricultural Report, 1860, p. 425.

market quite a large drove of cattle, which had been purchased of General Wadsworth, James Doud and others in Canfield.<sup>1</sup>

In 1805 Mr. George Renick, of Chillicothe, fed a lot of cattle and drove them to Baltimore, and those who saw the cattle on their way to market were much surprised at their fine condition.

The question of disposing of their cattle was thus settled very early in the history of the State, and for many years from fifteen thousand to sixteen thousand head, worth over \$600,000, were driven annually to the eastern markets. The driving commenced about the middle of February, and continued until about the middle of June. The stock was sent out in lots of one hundred. Flint, in his "Letters from America," says of a drove of these cattle: "Saw a drove of large cattle on their way from the State of Ohio for Philadelphia. Their condition is good, the length of the journey taken into consideration. In size, and even fat, they are much superior to the Pennsylvania stock."

Mr. Patton, of Kentucky, procured several of the imported "Short-horn," or milk breed, of cattle, which had been brought to Maryland from England in 1783, and introduced some of this stock into Ohio between 1807 and 1810, the first being bought by Mr. D. Walton and taken to Warren county. It is very probable that some of the best cattle in Southern Ohio were the descendants of this stock and of the bulls "Phito" and "Shaker," which were imported by Mr. Patton a few years later.

An early history of the cattle trade in Ohio gives a good idea of the condition of this business in the State previous to 1834. There were four distinct sections of native breeds, each with qualities peculiar to itself.

The cattle of the Hocking or hill district,<sup>2</sup> which extended from the eastern margin of the Scioto valley eastward indefinitely, were healthy, hardy and compact, but too small and without room for improvement for profit.

The Adams and Highland county cattle, known by the general name of Brush Creek cattle, were a little larger than the Hocking, and were also healthy, hardy and early fattened, and their general good qualities almost made up for their inferior size.

In Fayette and Madison counties and parts of Clark and Champaign counties the stock was known as the Barren cattle. They were much larger than the Brush Creek breed, but they were loose-made, harder to fatten and subject to disease.

In the Scioto valley counties there were all sorts of cattle, from the common scrub to the full blooded Patton; it was a heterogeneous collection and was indescribable.

<sup>1</sup> Agricultural Report 1860, p. 446.

<sup>2</sup> Burkett's History of Ohio Agriculture, p. 110.

Horses were often difficult to procure, and steers and oxen were trained to perform a part of the labor of the farm. The following description of an ox team on the Mahoning county fair grounds as late as 1859 is of considerable interest:<sup>1</sup>

"The casual observer could not fail to notice the team of thirty-eight yoke of steers and oxen before a timber wagon. \* \* \* It entered the ground in good style, each pair gently pressing forward, so that no chain was slack. Military officers never marched a corps of men into a field for parade or battle with greater precision."

The first importation of thoroughbred cattle into Ohio direct from England was in 1834, under the auspices of the Ohio Breeding and Importing Company.

On the 2d of November, 1833,<sup>2</sup> Governor Allen Trimble, George Renick and General Duncan McArthur, citizens of the State of Ohio, for the purpose of promoting the interests of agriculture and of introducing an improved breed of cattle into the State, formed a company and contributed an amount of money necessary to import from England some of the best improved cattle of that country. The sum of nine thousand two hundred dollars (\$9,200) was very soon subscribed for the purpose, in ninety-two shares of one hundred dollars (\$100) each. After making the necessary arrangements, the company appointed Felix Renick, of Ross county, their agent for the purchase and importation of said cattle.

Mr. Renick and his assistants proceeded to England, made a careful examination of much of the improved stock of that country and made purchases from some of the most celebrated and successful cattle breeders in England of about nineteen bulls and cows of thoroughbred Shorthorn and Durham stock. They brought these cattle to Ohio, returning in time to exhibit them under the auspices of the Ross County Agricultural Society on the 31st of October, 1834. The stock was sold in 1836. At a meeting of the company, held at Chillicothe in 1837, the business was closed and a dividend of two hundred and eighty dollars (\$280) per share was declared on the ninety-two shares of the stock of the company.

The Clark County Importing Company and the Madison County Importing Company were organized in 1854, and made some importations of thoroughbred cattle.

The first record we have of pure bred Devon cattle being brought into the State,<sup>3</sup> was in 1842, when John (Ossawatimie) Brown imported from England some thoroughbred Devonshire cattle. Later, Mr. C. A.

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1 Ohio Agricultural Report 1860, 425.

2 Ohio Agricultural Report 1857, 361.

3 Burkett's History of Ohio Agriculture, p. 113.



Ely, of Elyria, purchased seven Devon cows, eight calves and one bull of C. H. Crippen, of Michigan.

The first direct importation of Hereford cattle into Ohio was about 1852 or 1853, by Messrs. Thomas Aston and John Humphreys, of Elyria, who imported two Hereford bulls and two heifers of very fine stock. In 1853 Mr. D. B. Kinney, of Oberlin, purchased a fine four year old Hereford bull, that was secured from the best stock in England.

In 1848 Mr. E. A. Brown, of North Bloomfield, Trumbull county, purchased a premium bull and cow of the Ayrshire breed at the Buffalo fair, and in 1849 Messrs. W. H. Ladd and J. R. Cunningham, of Richmond, Jefferson county, bought an Ayrshire bull, cow and heifer from E. P. Prentiss, of Albany, N. Y.

A. D. Bullock, of Cincinnati, imported in 1865 the first pure bred Jerseys brought into the State; and the same year J. F. Stettinius, also of Cincinnati, imported direct several cows from the Island of Jersey.

Guernsey cattle were brought into the State about the same time as the Jerseys. Numbers of fine herds of both Jersey and Guernsey cattle have been established since then, and they are now found in every county in the State.

In 1880 or 1881 Mr. D. N. Hine, of Erie county, made the first importation of the Aberdeen-Angus breed. Mr. Hine went to Scotland and personally selected his stock. In 1882 a herd was established in Fayette county by Renton Garringer, and soon afterwards herds were established by Messrs. C. R. Dye, of Miami county, G. W. Perry, of Champaign county, and Bradfute & Son, of Greene county.

J. McLain Smith, of Dayton, and Captain V. T. Hills, of Delaware, have imported large numbers of choice animals of the Red Poll breed from England.

Mr. William Crane, of Miami county, has succeeded in producing a hornless breed of Shorthorn cattle, and Mr. J. R. Orr, of Greene county, has founded a herd of polled Jerseys.

Mr. O. F. Jones, of Wooster, purchased in 1866 "Zuyder Zee," a Holstein bull, bred by Winthrop Chenery. This breed has rapidly advanced in favor, and a good authority estimates that probably one-fifth of the dairy cows in Ohio today are of this breed.

In addition to the above named breeds, there are some herds of Galloways, Polled Durhams, Dutch Belted and Brown Swiss cattle in the State.

In 1856 some of the leading cattle breeders and dealers in Madison county met for the purpose of arranging for monthly sales of stock, to be held in London. It was decided to hold the first sale on the first Tuesday in March of that year, and on the first Tuesday of each and every month thereafter. The sale was held at the time designated, and was a decided success. In thirty years the sales amounted to \$5,813,902.25. It is said

of these sales<sup>1</sup> that they "were conducted in the interest of the buyers and sellers only, and that no outside influence was permitted to interfere with the rights of these two interested parties."

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## SHEEP.

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The sheep brought into the Northwest Territory by the first settlers were no doubt the common or native sheep, but they were very important members of the family in those days, as most of the clothing was manufactured from their fleeces. The wool was carded by hand for many years, spun in the cabin and not infrequently dyed and woven there, as well as shaped into garments for the family.

In 1801 Seth Adams, of Zanesville, imported some Spanish Merino sheep for breeding purposes, and these were the first blooded sheep brought into the State. Judge Todd, of Kentucky, bought the first pair of Merinos that Mr. Adams had for sale, paying fifteen hundred dollars for them.

About 1809 Mr. Thomas Rotch, a member of the Society of Friends, emigrated from Connecticut to Stark county and brought with him a small flock of Merino sheep. They were all good, and a few of them were from the flock of two hundred, which Colonel Humphrey, United States minister to Spain, had brought with him on his return to this country.

About 1812,<sup>2</sup> Mr. William R. Dickinson, who had moved from Virginia to Steubenville, Ohio, in 1807, purchased some pure bred Merino sheep from the flock of James Caldwell, of Pennsylvania, an extensive breeder of Merinos. Thirteen years later he had twenty-five hundred sheep. They were as fine as could be found in the United States, and were celebrated throughout the country.

Mr. Wells, the senior partner of the firm of Wells-Dickinson, who were extensive woolen manufacturers at Steubenville, laid the foundation of his flock of Merinos by purchases made from Colonel Jarvis, the greatest importer of his day. By 1825 Mr. Wells' flock had increased to thirty-five hundred. By interchanging the rams, the flocks of Messrs. Wells and Dickinson soon became almost identical, and were the original Wells-Dickinson sheep. Owing to financial difficulties with the Government, these flocks were sold at public auction at Steubenville, in 1830. Buyers

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<sup>1</sup> Howe's Historical Collections, vol. 2, p. 165.

<sup>2</sup> Ohio Archaeological and Historical Society Publications, vol. VI., pp. 236-237.

attended the sale from all parts of Ohio, Pennsylvania and Western Virginia.

Isaac Putnam, of Marietta, purchased in 1809 a number of full blooded Merinos of Seth Adams, Zanesville, and laid the foundation of a fine flock.

Paul Fearing and B. J. Gilman, of Marietta, purchased from Colonel Humphrey in 1811 a ram, and in payment gave him sixteen hundred acres of land in Ohio.

In 1826 a number of pure Merinos from the celebrated Dickinson flock at Steubenville were bought by Col. John Stone and George Dana, of Belpre.

So the Merinos were pretty well distributed over the State during the first quarter of the century.

The date of the introduction of Saxony Merinos is not definitely known, but it was doubtless very soon after their first importation, in 1825 and 1826.

In 1834 Isaac Maynard, of Coshocton county, imported ten Southdown, three New Leicester, three Lincolnshire and three Cotswold sheep, thus introducing four new breeds into Ohio.

Mr. George Smith, of Carthage, imported some Southdown sheep in 1840 and 1841.

In 1844 Mr. J. F. King, of Warren, purchased a Southdown ram and four ewes from J. H. Hesless, of Trumbull county, who had secured his sheep from the flocks of Jonas Webb, England.

T. S. Cooper made the first importation of Horned Dorsets into Ohio in 1891. Joseph E. Wing, of Mechanicsburg, who secured some of the original Cooper stock, is one of the prominent breeders of Horned Dorsets. He has increased his flock by purchases from Pennsylvania and New Jersey.

Leicesters, Lincolns, Cotswolds, Southdowns, Shropshires and Horned Dorsets are now found in all parts of the State.

Ninety per cent. of the sheep in Ohio in 1865 were Merinos, and their grades, but today it is doubtful if it will exceed thirty or forty per cent.

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## SWINE.

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The raising of pork has always been, and still is, a very important branch of productive labor in Ohio.

The native hog, commonly called the "razor-back" or "rail-splitter," had to depend largely on his own efforts not only to support life, but to

save it. He had to find his food in the forest—nuts, berries and roots furnishing the supply—and was compelled, at the same time, to keep a constant lookout for attacks when poaching on the preserves of bears, wolves, etc. His was a strenuous life, and it is no wonder he was hard to fatten and oftentimes difficult to find; but the breed multiplied and increased, and it made a splendid foundation upon which to build new breeds.

The China, Berkshire, Woburn, Irish Grazer and Russian were the first used to cross with the "razor-back."

The Poland-China breed was evolved in the Miami valley, and the Bedfords, Byfields, Chinas, Irish Grazers, Russian and razor-backs have all entered into its blood. This breed has become very popular in the Western States.

In northern Ohio Todd's Improved Chester White originated, and later the Ohio Chester White breed.

The China, which did more to improve the hogs of the Miami valley than any other breed, was introduced into Ohio by the Shakers of Union Village in 1816. John Wallace, a trustee of the Shaker Society living near Lebanon, bought a boar and three sows in Philadelphia.

About 1840 the importation of Berkshire hogs began, and the breed proved a very popular one.

Peter Melendy, living near Cincinnati, brought from Boston, somewhere about 1853, the Suffolk hog "Independence," which had been pronounced the best hog in New England, and fifteen others of the same breed; and the same year this breed was introduced into Ashtabula county.

The Chester Whites, Yorkshires and Duroc Jerseys have been introduced into the State recently, the former in the dairy regions and the latter two in the corn producing districts.

NUMBER AND VALUE OF SPECIFIED CLASSES OF DOMESTIC ANIMALS  
ON FARMS AND RANGES, JUNE 1, 1900.

(U. S. Census 1900.)

Animal.	Number.	Value.
Cattle .....	2,053,313	\$46,560,246
Horses .....	878,205	50,159,245
Mules .....	16,771	941,211
Asses and Burros .....	250	18,981
Sheep .....	4,020,628	10,956,308
Swine .....	3,188,563	11,813,168
Goats .....	5,432	16,975
Total value .....		\$120,466,134

Total receipts from sale of live animals in 1899.....\$40,873,674  
 Value of animals slaughtered on farms in 1899..... 10,276,931

Ohio ranks third in value of horses.  
 Ohio ranks sixth in number of horses.  
 Ohio ranks third in value of sheep.  
 Ohio ranks fourth in number of sheep.

## WOOL SHORN IN FALL OF 1899 AND SPRING OF 1900.

		Rank.
Fleeces shorn .....	2,897,604	4
Weight unwashed, pounds .....	20,350,721	3
Value .....	\$4,299,025	2

## DAIRY COWS.

	Number.	Value.
Farms reporting .....	244,405	
Dairy cows .....	818,239	\$24,725,382

## DAIRY PRODUCTS.

	Gallons.	Pounds.	Received from sale.	Value.
Milk produced .....	425,870,394			
Average per cow.....	520			
Milk consumed on farms	59,019,757			
Milk sold .....	84,543,703		\$8,303,626	
Cream sold .....	429,143		213,716	
Butter made on farms..		79,551,299		
Butter sold .....		47,118,140	6,896,334	
Cheese made on farms		1,167,001		
Cheese sold .....		1,047,202	71,173	
Dairy products sold....				\$15,484,849
Dairy products con- sumed on farms .....				9,898,778
Total.....				\$25,383,627

## AMOUNT OF BUTTER AND CHEESE PRODUCED BY FACTORIES.

Butter .....	Pounds.	8,087,631
Cheese .....		18,156,527

## TOTAL PRODUCTION OF BUTTER AND CHEESE FROM FARMS AND FACTORIES.

Butter .....	Pounds.	87,638,930
Cheese .....		19,323,528

There were 8,830,969 pounds of oleomargarine shipped into Ohio during 1899. Ohio stands first on the list in the production of farm butter.

POULTRY AND EGG PRODUCTION IN 1899, WITH VALUE.

(U. S. Census Report of 1900.)

	Number.	Value.
Poultry .....	15,018,352	\$8,847,009
Eggs, dozens .....	91,766,630	10,280,769
Total .....		\$19,127,778

Ohio ranks second in egg production and fourth in poultry production.

BEEES, HONEY AND WAX.

(U. S. Census Report of 1900.)

	Pounds.	Value.
Bees, June 1, 1900.....		\$402,561
Honey produced in 1899.....	1,980,530	
Wax produced .....	34,620	
Honey and wax .....	2,015,150	252,321
Total .....		\$654,882

Ohio ranks third in the production of honey.

TOTAL NUMBER OF FARMS, WITH VALUE, FOR 1900.

(U. S. Census for 1900.)

Total number of farms .....	276,719
Total number of farms with buildings.....	268,404
Total value of farms without buildings.....	\$817,163,710
Total value of buildings .....	219,451,470

CLASSIFICATION OF FARMS, JUNE 1, 1900.

Owners .....	169,370
Part owners .....	23,730
Owners and tenants .....	4,261
Managers .....	3,427
Cash tenants .....	24,051
Share tenants .....	51,880
Total number of farms in Ohio .....	276,719

CLASSIFICATION OF FARMS BY PRINCIPAL SOURCE OF INCOME.

Hay and grain .....	80,809
Vegetables .....	7,171
Fruits .....	5,074
Live stock .....	113,520
Dairy products .....	12,768
Tobacco .....	6,199

Sugar .....	60
Flowers and plants .....	595
Nursery products .....	147
Miscellaneous .....	50,466
Total number of farms in Ohio.....	276,719

ACREAGE OF IMPROVED AND UNIMPROVED FARM LAND AND TOTAL  
ACREAGE FROM 1850 TO 1900.

(U. S. Census Report of 1900.)

Years.	Improved.	Unimproved.	Total
1850 .....	9,851,493	8,146,000	17,997,493
1860 .....	12,625,394	7,846,747	20,472,141
1870 .....	14,469,133	7,243,287	21,712,420
1880 .....	18,081,091	6,448,135	24,529,226
1890 .....	18,338,824	5,013,584	23,352,408
1900 .....	19,244,472	5,257,513	24,501,985

VALUE OF FARMS, MACHINERY, LIVE STOCK AND FARM PRODUCTS  
FROM 1850 TO 1900.

(U. S. Census Report of 1900.)

Years.	Farms with Buildings.	Machinery and Implements.	Live stock.	Farm Products.
1850 .....	\$358,758,603	\$12,750,585	\$44,121,741	
1860 .....	678,132,991	17,538,832	80,384,819	
1870 .....	843,572,181	25,692,787	96,240,422	\$158,605,526
1880 .....	1,127,497,353	30,521,180	103,707,730	156,777,152
1890 .....	1,050,031,828	29,475,346	116,181,690	133,232,498
1900 .....	1,036,615,180	36,354,150	125,954,616	257,065,826

Total value of farm property for 1900.....\$1,198,923,946

Ohio ranks third in value of farm property.

EXPENDITURE IN 1899 FOR LABOR AND FERTILIZERS.

(U. S. Census Report of 1900.)

Labor .....	\$14,502,600
Fertilizers .....	2,695,470

## FLOURING AND GRIST MILLS.

(U. S. Census Report for 1900.)

Ohio has 1,150 flouring and grist mills, with a capital of \$12,531,150. The products of these mills for 1899, with value, are reported as follows:

	Barrels.	Pounds.	Value.
Wheat flour .....	7,366,474		\$26,060,827
Rye flour .....	40,258		117,769
Buckwheat flour .....		4,416,605	108,656
Barley meal .....		1,137,830	11,157
Corn meal .....	1,532,994		2,708,191
Hominy .....		5,579,900	57,429
Feed .....		731,562,772	5,314,187
Offal .....		414,242,365	2,518,665
Other products, etc. ....			493,486
Total value.....			\$37,390,367

## AGRICULTURAL IMPLEMENTS.

In 1900 there were 78 establishments in Ohio manufacturing agricultural implements, representing a capital of \$23,628,442, with 6,852 workmen employed and \$3,271,163 paid in wages, with a product valued at \$13,975,268.

Ohio ranks second in value of products, capital, total wages, cost of materials used and value of products.

Important manufacturing centers in 1900 were Springfield, Dayton, Canton and Akron.

In the manufacture of the various implements Ohio takes the following rank:

1st—Horse Hayforks.

2d—Cultivators, Harvesters, Combined Harvesters and Binders and Horse Hayrakes.

3d—Harrows, Planters and Drills, and Mowers.

4th—Plows.

## LIST OF OHIO TREES.

Cucumber Tree.	Honey Locust.
Tulip Tree; Yellow Poplar; White Wood.	Kentucky Coffee Tree.
Papaw.	Western Mountain Ash.
American Holly.	Crab-apple.
Basswood; Linden.	Southern Crab-apple.
White Basswood.	Shad-bush; June-berry; Service-berry.
Ohio Buckeye.	Scarlet Haw; White Thorn.
Striped Maple.	Large-spine Thorn.
Mountain Maple.	Scarlet Haw.
Sugar Maple.	Black Thorn.
Sugar or Rock Maple.	Cockspur Thorn.
Black or Sugar Maple.	Wild Yellow or Red Plum.
Silver Maple.	Wild Red Cherry.
Red or Swamp Maple.	Choke Cherry.
Box Elder.	Wild Black Cherry.
Staghorn Sumach.	Witch Hazel.
Smooth Sumach.	Sweet Gum.
Dwarf Sumach.	Flowering Dogwood.
Poison Sumach or Poison Dogwood.	Alternate-leaved Cornel.
Clammy Locust.	Sour Gum; Black Gum; Tupelo.
Red-bud.	Sweet Viburnum; Sheep Berry.



Black Haw.	White Oak.
Sorrel Tree; Sour-wood.	Bur Oak.
Persimmon.	Post Oak; Iron Oak.
White Ash.	Swamp White Oak.
Red Ash.	Chestnut Oak.
Green Ash.	Yellow Oak.
Blue Ash.	Red Oak.
Black Ash.	Scarlet Oak.
Sassafras.	Quercitron; Yellow-barked or Black Oak.
Red Elm; Slippery Elm.	Pin Oak; Swamp Spanish Oak.
White Elm; American Elm.	Black Jack; Barren Oak.
Rock Elm; Cork Elm.	Laurel Oak; Shingle Oak.
Hackberry; Nettle Tree.	Chestnut.
Sugarberry.	Chinquapin.
Red Mulberry.	American Beech.
White Mulberry.	White Poplar.
Sycamore.	American Aspen.
Butternut; White Walnut.	Large-toothed Poplar.
Black Walnut.	Downy Poplar; Swamp Poplar.
Shell-bark or Shag-bark Hickory.	Balsam Poplar; Tacamahac.
Big Shell-bark; King-nut.	Balm of Gilead.
Mocker-nut; White-heart Hickory.	Cottonwood; Carolina Poplar.
White Hickory.	Black Willow.
Pig-nut; Brown Hickory.	Amygdaloid Willow.
Bitter-nut; Swamp Hickory.	White Pine.
Sweet, Black or Cherry Birch.	Pitch Pine.
Yellow or Gray Birch.	Jersey Pine; Scrub Pine.
River Birch; Red Birch.	Tamarack; Black Larch; American Larch.
Speckled or Hoary Alder.	Hemlock; Hemlock Spruce.
Smooth Alder.	Arbor Vitae; White Cedar.
Hop-hornbeam; Ironwood; Lever-wood.	Common Juniper.
American Hornbeam, Blue or Water Beech.	Red Cedar; Savin.

VALUE OF FOREST PRODUCTS FOR 1899, Including only the Lumber, Railroad Ties, etc., which Farmers cut in Connection with their Ordinary Farming Operations.....\$5,625,897

TOTAL VALUE, BY DECADES FROM 1850 TO 1900, OF FOREST PRODUCTS, from all Sources, Lumbering, Woodchopping and Ordinary Farming Operations, in Ohio

1850 .....	\$3,864,452
1860 .....	5,158,076
1870 .....	10,235,180
1880 .....	13,864,460
1890 .....	15,279,843
1900 .....	20,790,850

#### LIST OF OHIO GRASSES.

Wooly Beard Grass.	Hidden-flowered Panic Grass.
Silver Beard Grass.	Barn-yard Grass.
Cluster-flowered Beard Grass.	Straight Panic Grass.
Indian Grass; Wood Grass.	Finger Grass.
Forked Spike Grass.	Smooth Crab Grass.
Purple Wood Grass.	Broad-leaved Panic Grass.
Virginia Beard Grass.	Small-seeded Panic Grass.
Floating Paspalum.	Prolific Panic Grass.
Agrostis-like Panic Grass.	Common Crab or Finger Grass.
Old Witch Grass.	Tall Smooth Panic Grass.

- Yellow Panic Grass.  
 Foxtail Pigeon Grass.  
 Bengal Grass.  
 Bristly Foxtail Grass.  
 Green Foxtail Grass.  
 Hedgehog or Burr Grass.  
 Prolific Rice.  
 Indian Rice; Water Oats.  
 Catch-fly Grass.  
 Rice Grass.  
 White Grass.  
 Reed Canary Grass.  
 Common Canary Grass.  
 Sweet Vernal Grass.  
 Vanilla or Seneca Grass.  
 Poverty Grass.  
 Downy Triple Awn Grass.  
 Black Oat Grass; Feather Grass.  
 Porcupine Grass.  
 Mountain Rice.  
 Little Mountain Rice.  
 Black Mountain Rice.  
 Millet Grass.  
 Hair Grass.  
 Nimble Will.  
 Mexican Drop-seed Grass.  
 Clustering Muhlenbergia.  
 Awnless Muhlenbergia.  
 Sylvan Muhlenbergia.  
 Willdenovii's Muhlenbergia.  
 Awned Brachyelytrum.  
 Timothy.  
 Floating Foxtail Grass.  
 Meadow Foxtail.  
 Hairy Muskit Grass.  
 Drop-seed Grass.  
 Leaden Drop-seed Grass.  
 Strong-scented Drop-seed Grass.  
 Wood Reed Grass.  
 Drooping Reed Grass.  
 White Bent Grass.  
 Red-top Herd's Grass.  
 Hair Grass.  
 Thin Grass.  
 Blue Joint Grass.  
 Sand Reed.  
 Velvet Grass.  
 Common Hair Grass.  
 Marsh Oat Grass.  
 Downy Persoon Grass.  
 Wild Oat.  
 Purple Wild Oat.  
 Tall Meadow Oat Grass.  
 Wild Oat Grass.  
 Bermuda Grass.  
 Fresh Water Cord Grass.  
 Crab Grass; Wire Grass.  
 Pointed Slender Grass.  
 Common Reed Grass.  
 Tall Red Top.  
 Sand Grass.  
 Hair-panicked Meadow Grass.  
 Southern Eragrostis.  
 Short-stalked Meadow Grass.  
 Creeping Meadow Grass.  
 Meadow Comb Grass.  
 Slender Meadow Grass.  
 Crested Koeleria.  
 Eaton's Grass.  
 Melic Grass.  
 Twin Grass.  
 Broad-leaved Spike Grass.  
 Orchard Grass.  
 Wood Spear Grass.  
 Annual Spear Grass.  
 Short-leaved Spear Grass.  
 Wire Grass; English Blue Grass.  
 Weak Meadow Grass.  
 Southern Spear Grass.  
 June Grass; Spear Grass.  
 False Red Top.  
 Sylvan Spear Grass.  
 Rough-stalked Meadow Grass.  
 Pointed Spear Grass.  
 Rattlesnake Grass.  
 Long-panicked Meadow Grass.  
 Common Manna Grass.  
 Reed Meadow Grass.  
 Fowl Meadow Grass.  
 Obtuse Spear Grass.  
 Pale Manna Grass.  
 Sheep's Fescue; Hard Fescue.  
 Tall Meadow Fescue.  
 Meadow Fescue Grass.  
 Nodding Fescue Grass.  
 Small Fescue Grass.  
 Fringed Brome Grass.  
 Wild Chess.  
 Soft Chess.  
 Upright Chess.  
 Chess; Cheat.  
 Sterile Brome Grass.  
 Perennial Rye Grass.  
 Quack Grass; Couch Grass.  
 Squirrel Tail Grass.  
 Canadian Lyme Grass.  
 Slender Hairy Lyme.  
 Lyme Grass.  
 Bottle-brush Grass.  
 Switch Cane; Small Cane.

#### DRY MEASURE.

1 bushel=	4 pecks=	8 gallons=	32 quarts=	2150.4 cubic inches.
½ bushel=	2 pecks=	4 gallons=	16 quarts=	1075.2 cubic inches.
	1 peck =	2 gallons=	8 quarts=	537.6 cubic inches.
		1 gallon =	4 quarts=	268.8 cubic inches.
			1 quart =	67.2 cubic inches.

## SIZE OF MEASURES.

The interior diameter of a half bushel is  $13\frac{39}{40}$  inches.

The depth is  $7\frac{1}{24}$  inches.

A barrel shall be equal to  $31\frac{1}{2}$  gallons, and two barrels shall constitute a hoghead.

## BARBED WIRE REQUIRED FOR FENCES. (Author not known.)

Estimated number of pounds of barbed wire required to fence space or distances mentioned, with one, two or three lines of wire, based upon each pound of wire measuring one rod ( $16\frac{1}{2}$  feet).

	One line.	Two lines.	Three lines.
1 square acre .....	50 $\frac{2}{3}$ pounds	101 $\frac{1}{3}$ pounds	152 pounds
1 side of a square acre .....	12 $\frac{2}{3}$ pounds	25 $\frac{1}{3}$ pounds	38 pounds
1 square half-acre .....	36 pounds	72 pounds	108 pounds
1 square mile .....	1280 pounds	2560 pounds	3840 pounds
1 side of a square mile .....	320 pounds	640 pounds	960 pounds
1 rod in length .....	1 pound	2 pounds	3 pounds
100 rods in length .....	100 pounds	200 pounds	300 pounds
100 feet in length .....	6 $\frac{1}{10}$ pounds	12 $\frac{1}{5}$ pounds	18 $\frac{3}{10}$ pounds

## VITALITY OF SEEDS IF PROPERLY KEPT. (McKerrow.)

Turnips .....	5 years	Wheat .....	2 years
Rape .....	5 years	Buckwheat .....	2 years
Pumpkin .....	5 years	Corn .....	2 years
Peas .....	3 years	Timothy .....	2 years
Beans .....	3 years	Rye .....	2 years
Clover .....	3 years	Flax .....	2 years
Oats .....	3 years	Millet .....	2 years
Barley .....	3 years	Orchard grass .....	2 years

## QUANTITY OF SEED REQUIRED TO THE ACRE. (Waring.)

Designation.	Quantity of seed.	Designation.	Quantity of seed.
Wheat .....	1 $\frac{1}{4}$ to 2 bushels	Broom-corn .....	1 to 1 $\frac{1}{2}$ bushels
Barley .....	1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ bushels	Potatoes .....	5 to 10 bushels
Oats .....	2 to 4 bushels	Timothy .....	12 to 24 quarts
Rye .....	1 to 2 bushels	Mustard .....	8 to 20 quarts
Buckwheat .....	$\frac{3}{4}$ to 1 $\frac{1}{3}$ bushels	Herd grass .....	12 to 16 quarts
Millet .....	1 to 1 $\frac{1}{2}$ bushels	Flat turnip .....	2 to 3 pounds
Corn .....	$\frac{1}{4}$ to 1 bushel	Red clover .....	10 to 16 pounds
Beans .....	1 to 2 bushels	White clover .....	3 to 4 pounds
Peas .....	2 $\frac{1}{2}$ to 3 $\frac{1}{2}$ bushels	Blue grass .....	10 to 15 pounds
Hemp .....	1 to 1 $\frac{1}{2}$ bushels	Orchard grass .....	20 to 30 pounds
Flax .....	$\frac{1}{2}$ to 2 bushels	Carrots .....	4 to 5 pounds
Rice .....	2 to 2 $\frac{1}{2}$ bushels	Parsnips .....	6 to 8 pounds

## AVERAGE YIELD PER ACRE OF VARIOUS CROPS. (Bailey.)

Apples .....	A tree 20 to 30 years old should yield from 25 to 40 bushels every alternate year.
Artichoke .....	200 to 300 bushels.
Beans, green or snap .....	75 to 120 bushels.
Beans, Lima .....	75 to 100 bushels of dry beans.
Beets .....	400 to 700 bushels.
Carrots .....	400 to 700 bushels.
Corn .....	50 to 75 bushels, shelled.
Cranberries .....	100 to 300 bushels; 900 bushels have been reported.

Cucumbers .....	About 150,000 fruits per acre.
Currants .....	100 bushels.
Gooseberries .....	100 bushels.
Grapes .....	3 to 5 tons.
Horse-radish .....	3 to 5 tons.
Kohlrabi .....	500 to 1,000 bushels.
Onions, from seed.....	300 to 800 bushels; 600 bushels is a large average yield.
Parsnips .....	500 to 800 bushels.
Peas, green in pod .....	100 to 150 bushels.
Peaches .....	In full bearing a peach tree should produce from 5 to 10 bushels.
Pears .....	A tree from 20 to 25 years old should yield from 25 to 45 bushels.
Peppers .....	30,000 to 50,000 fruits.
Plums .....	5 to 8 bushels may be considered an average crop.
Potatoes .....	100 to 300 bushels.
Quinces .....	200 to 400 bushels.
Raspberries .....	50 to 100 bushels.
Blackberries .....	50 to 100 bushels.
Salsify .....	200 to 300 bushels.
Spinach .....	200 barrels.
Strawberries .....	75 to 200, or even 300 bushels.
Tomatoes .....	8 to 16 tons.
Turnips .....	600 to 1,000 bushels.

YIELD OF A GOOD CROP OF FARM PRODUCTS PER ACRE. (McKerrow.)

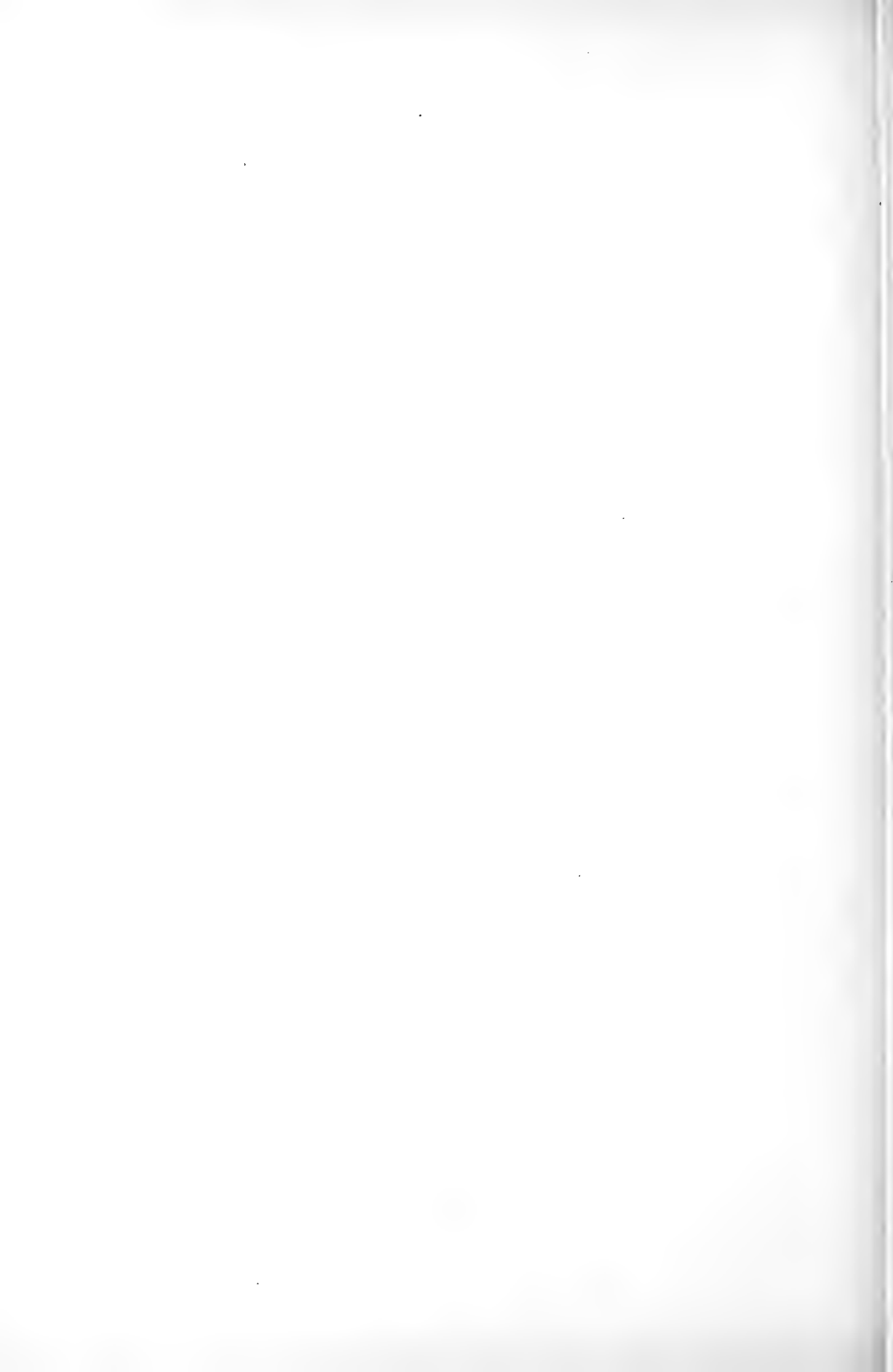
Oats .....	.50 bushels	Rye .....	25 bushels
Corn (shelled) .....	.50 bushels	Hay .....	2 tons
Barley .....	.50 bushels	Potatoes .....	200 bushels
Wheat (winter) .....	.30 bushels	Turnips .....	500 bushels
Wheat (spring) .....	.25 bushels	Mangels .....	800 bushels
Beans .....	.15 bushels	Sugar beets .....	500 bushels

USUAL DISTANCES FOR PLANTING VEGETABLES. (Bailey.)

Asparagus .....	Rows 3 to 4 ft. apart, 1 to 2 ft. apart in row.
Beans, bush .....	2 to 3 ft. apart, 1 ft. apart in rows.
Beans, pole .....	3 to 4 ft. each way.
Beets, early .....	In drills from 12 to 18 in. apart.
Beets, late .....	In drills from 2 to 3 ft. apart.
Cabbage, early .....	16 by 28 in. to 18 by 30 in.
Cabbage, late .....	2 by 3 ft. to 2½ by 3½ ft.
Carrots .....	In drills from 1 to 2 ft. apart.
Cauliflower .....	2 by 2 ft. to 2 by 3 ft.
Celery .....	Rows 3 to 4 ft. apart, 6 to 9 in. in row.
Corn, sweet .....	Rows 3 to 3½ ft. apart, 9 in. to 2 ft. in row.
Cucumbers .....	4 to 5 ft. each way.
Egg-plant .....	3 by 3 ft.
Lettuce .....	1 by 1½ or 2 ft.
Muskmelon .....	5 to 6 ft. each way.
Watermelon .....	7 to 8 ft. each way.
Onions .....	In drills from 14 to 20 in. apart.
Parsnips .....	In drills 18 in. to 3 ft. apart.
Peas .....	In drills early kinds, usually in double rows from 6 to 9 in. apart; late, in single rows 2 to 3 in. apart.
Peppers .....	15 to 18 in. by 2 to 2½ ft.
Potatoes .....	10 to 18 in. by 2½ to 3 ft.
Pumpkins .....	8 to 10 ft. each way.
Radishes .....	In drills, 10 to 18 in. apart.
Rhubarb .....	2 to 4 ft. by 4 ft.
Salsify .....	In drills, 1½ to 2 ft. apart.
Spinach .....	In drills, 12 to 18 in. apart.
Squashes .....	3 to 4 ft. by 4 ft.
Sweet-potatoes .....	2 ft. by 3 to 4 ft.
Tomatoes .....	4 ft. by 4 to 5 ft.
Turnips .....	In drills, 1½ to 2½ ft. apart.

QUANTITY OF SEED OF VEGETABLES REQUIRED TO SOW AN ACRE.  
(Bailey.)

Asparagus .....	4 or 5 lbs., or 1 oz. for 50 ft. of drill.
Beans, dwarf, in drills .....	1½ bushels.
Beans, pole .....	10 to 12 quarts.
Beets .....	5 to 6 lbs.
Buckwheat .....	1 bushel.
Cabbage, in beds to transplant .....	¼ lb.
Carrots, in drills .....	3 to 4 lbs.
Cauliflower .....	1 oz. of seed for 1,000 plants.
Celery .....	1 oz. of seed for 2,000 plants.
Corn, in hills .....	8 to 10 quarts.
Cucumber, in hills .....	2 lbs.
Cress, water, in drills .....	2 to 3 lbs.
Egg-plant .....	1 oz. of seed for 1,000 plants.
Kale or sprouts .....	3 to 4 lbs.
Lettuce .....	1 oz. of seed for 1,000 plants.
Muskmelon in hills .....	2 to 3 lbs.
Watermelon in hills .....	4 to 5 lbs.
Mustard, broadcast .....	¼ bushel
Onion, in drills .....	5 to 6 lbs.
Onion seed for sets, in drills .....	30 lbs.
Onion sets in drills .....	6 to 12 bushels.
Parsnip, in drills .....	4 to 6 lbs.
Peas .....	1 to 2 bushels.
Potato, cut tubers .....	7 bushels.
Pumpkin, in hills .....	4 to 5 lbs.
Radish, in drills .....	8 to 10 lbs.
Sage .....	8 to 10 lbs.
Salsify .....	8 to 10 lbs.
Spinach .....	10 to 12 lbs.
Squash, bush, hills .....	4 to 6 lbs.
Squash, running hills .....	3 to 4 lbs.
Tomato, to transplant .....	¼ lb.
Turnip, in drills .....	1 to 2 lbs.
Turnip, broadcast .....	3 to 4 lbs.
Grass, mixed lawn .....	2 to 4 bushels.



# A BRIEF HISTORY OF OHIO

CHRONOLOGICALLY ARRANGED

## OHIO.

(U. S. Census Report for 1900.)

Ohio has a gross area of 41,060 square miles; land, 40,760 and water 300 square miles.

## POPULATION OF OHIO FROM 1800 TO 1900 BY DECADES, WITH RANK.

	Population.	Rank.
1800 .....	45,365	18
1810 .....	230,760	13
1820 .....	581,434	5
1830 .....	937,903	4
1840 .....	1,519,467	3
1850 .....	1,980,329	3
1860 .....	2,339,511	3
1870 .....	2,665,260	3
1880 .....	3,198,062	3
1890 .....	3,672,316	4
1900 .....	4,157,545	4

## POPULATION OF OHIO BY COUNTIES FOR 1900.

(U. S. Census Report for 1900.)

Adams .....	26,328	Hamilton .....	409,479	Muskingum .....	53,185
Allen .....	47,976	Hancock .....	41,993	Noble .....	19,466
Ashland .....	21,184	Hardin .....	31,187	Ottawa .....	22,213
Ashtabula .....	51,448	Harrison .....	20,486	Paulding .....	27,528
Athens .....	38,730	Henry .....	27,282	Perry .....	31,841
Auglaize .....	31,192	Highland .....	30,982	Pickaway .....	27,016
Belmont .....	60,875	Hocking .....	24,398	Pike .....	18,172
Brown .....	28,237	Holmes .....	19,511	Portage .....	29,246
Butler .....	56,870	Huron .....	32,330	Preble .....	23,713
Carroll .....	16,811	Jackson .....	34,248	Putnam .....	32,525
Champaign .....	26,642	Jefferson .....	44,357	Richland .....	44,289
Clark .....	58,939	Knox .....	27,768	Ross .....	40,940
Clermont .....	31,610	Lake .....	21,680	Sandusky .....	34,311
Clinton .....	24,202	Lawrence .....	39,534	Scioto .....	40,981
Columbiana .....	68,590	Licking .....	47,070	Seneca .....	41,163
Coshocton .....	29,337	Logan .....	30,420	Shelby .....	24,625
Crawford .....	33,195	Lorain .....	54,857	Stark .....	94,747
Cuyahoga .....	439,120	Lucas .....	153,559	Summit .....	71,715
Darke .....	42,532	Madison .....	20,590	Trumbull .....	46,591
Defiance .....	26,387	Mahoning .....	70,134	Tuscarawas .....	53,751
Delaware .....	26,401	Marion .....	28,678	Union .....	22,342
Erie .....	37,650	Medina .....	21,958	Van Wert .....	30,394
Fairfield .....	34,259	Meigs .....	28,620	Vinton .....	15,330
Fayette .....	21,725	Mercer .....	28,021	Warren .....	25,584
Franklin .....	164,460	Miami .....	43,105	Washington .....	48,245
Fulton .....	22,801	Monroe .....	27,031	Wayne .....	37,870
Gallia .....	27,918	Montgomery .....	130,146	Williams .....	24,953
Geauga .....	14,744	Morgan .....	17,905	Wood .....	51,555
Greene .....	31,613	Morrow .....	17,879	Wyandot .....	21,125
Guernsey .....	34,425				

Rural population for 1900.....1,743,285



## A BRIEF HISTORY OF OHIO, 1803-1903, ARRANGED CHRONOLOGICALLY.

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On the 30th of April, 1802, Congress passed an act to enable "the inhabitants of the eastern division of the territory northwest of the river Ohio to form a constitution and establish a State government." In accordance with the provisions of this "enabling act," the Constitutional Convention met at Chillicothe November 1, 1802, and the thirty-five members were apportioned to the nine counties as follows: Adams, three; Belmont, two; Clermont, two; Fairfield, two; Hamilton, ten; Jefferson, five; Ross, five; Trumbull, two, and Washington, four. The members of this convention performed their work in twenty-five days, framing a constitution, under which the people of the State lived for fifty years. The new State was named "Ohio."

1803. As provided by the constitution, an election was held on the second Tuesday of January, 1803, at which a Governor, Senators and Representatives were chosen. The Democrat-Republicans presented the name of Edward Tiffin for Governor, and as there was no other candidate—General St. Clair refusing to allow his name to be used—we may say that he was unanimously elected, the federalists generally declining to vote.

The first Legislature met at Chillicothe, March 1, 1803. Michael Baldwin was elected Speaker of the House and Nathaniel Massie Speaker of the Senate. Edward Tiffin took the oath of office and entered upon his duties as Chief Executive of the new State, which John Randolph described as "a mere geographical diagram beyond the Ohio river of vast deserts of woods inhabited by the aborigines." The General Assembly appointed William Creighton, Jr., Secretary of State, William McFarland Auditor of State and Thomas Gibson Treasurer of State; Judges of the Supreme Court, Return J. Meigs, Jr., Samuel Huntington and William Spriggs; United States Senators, Thomas Worthington and John Smith. State courts were established and the judges, under the provisions of the constitution, were appointed for seven years. Laws were passed for leasing school lands and regulating the public salt works; election laws were enacted and salaries were fixed; the territorial tax laws were, with slight modifications, continued in force. Eight new counties were organized: Butler, Columbiana, Franklin, Gallia, Greene, Montgomery, Scioto

and Warren. The northern boundary of Franklin county was Lake Erie, and Franklinton (now a part of Columbus) was made the county seat.

A notable event of this year was the purchase of Louisiana from the French. The people west of the Alleghany<sup>1</sup> Mountains had been harassed because of the closing by the Spanish of the Mississippi River, which was the only outlet for their produce, but by this purchase they secured unrestricted traffic on this great "highway to the sea."

1804. During the second session of the Legislature (1803-1804), the "black laws,"<sup>2</sup> which disgraced our statute books until 1848-1849, were enacted, laws were passed to improve the revenue system of the State, to organize the militia, to punish crimes, to improve the administration of justice by regulating the common law and chancery practice of the courts.

Of this period Caleb Atwater, in his "History of the State of Ohio," says:

"The president, judge and the lawyers traveled their circuits, holding courts. When arrived at the shire town, the lawyers and judges were all generally thrown together, into one room, in a log tavern, and slept under the roof, some of them very near it. The food was generally cooked out of doors.\*\*\*We have seen a constable with a grand jury, sitting under a tree, and the constable keeping off the crowd, so as to prevent their hearing the testimony of witnesses before the jury.\*\*\*Judges and lawyers rode from court to court, through the forest, and carried their provisions or starved on the route.\*\*\*When the streams were swelled with rain, they swam every stream in their way."

1805. By a treaty made with the Indians at Fort Industry in 1805, and ratified by the United States Senate January 25, 1806, the General Government acquired, for the benefit of the grantees of Connecticut, all that portion of the Western Reserve lying west of the Cuyahoga river.

On February 12, 1805, the third General Assembly enacted a law entitled "An act defining the duties of justices of the peace and constables, in criminal and civil cases," which proved to be a source of very serious trouble between the judicial and legislative departments of the State government for a number of years.

At the October election Edward Tiffin was re-elected Governor. Dayton, Lancaster and Steubenville were incorporated.

1806. During this year Burr and Blennerhassett were busy preparing an expedition for the avowed purpose of colonizing the Bastrop lands in Louisiana. Boats were built, volunteers recruited and supplies

<sup>1</sup>A negro could not testify in court in any case in which a white man was a party. He was not permitted to testify in his own behalf if he was sued by a white man.

A black or mulatto person was prohibited from settling in Ohio unless a certificate of freedom could be shown and security furnished by two freeholders for good behavior and maintenance in case he became a public charge, and unless this certificate was recorded and produced, it was a penal offense to give him employment.

Under the constitution he had no vote.

The property of the negro was taxed, but his children were denied the privileges of the public schools.

engaged for it. The scheme was regarded by President Jefferson, however, with very great suspicion, and upon representations made by Government agents, the President issued on November 27, 1806, a proclamation,<sup>1</sup> calling upon all good citizens to aid in suppressing treasonable plots, which were being hatched by certain parties. On December 6 the Ohio Legislature passed a law to prevent acts "hostile to the peace and tranquillity of the United States within the jurisdiction of Ohio." Governor Tiffin at once issued a proclamation, calling out the sheriffs and militia along the Ohio River. Neither Burr nor Blennerhassett was captured at this time. They were arrested later, however, taken to Richmond, Va., and tried for treason, but both were acquitted.

1807. Edward Tiffin declined the nomination for a third term as Governor of the State and resigned as chief executive March 3, 1807, to take the position of United States Senator, to which he had been elected.

Thomas Kirker, Speaker of the Senate, became acting Governor.

Return Jonathan Meigs, Jr., and Nathaniel Massie were the candidates for gubernatorial honors at the following October election. Meigs was elected, but, after much delay, was declared ineligible, on the ground of being a non-resident. Massie refused to serve, so Mr. Kirker occupied the position until the following year.

St. Clairsville was incorporated.

1808. At the October election in 1808 Judge Samuel Huntington was elected Governor and in December took his seat.

The law passed in 1805, defining the duties of justices of the peace, having been declared unconstitutional by two judges of the Supreme Court and the presiding judge of the Third Circuit Court, the General Assembly resented what it considered an unwarrantable interference with its rights, and resolutions of impeachment against Judges Huntington, Tod and Pease were promptly offered. Nothing, however, was done at that session. Before the General Assembly met again, Judge Huntington had resigned his position on the bench and was chief executive of the State. His name was therefore dropped from the list, but charges of impeachment were made against Judges Tod and Pease.

Springfield was incorporated.

1809. Judges Tod and Pease were tried before the "High Court of Impeachment,"<sup>2</sup> but their arguments were so convincing that, in deference to public opinion, both were acquitted, but their temerity in questioning the constitutionality of any portion of the work of the Legislature was neither forgotten nor forgiven by the lawmakers.

1810. On the 16th of January the well named "sweeping resolution" was passed by the General Assembly, which swept out of office the judges of the Supreme Court, the Common Pleas Court, the Secretary of

<sup>1</sup> Annals of Congress, Ninth Congress, Second Session, p. 686.

<sup>2</sup> Senate Journal 1809.

State, the Auditor and Treasurer of State and all justices of the peace in the State. This action of the Legislature resulted in endless confusion, and it was some years before order was restored.

At the October election Return Jonathan Meigs, Jr., was again elected chief executive, and having overcome his disability of non-residence, he in due time took his seat as Governor.

The Indians, who had remained comparatively quiet since the Greenville treaty, began to be troublesome again. Tecumseh and his brother, the "Prophet" (Elskwatawa) had been endeavoring from 1807 to form a confederacy of all the nations and tribes on the continent "for the purpose of putting a stop to the encroachments of the white people."

Hamilton and Lebanon were incorporated.

1811. The General Assembly met at Zanesville during the sessions of 1810-1811 and 1811-1812. Commissioners were appointed during the winter of 1811 to select a permanent location for the state capital. They reported at the next session in favor of Dublin, a village about fourteen miles north of Columbus. The Legislature did not act favorably on their report, but on February 14, 1812, an act was passed accepting a site on the east side of the Scioto river—then a dense forest—opposite the town of Franklinton. Having no name, the Legislature called it Columbus.

General Harrison, Governor of the Indiana Territory, having decided to anticipate the movements of the Indians, marched to the home of the "Prophet" on the Wabash, during Tecumseh's absence in the South, and totally routed the Indians at the battle of Tippecanoe.

During October of this year the Orleans, the first steamboat ever launched in western waters, left Pittsburg for New Orleans. It reached its destination December 24, but did not attempt the return trip.

The great earthquake, which was felt from the Alleghany Mountains to the Mississippi River, occurred December 11, and it created great consternation and terror throughout the whole country.

1812. On June 18, the United States made a formal declaration of war against Great Britain.

On June 18 Columbus was surveyed and lots and streets laid off.

Return Jonathan Meigs, who had proved an efficient and patriotic Governor, was re-elected for another term.

1813. Peace was declared between the United States and England.

1814. A treaty of peace between American and British commissioners, assembled at Ghent, was concluded December 24th, 1814, and ratified early the following year.

On the 22d of March Return Jonathan Meigs resigned as Governor to accept the position of Postmaster-General under President Madison,

and Othniel Looker, Speaker of the Senate, became acting Governor for the unexpired term, eight months.

Thomas Worthington was elected Governor.

The old brick State House, located at the corner of High and State streets, Columbus, was erected this year.

An oil well was found near Caldwell, but as the parties were hunting salt water and not oil, the well was filled up.

1815. The beginning of this year found Ohio on the verge of a panic. Paper currency had been issued by all the banks in the State—and their name was legion—without limit. In New York notes of the best Ohio banks were at a discount of from eight to fifteen per cent., and others from twenty to twenty-five per cent. Eastern merchants refused this currency, and as the specie had been carried over the mountains on the backs of pack horses, the outlook was very discouraging.

August 1st an act passed by the Legislature the previous winter, abolishing the whipping post, pillory and stocks, went into effect, and the act passed January 27th, providing for punishment by confinement in the penitentiary, took effect the same month, August.

The first camp meeting in Ohio was held in Clermont county during this year, and the meetings were conducted by Lorenzo Dow.

1816. The General Assembly met at Columbus, the new seat of government, December 2, for the first time; the capital had now been incorporated as a borough.

Governor Worthington founded the State Library.

1817. The United States Bank established two branches in Ohio, one at Cincinnati and one at Chillicothe.

The United States Government purchased the right of the Indians in the Northwestern Ohio reservation, about 3,694,540 acres, but each tribe retained a small reservation. The Secretary of War considered this the most important treaty that had as yet been made with the Indians, and stated that there could be no "real or well founded objection to the amount of compensation given for it, except that it is not an adequate one."<sup>1</sup> Later these homes were exchanged by one tribe after another, for larger tracts beyond the Mississippi river, until all had gone.

President Monroe passed through Ohio on his return to Washington from Detroit, and was entertained at Lancaster, Delaware, Columbus, Circleville, Zanesville and other places. "At the boundary of Ross county he was met by a deputation of the corporation of Chillicothe and a large number of gentlemen on horseback, who escorted him to the Governor's mansion, on Prospect Hill, where he spent the night."

The steamer Washington, Captain Shreve, made the trip from Pittsburgh to New Orleans and return this year.

1818. Ethan Allen Brown was elected Governor.

<sup>1</sup> "A Century of Dishonor," Helen Hunt Jackson, p. 47.

September 1st, "Walk-in-the-Water," the first steam vessel on Lake Erie, stopped at Cleveland on her way from Buffalo to Detroit.

1819. The branches of the United States Bank which had been established in Ohio in 1817, had in the course of business issued notes to a considerable extent. This interfered with the business of the State banks, as the people preferred a convertible paper to a depreciated and often worthless currency, and an active opposition was aroused to the branch banks. On February 8th a law was passed by the Legislature, taxing each branch fifty thousand dollars annually. The tax was forcibly collected, and the United States Bank brought an action for trespass against the Auditor of State in the United States Circuit Court. A decision was rendered in favor of the bank, and the State Treasurer was ordered to return the money; failing to do this, the marshal of the district arrested him, and under a writ of sequestration secured ninety-eight thousand dollars, which was taken into court and delivered to the officers of the bank. An appeal to the Supreme Court was arranged for by the defendants for the two thousand dollars, the interest and costs. The decree of the Circuit Court was confirmed as to the sums of ninety-eight thousand dollars and the two thousand dollars, but was reversed as to interest and costs. The matter was not entirely closed until 1825.

Cincinnati was incorporated as a city.

1820. Ethan Allen Brown was re-elected Governor over General William Henry Harrison and Jeremiah Morrow. During the entire period of General Brown's service as Governor of Ohio he was an earnest advocate and an untiring worker for a canal from Lake Erie to the Ohio River. He finally secured the appointment of commissioners to prepare surveys of canal routes.

William Tecumseh Sherman was born at Lancaster, February 8.

1821. On February 12, by an act of the General Assembly, Williams, Henry, Wood and Sandusky counties were erected, the northern boundary in each case to extend to the "State line." This line was rather indefinite, and the Michigan authorities were resisting the enforcement of Ohio laws on what they claimed to be Michigan territory.

1822. Caleb Atwater secured the passage of a law authorizing the Governor to appoint a commission to report a system of education for the common schools to the next General Assembly.

January 13 Ethan Allen Brown was elected United States Senator, and Allen Trimble, Speaker of the Senate, became acting Governor. Mr. Trimble was the first Federalist to occupy the position of chief executive of the State of Ohio.

Jeremiah Morrow was elected Governor at the October election, and the Democrat-Republicans were again at the head of affairs.

April 27 Ulysses S. Grant was born at Point Pleasant, Clermont county.

R. B. Hayes was born at Delaware, Delaware county, October 4.

1824. The questions of canals and common schools were successfully agitated during the canvass for members of the twenty-third General Assembly, and the result was the election of a Legislature which took prompt and effective action on both questions. Governor Morrow was re-elected.

1825. The law authorizing the construction of the Ohio canals and the establishment of a Board of Canal Commissioners was enacted February 4 and on the 4th of July following the work was formally commenced.<sup>1</sup>

On the 5th of February "An act to provide for the support and better regulation of common schools,"<sup>2</sup> was passed.

The State Board of Equalization was created.

Lafayette visited Ohio. Governor Morrow and his staff received him in Cincinnati, in the presence of fifty thousand people. The Governor escorted him across the State to Virginia, where he was also received with great honor.

On May 18th a tornado occurred, which did an immense amount of damage in Delaware, Licking, Knox and Coshocton counties. Those who witnessed the storm say that the "roar of the wind, the darkened sky, the trembling earth, the crash of falling timbers, the air filled with trees, cattle, fragments of houses, etc., presented an awful spectacle." Although it passed over a wilderness, three lives were lost.

1826. Ohio gave a majority for Andrew Jackson, the candidate for President of the United States on the ticket of the Democratic party, but Allen Trimble, a Federalist, was re-elected as Governor of the State.

1827. In January an act was passed to "establish an asylum for the education of deaf and dumb persons."

The Ohio canal was completed from Cleveland to Akron and the first tolls were collected.

1828. Allen Trimble re-elected.

The Miami canal completed to Dayton and during this year the first coal was shipped by canal to Cleveland.

1829. The school for deaf and dumb persons was opened in a room rented for the purpose, with three pupils in attendance.

1830. General Duncan McArthur was elected Governor.

1831. Joseph Smith, the founder of the Mormon Church, and about thirty of his followers from western New York went to Kirtland, Lake county, Ohio, in February, and located there, Smith claiming that by revelation this had been designated as the "Promised Land," and they assumed the name of "Latter Day Saints." In 1832 Brigham Young joined the Saints, and Smith, recognizing his ability, promptly ordained him to preach. The number of adherents rapidly increased and the

<sup>1</sup> See "Ohio Canals."

<sup>2</sup> See "Ohio Education."

"Prophet of the Lord," as Smith styled himself, urged upon his people the necessity of having a church, and soon succeeded in raising forty thousand dollars for this purpose. The temple was completed in 1836 and dedicated in the presence of an immense throng. Smith established "The Kirtland Safety Society Bank"—notwithstanding the Legislature had refused to grant a charter—and issued bills largely in excess of the specie at his command. He assured his dupes that the bank belonged to the "Lord" and could not fail. But financial difficulties soon followed, and Smith and Rigdon (president and cashier of the bank) were arrested for operating a bank without authority of law, were tried and convicted. The case was appealed, and while pending in the higher court, the "Prophet" received another "revelation," commanding him to take Rigdon and fly to the far west, where another "New Jerusalem" awaited them. The command was promptly obeyed, and fast horses soon conveyed them beyond the reach of Ohio laws and Ohio courts.

1832. Robert Lucas presided over the Democratic convention that nominated Andrew Jackson as President of the United States for a second term. He was elected Governor of Ohio, defeating General Duncan McArthur by one vote.

The "great flood" occurred in February of this year. Many villages along the Ohio were depopulated and business was suspended in every town but Gallipolis, from Steubenville to Cincinnati.

1833. February 25 the General Assembly enacted a law "to authorize and encourage the establishment of agricultural societies in the several counties of the State." This was the first official recognition that had been given to the agricultural interests of the State.

1834. Robert Lucas was re-elected Governor. March 3 the Legislature passed an act incorporating Columbus as a city.

1835. The boundary line between Ohio and Michigan was a disputed question for many years, which finally culminated in an open rupture between the State and the Territory in 1835. The militia was called out on both sides, and for some time affairs assumed a very serious aspect. But, finally, in 1837, Michigan, upon her admission to the Union, resigned all right and title to the disputed territory, and accepted from the United States Government, in lieu thereof, the Upper Peninsula, lying between Lakes Superior, Huron and Michigan, and which contains immense forests and very valuable copper and iron mines.

1836. Joseph Vance, who had been a member of Congress from 1821 to 1836, was elected Governor.

1837. The General Assembly passed an act creating the office of Superintendent of Common Schools of the State of Ohio and Mr. Samuel Lewis was elected to the office.

The school for the blind, which had been authorized by the Legislature the previous year, was opened in a rented room on West Town street, Columbus, in July, 1837, with five scholars in attendance.



In March the Legislature passed an act authorizing a loan of credit by the State of Ohio to railroad companies; also to turnpike, canal and slack-water navigation companies, which was soon popularly known as the "plunder law." This law provided for a loan of credit to a corporation to the amount of half the money expended in actual construction or in the purchase of lands for the use of the corporation, but it was construed to apply to the purchase of lands for the purpose of speculation and even fraud. <sup>1</sup>

William Dean Howells, born at Martinsville, Belmont Co., O., March 1st.

1838. Wilson Shannon was elected Governor on the Democratic ticket. Mr. Shannon was the first native of Ohio who filled this position. He was born in Belmont County, February 24, 1803.

January 26th an act was passed by the General Assembly providing for the erection of a new State House on the public square in Columbus.

1839. Work on the new Capitol began in the spring of this year and the corner stone was laid July 4th with appropriate ceremonies "in the presence of a vast assemblage of people, the officers of State, the judges of the United States Circuit and District Courts, with the officers and members of the bar, in attendance, and the splendid military companies from Lancaster."<sup>2</sup>

1840. Thomas Corwin, the Whig candidate for Governor, was elected by a majority of 16,000.

Some opposition had developed in regard to the location of the State Capital at Columbus, and the act providing for the erection of the capitol was repealed.

General William Henry Harrison, a resident of Ohio, was nominated on the Whig ticket for President of the United States, and after a stirring campaign was elected. This election brought Ohio prominently before the country and gave her an important place in national affairs.

1841. The census for 1840 gave Ohio the rank of third State in the Union in population, yet Cincinnati, her largest city, had at that time a population of but 46,000, and no other city in the State had reached 7,000.

A great temperance movement was inaugurated in Ohio during this year, which John Sherman called the most beneficial reform of his time.

1842. The General Assembly passed an act to regulate banking, requiring that all capital should be paid in in specie before operations were begun, and limiting liabilities and circulation.

Wilson Shannon was re-elected Governor, defeating Thomas Corwin by a majority of nearly 2,000. Charles Dickens visited Cincinnati.

1843. William McKinley was born at Niles, Ohio, January 29.

The efforts to remove the seat of government from Columbus proved

<sup>1</sup> Executive Documents, 1842, No. 44, p. 20.

<sup>2</sup> Executive Documents, 1869, pt. 1, p. 600.

unavailing and the work of construction on the new capitol was authorized by the Legislature to be resumed.

1844. Governor Shannon, having been tendered the position of Minister to Mexico, accepted it and resigned the Governorship of Ohio April 15th. Thomas W. Bartley, Speaker of the Senate, became acting-Governor.

Mordecai Bartley, the father of Thomas W. Bartley, was elected Governor.

1845. An act was passed by the General Assembly authorizing the incorporation of the Bank of the State of Ohio.

David Tod opened the first coal mine in the Mahoning Valley, at Briar Hill, and began shipping coal to Cleveland. James A. Garfield, then a boy of fifteen, was employed by Mr. Tod on one of his canal boats. Texas was annexed to the Union.

1846. William Bebb was elected Governor.

War was declared with Mexico on the 13th of May. This trouble resulted from the annexation of Texas.

An act was passed by the General Assembly establishing the Ohio State Board of Agriculture and making provision for its support.<sup>1</sup>

1847. The position of Attorney-General of Ohio was created.

The first press telegram was received in Cincinnati. The Cleveland, Warren & Pittsburg Railway was begun this year.

1848. Seabury Ford was elected Governor on the Whig ticket.

After much unavoidable delay, work on the new capitol was begun early in the spring and pushed vigorously forward during the year. Both convict and free labor were employed.

The General Assembly for 1848-49 met on the first Monday in December. A serious political complication occurred and an organization of the House of Representatives was not effected until the 2d of January, when John G. Breslin was elected Speaker. But the question of Governor Ford's election was not settled until January 21, when he received official notification of his election, took the oath of office and entered upon his duties as Chief Executive.

1849. Through the efforts of Dr. N. S. Townshend and Mr. John F. Morse, Free Soilers from the Western Reserve, who were instructed by their constituents to do whatever "the cause of freedom should require," the "black laws" were repealed, and Salmon P. Chase was elected United States Senator.

1850. Reuben Wood was elected Governor, defeating the Whig candidate, Samuel F. Vinton.

An act was passed by the Legislature in February, 1850, calling for a second constitutional convention. The convention was composed of one hundred and eight members and met at Columbus the following May.

<sup>1</sup> See Ohio State Board of Agriculture.

The last election under the old constitution was held in October of this year.

1851. The constitutional convention, having been in session one hundred and thirty-five days, adjourned March 10, 1851. On the third Tuesday of June the constitution was submitted to the people and was ratified by a majority of 16,288.

The new constitution provided for biennial sessions, instead of annual, and the date of meeting was changed from the first Monday in December to the first Monday in January.

Several sections were added to the article devoted to the executive department of the State, but the prerogatives of the chief executive were not very greatly enlarged.

A Lieutenant-Governor, who was made the presiding officer of the Senate, and an Attorney-General were provided for.

The Secretary of State, Treasurer and Auditor of State had been, under the old constitution, appointed by a joint ballot of the Senate and House, but the positions were made elective under the new constitution.

In accordance with the provisions of sections 2, 3 and 4 of the "Schedule," the first election under the new constitution was held the second Tuesday of October, 1851. Mr. Wood had only served one year as Governor, but was re-elected under the new constitution.

The Wabash and Erie Canal, connecting the Ohio River with Lake Erie, four hundred and sixty-seven miles, was completed.

1852. The first session of the General Assembly after the adoption of the new constitution was held the first Monday in January, 1852, and the Governor entered upon his second term the Monday following. (Constitution of 1851, Art. 3, Sec. 2.)

The old brick State House was burned February 1st. The first successful fire engine made in the United States was completed at Cincinnati.

1853. Mr. Wood resigned the Governorship on July 13th, to accept the position of Consul to Valparaiso. William Medill, who was President of the Constitutional Convention and was elected Lieutenant-Governor, became acting-Governor upon Mr. Wood's resignation. The following October he was elected Governor.

1854. On January 20th a tornado nearly destroyed the town of Brandon.

On July 13th, a large delegate convention, representing the anti-slavery elements of the "Whig, Democratic, Free Soil and Liberal Parties," met at Neil's new hall, Columbus, for the purpose of fusing into one organization all who were opposed to the extension of slavery. A State central committee was appointed, with power to call another convention and take necessary measures to perfect a permanent organization.<sup>1</sup>

<sup>1</sup> Early History of the Republican Party, Archaeological and Historical Society Publications, Vol. 2, p. 327.

1855. The first Republican State convention was held at the Town Street Methodist Church, in Columbus, July 13-14, 1855. Joshua R. Giddings called the convention to order and John Sherman was made President. Salmon P. Chase was nominated for Governor. Notwithstanding the existence of a strong pro-slavery and know-nothing sentiment in the State, Chase was elected by a majority of 15,651.<sup>1</sup>

1856. Governor Chase, on January 14th, entered upon his duties as chief executive of the State.

The defalcation of John G. Breslin, Treasurer of State, was discovered during this year and prompt measures were taken by Governor Chase to punish the offender.

On June 2d the national Democratic convention met at Cincinnati and James Buchanan was nominated for President of the United States.

1857. By the first of January the new Capitol was ready for occupancy. On the evening of January 6th, a "superb banquet was given at the Capitol by the citizens of Columbus to the members of the Legislature, heads of Departments, Judiciary, citizens and strangers—a mighty throng." The General Assembly took up its regular work the next day.

Governor Chase was re-elected.

1858. Very early in Mr. Chase's second term he secured the passage of an act by the General Assembly to reorganize the militia of the State and a review of all the military companies in the State was held in Columbus during the summer.

The wheat crop of Ohio was seriously damaged by frost on June 5th.

1859. Governor Chase received notification from Governor Wise of Virginia, after John Brown's invasion of Harper's Ferry, that Virginia would pursue abolition organizations into neighboring States to punish them. To this Mr. Chase replied that Ohio would fulfill her obligations to the constitution and laws of the United States and would punish unlawful acts, but under no circumstances would he permit bodies of armed men from other States to invade Ohio territory.

William Dennison was nominated for Governor on the Republican ticket and was elected.

1860. Both branches of the Legislature were Republican. There were three members of this body who subsequently came prominently before the public, James A. Garfield, Jacob D. Cox and James Monroe, known as the "Radical Triumvirate of the Ohio Senate."

On September 10th, the forty-seventh anniversary of the battle of Lake Erie, a statue of Commodore Perry was unveiled at Cleveland.

1861. February 13th President-elect Lincoln visited Columbus.

The General Assembly was in session when the news was received of the fall of Fort Sumter, April 14th. President Lincoln called for troops

<sup>1</sup> Ohio State Journal, July 14, 1854.

on April 15th and on the 19th Ohio soldiers were on their way to Washington.<sup>1</sup>

April 20. "The Soldiers' Aid Society of Northern Ohio," the first organization in the country for the relief of soldiers, was organized at Cleveland, and during the four years of the war disbursed, for the benefit of soldiers and soldiers' families, over one million dollars.

Governor Dennison found himself in a "whirlpool of events," but the emergency proved the man.

David Tod was elected Governor in October by a majority of 55,000.

1862. Mr. Tod had many difficult problems to solve during his administration. In the summer of 1862 the Rebel Generals Kirby, Smith and John Morgan made a feint of attacking Cincinnati, which caused considerable excitement.

1863. On April 13th the General Assembly passed an act to enable qualified voters of Ohio, in the military service of this State and the United States, to exercise the right of suffrage.

In July General Morgan with his cavalry made a raid through southern Ohio. Seven hundred prisoners, with Colonel Basil Duke and other officers, were captured, and later Morgan and the rest of his command were taken prisoners. Morgan and about seventy of his men were confined in the Ohio penitentiary, Columbus, October 1st. On the night of November 27th, Morgan and six of his officers escaped from the penitentiary. This raid cost the State of Ohio \$897,000.

John Brough, an old line Democrat, but a staunch supporter of the Government, was selected as the standard-bearer of the Republican party, while Clement L. Vallandigham was the candidate of the Democratic party. The campaign was an exciting one and the result was awaited with the most intense anxiety by all loyal citizens, whether in the field or within the borders of the State.

The night following the election, crowds of men marched through the streets of the cities all night, and instead of the old familiar "left," "left," "left," of the drill, the men were keeping step to the hoarse shouts of "Brough," "Brough," "Brough," from the thousands who, too anxious to sleep or even rest, were awaiting returns. Brough's majority was one hundred thousand. Thus was disloyalty rebuked by the people of Ohio.

1864. On January 11th John Brough took his seat as Governor. One of his first acts was to invite the governors of Indiana, Illinois, Iowa and Wisconsin to meet him in Washington for a conference, and on April 21st these gentlemen notified Mr. Lincoln that they could furnish him with eighty-five thousand men for one hundred days without making a draft or paying a dollar of bounty.

On January 30th a law was enacted prohibiting volunteer and

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<sup>1</sup> See "Ohio's War Record."

substitute brokerage; a little later a bureau was created for the auditing and collecting of soldiers' claims and for the relief of Ohio soldiers.

Another act was passed to punish men for avoiding the draft by collecting a commutation fee of four dollars per annum from every citizen of the State subject to military duty and not in the military service of the State or United States. Governor Brough did much to secure a more efficient organization of the militia of the State.

The XIII Amendment to the Constitution of the United States was ratified by Ohio on February 10th.

Joshua R. Giddings died May 27, 1864. He was a member of Congress for twenty-one years and during that time was twice assaulted by armed men and was once attacked by a mob because of his opposition to slavery. Was Consul-General to British North America.

1865. Lee's surrender at Appomattox Court House, April 9th, virtually closed the war.

On April 14, 1865, President Lincoln, while attending a performance at Ford's Theatre, Washington, was shot by John Wilkes Booth. He died the morning of the 15th.

Governor Brough died August 29th, and Lieutenant-Governor Charles Anderson succeeded him.

The ability of this trio of war Governors, William Dennison, David Tod and John Brough, is receiving a recognition by this generation which was not accorded in those days which tried men's souls. They were good men and true—honest, loyal, efficient—no better could have been found within the borders of the State. But unfortunately for their peace of mind they were held responsible for all unpopular measures, and there was of necessity much drastic legislation during the four years of the war. They endured unjust criticism, ridicule, contumely—yet they had served not only their State but their country faithfully when faithful service was most needed.

Jacob D. Cox, a member of the "Radical Triumvirate of the Ohio Senate" in 1859, was elected Governor.

Thomas Corwin died December 18.

1866. General Cox was inaugurated in January and entered upon his duties as Governor. On April 2d an act was passed to enroll the militia and to organize volunteer militia. A temporary home for soldiers was authorized and assessors were instructed to make returns of "necessitous soldiers' families" and estimate the amount required for their relief. The work of mustering out all Ohio soldiers in the United States service and the discharge of the National Guard occupied much of the time of this administration.

1867. On January 11th, the General Assembly by joint resolution, ratified the XIV Amendment to the Constitution of the United States.

A resolution to submit to the people of the State at the next October election an amendment to the State constitution was passed by the General

Assembly on March 27th. The amendment was lost by a majority of 38,353 votes. The question at issue was not only the enfranchisement of the colored man, but the disfranchisement of many disloyal whites as well, and the latter clause no doubt defeated the amendment.

An act was passed by the Legislature appropriating five thousand dollars for the purchase and improvement of grounds in the Antietam cemetery and for the removal of the bodies of soldiers who were buried in that vicinity to the cemetery and interment therein, and for plainly marking their graves.

Rutherford B. Hayes was elected Governor.

1868. January 15th the General Assembly (Democratic) rescinded the resolution of assent, passed by the previous Legislature, declaring that the ratification of the XIV Amendment of the Constitution of the United States on behalf of the State of Ohio, was withdrawn and refused, and making the modest request that any and all papers on file in the Executive Department at Washington certifying the ratification of the XIV amendment, be returned to the General Assembly of Ohio. It is needless to say that the request was not granted. Eighteen Senators made a vigorous protest against the resolution.

On November 13th, Honorable David Tod died.

The Central Lunatic Asylum, located at Columbus, was on November 18th destroyed by fire and six lives were lost.

Bessemer steel was first made at Cleveland during this year.

1869. On May 4th, the General Assembly by joint resolution refused to ratify the XV Amendment to the Constitution of the United States.

On May 6th an act was passed by the Legislature providing for the ceding of ground purchased by Ohio in the Antietam and Gettysburg cemeteries to the United States.

The third national encampment of the Grand Army of the Republic was held at Cincinnati, General John A. Logan, Commander.

Governor R. B. Hayes was re-elected.

Edwin M. Stanton was born at Steubenville, December 19, 1814, and died December 24, 1869. He was Attorney-General under Buchanan; was a Democrat until the Civil War, but in 1862 he became Secretary of War under Lincoln. In 1869 he was confirmed as Associate-Justice of the United States Supreme Court, but before he could assume the duties he died.

1870. The Republicans secured a majority in both houses at the October election, and on the 27th of January the General Assembly ratified the XV Amendment to the Constitution of the United States.

1871. Edward F. Noyes was elected Governor.

Under the provisions of Article XVI, Section 3, of the State Constitution, a vote was required to be taken this year on the question, "Shall

there be a convention to revise, alter or amend the constitution?" The question was submitted to the people and the vote was in favor of revision.

The first national convention of the Prohibition party was held at Columbus, February 22d, and James Black, of Pennsylvania, was nominated for President of the United States.

1872. Governor Noyes was inaugurated. The General Assembly passed an act providing that the election of delegates to the constitutional convention should be held in October, which was done.

The national convention of Liberal Republicans was held at Cincinnati May 4th, and Horace Greeley was nominated for President of the United States. On the 29th of November Mr. Greeley died.

The Ohio State Grange was organized.

1873. The third constitutional convention met in Columbus on the 13th of May. It was in session one hundred and eighty-five days and drafted a new constitution to be submitted to the people.

William Allen defeated Governor Noyes for re-election on the "greenback" issue.

The General Assembly passed a law providing for the relief of the families of soldiers and marines.

Salmon P. Chase died May 7, 1873. From 1849 to 1855 he was United States Senator from Ohio; Governor of Ohio from 1856 to 1860; Secretary of the United States Treasury from 1861 to 1864; and Chief Justice of the Supreme Court from 1864 to 1873.

The "Women's Crusade" against the liquor traffic began in Hillsboro, December 23d.

1874. Governor Allen inaugurated. The Legislature authorized the appointment of a Board of Centennial Managers for the Philadelphia Exposition.

At a special election held August 18th, the new constitution was submitted to the people, but was defeated.

In drilling a well at Findlay natural gas was discovered and it was soon found that a valuable oil and gas belt was located in northwestern Ohio.

On November 17th the first National Women's Christian Temperance convention met in Cleveland, and on the 19th the Women's Christian Temperance Union was organized.

1875. A joint resolution was passed by the General Assembly on the 30th of March "relative to an amendment of Article IV of the State Constitution, 'Judiciary,'" and on the 12th of October the amendment was adopted by a vote of the people.

Rutherford B. Hayes was elected Governor. Mr. Hayes had the distinction of being the only man elected to the office of Governor of Ohio for three terms.

The Ohio State Grange held its first meeting this year.



Charles Brush of Cleveland invented a successful dynamo and arc light lamp.

1876. Governor Hayes inaugurated.

General George A. Custer, born in Harrison county, Ohio, was killed in Montana during a fight with hostile Indians.

The Ohio Agricultural and Mechanical College, located at Columbus, was opened this year.

Thomas A. Edison, who was born at Milan, Erie County, Ohio, established his laboratory at Menlo Park, New Jersey, and began work on his incandescent lamp, phonograph, etc.

On December 29th, a passenger train on the Lake Shore Railroad went through a bridge at Ashtabula and nearly one hundred lives were lost.

1877. Rutherford B. Hayes, having been elected President of the United States, presented his resignation as Governor of Ohio to the General Assembly on February 28th, to take effect March 2d, at which time Lieutenant-Governor Thomas L. Young became acting-Governor.

At the election in October Richard M. Bishop, Democrat, was elected Governor.

There were strikes in Stark and Wayne counties among the coal miners which finally extended to the railroad employees in Ohio, Pennsylvania, West Virginia and Illinois. Serious conflicts occurred between the strikers and the militia in the various States.

1878. Governor Bishop inaugurated.

On May 1st the General Assembly passed an act changing the name of the Ohio Agricultural and Mechanical College to the Ohio State University.

Yellow fever again made its appearance in the Ohio Valley.

Benjamin F. Wade was in the United States Senate from 1851 to 1869. He was appointed on the San Domingo Commission in 1871, by President Grant. Died in 1878.

1879. Charles Foster and Thomas Ewing were the Republican and Democratic candidates for Governor. The campaign was an active one, the money question being prominent, but Mr. Foster was elected.

1880. On June 8th the fourteenth national encampment of the Grand Army of the Republic was held at Dayton.

June 17th the national Prohibition convention met at Cleveland and nominated Neal Dow for President.

James A. Garfield was elected to the United States Senate. Before he could assume the duties of this position he was nominated as President of the United States by the Republican party and was elected.

June 22-24 the national Democratic convention met at Cleveland and nominated Winfield Scott Hancock as its candidate for President.

1881. On July 2d, President Garfield was shot and fatally wounded by Charles J. Guiteau. He died September 19th and was buried at Lake View Cemetery, Cleveland.

Governor Charles Foster was re-elected.

1882. Governor Foster held advanced views in regard to taxing the liquor traffic in Ohio and his ideas have since been fully endorsed by his party. The Pond act was passed by the General Assembly.

1883. George Hoadly, Democrat, was elected Governor. A disastrous flood occurred in the Ohio River during February. The Scott law, taxing the liquor traffic, was passed.

March 28 to April 3<sup>1884</sup>, a riot occurred in Cincinnati. The militia was called out; forty-two rioters were killed and one hundred and twenty wounded; the court house was burned and most of the county records destroyed.

A constitutional amendment was adopted which made some changes in the judiciary of the State. Under it twenty-one judges of the circuit court were to be elected in 1884, three judges in each of the seven circuits, to act as an intermediate court between the common pleas and supreme courts. An amendment relative to the regulation of the liquor traffic was also submitted to the electors, but was defeated.

1884. A sudden rise occurred in the Ohio River and one hundred thousand people were rendered homeless, hundreds of lives were lost and millions of dollars' worth of property destroyed.

The first gas well in Hancock county was found at Findlay.

Noah H. Swayne died June 8th. Mr. Swayne was United States District Attorney for Ohio, from 1831 to 1841, and was a Justice of the United States Supreme Court from 1862 to 1881, when he resigned.

1885. Governor Hoadly was a candidate for re-election, but was defeated by Joseph B. Foraker.

By joint resolution, passed April 9th, an amendment to the constitution was proposed, changing the date of the election of senators and representatives, governor, lieutenant-governor, secretary of state, auditor of state, treasurer of state and attorney-general, from the second Tuesday of October to the first Tuesday after the first Monday in November, to be submitted to the qualified electors at the October election. This was done and the amendment adopted.

General Ulysses S. Grant died July 23d.

On March 13th the Ohio State Archæological and Historical Society was incorporated.

September 8th Washington Court House was visited by a tornado which did an immense amount of damage.

1886. The Legislature passed the Dow law regulating the liquor traffic.

The State election was held this year in November for the first time.

1887. Governor Foraker re-elected.

February 22 a convention of wage-workers held a meeting in Cincinnati and formed a new political organization combining various labor and agricultural organizations, calling it the "Union Labor Party."

1888. April 7th the centennial celebration of the founding of Marietta was held.

July 4th the centennial exposition for the Ohio Valley opened in Cincinnati.

September 10th the Ohio centennial was opened at Columbus, and on the same date the twenty-second national encampment of the Grand Army of the Republic opened its sessions in Columbus.

The Legislature appointed a commission to investigate the property rights of the State in lands adjoining the canals.

General Philip Henry Sheridan, born at Somerset, Ohio, March 6, 1831, died August 5th.

Morrison R. Waite died March 23d. From 1871 to 1872 he represented the United States as counsel in the Alabama claims before the arbitration tribunal at Geneva; he became Chief Justice of the Supreme Court of the United States and served until his death.

1889. Governor Foraker was nominated by his party for a third term, but was defeated by James E. Campbell, Democrat.

George H. Pendleton, Minister to Germany, and S. S. Cox died during this year.

1890. An extraordinary session of the Legislature was called by Governor Campbell.

Lieutenant-Governor Lampson elected on Republican ticket. The Senate contended that he was elected by illegal votes, and the Democrats being in the majority "counted him out."

The Australian ballot was recommended by the Governor. Labor Day, the first Monday in September, was made a legal holiday.

The Garfield monument was dedicated May 30th at Lake View Cemetery, Cleveland.

Steubenville held a celebration in honor of Baron Steuben.

General Robert C. Schenck died March 23d.

1891. William McKinley, Jr., was elected Governor.

By joint resolution of the General Assembly, an amendment to Article XII, Section 2, of the Constitution in regard to taxation was to be submitted to the people.

The question of submitting a proposition for holding a convention to revise the constitution of the State was submitted to the electors, but was defeated.

March 16th the Cleveland Municipal Code Bill was passed by the Legislature.

April 30th, the Legislature passed the act familiarly known as the "Australian ballot law," providing for a mode of conducting elections, "to insure the secrecy of the ballot and prevent fraud and intimidation at the polls."

March 26th an act was passed by the General Assembly to provide for a display of the products of Ohio at the Columbian Exposition, to be held in Chicago in 1893, and an appropriation was made therefor.

General William Tecumseh Sherman died February 14th.

Alphonso Taft died May 21st. Was Judge of Superior Court of Cincinnati from 1865 to 1871; was Secretary of War in 1876; United States Attorney-General from 1876 to 1877; was envoy extraordinary and minister plenipotentiary to Austria in 1882, and Russia in 1884.

1892. The Supreme Court decided that the Cleveland Charter Law, although general in form, was applicable only to Cleveland and was unconstitutional.

1893. Governor William McKinley was re-elected.

Rutherford B. Hayes, nineteenth President of the United States, died at his home in Fremont, Ohio, January 17, 1893.

Ex-Governor Richard M. Bishop died.

The Lewiston reservoir broke through its embankments and the loss entailed by the flood was very heavy.

On November 6th Wilmington was visited by a tornado which involved a property loss of \$100,000.

Ohio made exhibits at the World's Fair in Chicago in every department and section. Ten thousand square feet of floor space was occupied by her exhibits.

Propositions to amend Sections 1 to 11 inclusive, of Article XI, of the State Constitution, in regard to legislative apportionment, and Section 2 of Article XII, relative to taxation, were submitted to the electors.

1894. In Governor McKinley's message to the General Assembly, he called attention to the prolonged industrial depression from which the people were suffering, and urged the propriety of complying with the provisions of the constitution by holding biennial sessions of the Legislature, stating that a "short session and but little legislation would be appreciated at a time like this." The recommendation was adopted and adjourned sessions have not been held since that time.

The General Assembly passed an act granting to women the right of suffrage in school elections.

The Democratic State convention adopted a free silver plank in its platform and passed a resolution favoring the popular election of United States Senators.

A centennial celebration was held at Defiance.

1895. Asa S. Bushnell was elected Governor by a large majority.

Allen G. Thurman died December 12th. Mr. Thurman was elected Judge of the Supreme Court in 1851; was elected to Congress in 1844 and to the United States Senate in 1869, where he served until 1881, when he was appointed by President Garfield as a representative to the International Congress at Paris.

1896. April 27th an act was passed by the General Assembly providing for an addition to the State House.

On April 16th the Legislature by joint resolution provided for the holding of a constitutional convention to be submitted to the electors at the November election in 1897, but owing to the method of voting prescribed, the Supreme Court declared the act invalid and the vote was not taken.

The settlement of Cleveland by the Connecticut pioneers was celebrated this year.

Governor William McKinley was nominated as President of the United States at the national convention on the first ballot.

Thomas Ewing, lawyer, Secretary of the Treasury, Secretary of the Interior and member of Congress, died January 21, 1896. Columbus Delano died at Mt. Vernon October 23d.

1897. This was a phenomenal year for the growth of political parties, there being eight in the field with full state tickets, namely, Republican, Democratic, National Democratic (gold), Prohibition, Ohio State Liberty (original prohibitionists), People's Party, State Negro Protective Party and the Socialist Labor Party.

Governor Bushnell was re-elected.

March 28th the coal fields in Jackson county were sold to a London syndicate for \$4,000,000.

June 16th a National Anti-Mob and Lynch Law Association was incorporated at Columbus.

On March 4th, William McKinley, of Ohio, was inaugurated as President of the United States. Honorable John Sherman resigned his seat in the United States Senate to become United States Secretary of State. Marcus A. Hanna, of Cleveland, was appointed by Governor Bushnell to fill the vacant seat in the Senate until the meeting of the General Assembly in 1898.

1898. The General Assembly met January 3d and early in the session the election was held for United States Senator. After a spirited contest Honorable M. A. Hanna was elected for both the unexpired and full terms.

April 25th the Legislature passed an act authorizing the Governor to appoint a commission to revise the municipal code of the State.

February 14th the Maine was destroyed in Havana harbor and April 19th the United States declared war against Spain.

During this year death claimed General Rosecrans, General Buell, Benjamin Butterworth and Calvin S. Brice.

1899. A very serious street car strike occurred in Cleveland. It began on the morning of June 10th and was not abandoned until cold weather.

The congress of the National Municipal League was held in Columbus, November 17th.

Judge William Lawrence died at Bellefontaine, May 8th.

George K. Nash was elected Governor on the Republican ticket.

1900. The addition to the State House was completed and is occupied by the judicial department of the State Government and the various offices assigned thereto.

The General Assembly passed an act April 16th to provide for the centralization of township schools and to provide a high school for the same.

John Sherman died October 22d. He served in Congress from 1855 to 1861 and as United States Senator from 1861 to 1877; he then became Secretary of the Treasury and served to 1881, when he again entered the Senate and served until 1897, when he resigned to accept a position in President McKinley's Cabinet as Secretary of State.

1901. President William McKinley was shot at Buffalo, September 5th and died September 14th.

Governor Nash re-elected.

Judge William H. Taft was made Governor of the Philippine Islands.

Benjamin Harrison, twenty-third President of the United States, died in Indianapolis, Ind., March 13, 1901.

Elisha Gray, inventor, was born at Barnesville, Ohio, August 2, 1835, and died January 22, 1901. Dr. Newell, the founder of the Government life saving service and who aided in the establishment of the United States Agricultural Bureau (later made the Department of Agriculture), was born at Franklin, Ohio, September 5, 1817, and died August 8, 1901.

1902. The General Assembly by joint resolutions adopted the following amendments to the State Constitution, the same to be submitted to the electors at the election in November, 1903:

Section 3, Article XIII, entitled "Single Liability Amendment"; Section 2, Article XII, known as the "Taxation amendment"; Section 16, Article XI, entitled "Governor's veto"; Section 2, Article XI, "Legislative representation," all to be submitted to the people as above noted.

An extraordinary session of the Legislature, called by Governor George K. Nash with special reference to the consideration of the Municipal Code, convened August 25th, and the code was adopted after some delay. It also adopted an amendment to Section 6, Article XIII, entitled "Municipal Classification," to be submitted to the electors at the November election, 1903. It adjourned October 22.

The Supreme Court of Ohio decided that the Cleveland "charter law," although ostensibly general in form, was only applicable to Cleveland, that it was special legislation and therefore "repugnant to Section 1, Article

XIII, of the Constitution of the State." A similar decision was rendered in regard to the "Toledo ripper."

The General Assembly passed the Willis law, requiring corporations to file annual reports with the Secretary of State and pay annual fees.

A law was also passed requiring all insurance companies doing business in Ohio to pay an excise tax.

Ex-Governor George Hoadly died August 26.

1903. Four of the five amendments adopted by the General Assembly were accepted by the electors of the State, the "taxation" amendment being lost. By the amendment to Section 16, Article XI, the Governor of Ohio is given the veto power.

Myron T. Herrick was elected Governor of Ohio by a very large majority.

## TAXATION.

Until 1825 land only was taxed for state purposes; revenue for the counties was derived from a poll tax, a tax on all "mansion-houses valued at two hundred dollars or upwards," water mills, horses, mules and cattle, and in addition to this a portion of the tax received upon realty was given them by legislative appropriation, the amount varying from one-fifth to one-half per cent. from year to year.

Land was divided into three classes, "first quality," "second quality," and "third quality," upon which there were three rates of taxation per one hundred acres. In 1803 the rates were as follows:

1st Quality .....	\$0.60 per 100 acres.
2nd Quality .....	0.40 per 100 acres.
3rd Quality .....	0.20 per 100 acres.

The tax laws were revised in 1825, and on the tax duplicate of 1826 we find "personalty" for the first time, with a value of \$11,035,825.

The following table will show the gradual increase in value, both of realty and personalty, by decades, to 1902.

## SUMMARY OF TAX DUPLICATE BY DECADES.

First Table, 1803 to 1820, Inclusive.

Years.	First Quality of Land. Acres.	Second Quality of Land. Acres.	Third Quality of Land. Acres.	Total Number of Acres.	Rate of Taxation Per 100 Acres.			Total Taxes.
					1st Quality.	2d Quality.	3d Quality.	
1803 .....	101,709	2,326,226	3,641,694	7,069,629	\$0 60	\$0 40	\$0 20	\$22,331 06
1810 .....	129,741	4,177,950	5,625,408	9,933,099	1 25	1 00	65	85,964 39
1820 .....	255,082	7,304,633	5,759,323	13,319,043	1 50	1 00	50	205,346 95



Second Table, 1830 to 1902, Inclusive.

Years.	Value of Realty.	Value of Personalty.	Total Value Taxable Property.	State Tax.	Total Tax.
1830 .....	\$50,086,250	\$14,589,335	\$64,675,578	\$232,472 00	\$598,595 00
1840 .....	85,287,291	27,038,895	112,326,156	564,435 00	1,755,539 00
1850 .....	341,389,838	98,487,502	439,876,340	1,413,830 00	4,227,708 00
1860 .....	639,894,311	248,408,290	888,302,601	3,503,713 00	10,817,676 00
1870 .....	807,816,636	459,684,861	1,167,731,697	4,666,242 00	23,463,631 00
1880 .....	1,102,049,931	456,166,134	1,558,215,965	4,513,240 00	29,092,048 00
1890 .....	1,232,305,312	543,833,165	1,778,138,477	4,798,635 64	37,636,940 58
1900 .....	1,274,203,721	559,849,507	1,834,053,228	5,316,623 01	45,008,126 85
1902 .....	1,396,180,471	594,704,917	1,990,885,388	*5,687,252 95	47,658,208 89

\* No levy was made for general revenue purposes on the duplicate of 1902, this fund being provided for by taxes levied on corporations, in accordance with the provisions of the Willis and Cole acts, passed by the General Assembly of 1902. (O. L. vol. 95, pp. 124 and 136.)

## GOVERNORS OF OHIO.

1803 to 1903.

Name.	Politics.	County.	Elected.	Served.
Edward Tiffin .....	Democrat-Republican	Ross .....	1803	1803-1805
<sup>1</sup> Edward Tiffin .....	Democrat-Republican	Ross .....	1805	1805-1807
<sup>2</sup> Thomas Kirker .....	Democrat-Republican	Adams .....	Acting.	1807-1808
Samuel Huntington .....	Democrat-Republican	Trumbull .....	1808	1808-1810
Return Jonathan Meigs, Jr. ....	Democrat-Republican	Washington .....	1810	1810-1812
<sup>3</sup> Return Jonathan Meigs, Jr. ....	Democrat-Republican	Washington .....	1812	1812-1814
Othniel Looker .....	Democrat-Republican	Hamilton .....	Acting.	1814
Thomas Worthington .....	Democrat-Republican	Ross .....	1814	1814-1816
Thomas Worthington .....	Democrat-Republican	Ross .....	1816	1816-1818
Ethan Allen Brown .....	Democrat-Republican	Hamilton .....	1818	1818-1820
<sup>4</sup> Ethan Allen Brown .....	Democrat-Republican	Hamilton .....	1820	1820-1822
Allen Trimble .....	Federalist	Highland .....	Acting.	1822
Jeremiah Morrow .....	Democrat-Republican	Warren .....	1822	1822-1824
Jeremiah Morrow .....	Democrat-Republican	Warren .....	1824	1824-1826
Allen Trimble .....	Federalist	Highland .....	1826	1826-1828
Allen Trimble .....	Federalist	Highland .....	1828	1828-1830
Duncan McArthur .....	Federalist	Ross .....	1830	1830-1832
Robert Lucas .....	Democrat-Republican	Pike .....	1832	1832-1834
Robert Lucas .....	Democrat-Republican	Pike .....	1834	1834-1836
Joseph Vance .....	Whig	Champaign .....	1836	1836-1838
Wilson Shannon .....	Democrat	Belmont .....	1838	1838-1840
Thomas Corwin .....	Whig	Warren .....	1840	1840-1842
<sup>5</sup> Wilson Shannon .....	Democrat	Belmont .....	1842	1842-1844
Thomas W. Bartley .....	Democrat	Richland .....	Acting.	1844
Mordecai Bartley .....	Whig	Richland .....	1844	1844-1846
William Bebb .....	Whig	Butler .....	1846	1846-1848
<sup>6</sup> Seabury Ford .....	Whig	Geauga .....	1848	1849-1850
<sup>7</sup> Reuben Wood .....	Democrat	Cuyahoga .....	1850	1850-1852
<sup>8</sup> Reuben Wood .....	Democrat	Cuyahoga .....	1851	1852-1853
William Medill .....	Democrat	Fairfield .....	Acting.	1853-1854
William Medill .....	Democrat	Fairfield .....	1853	1854-1856
Salmon P. Chase .....	Republican	Hamilton .....	1855	1856-1858
Salmon P. Chase .....	Republican	Hamilton .....	1857	1858-1860
William Dennison, Jr. ....	Republican	Franklin .....	1859	1860-1862
David Tod .....	Republican	Mahoning .....	1861	1862-1864
<sup>9</sup> John Brough .....	Republican	Cuyahoga .....	1863	1864-1865
Charles Anderson .....	Republican	Montgomery .....	Acting.	1865-1866
Jacob Dolson Cox .....	Republican	Hamilton .....	1865	1866-1868
Rutherford B. Hayes .....	Republican	Hamilton .....	1867	1868-1870
Rutherford B. Hayes .....	Republican	Hamilton .....	1869	1870-1872
Edward F. Noyes .....	Republican	Hamilton .....	1871	1872-1874
William Allen .....	Democrat	Ross .....	1873	1874-1876
<sup>10</sup> Rutherford B. Hayes .....	Republican	Sandusky .....	1875	1876-1877
Thomas L. Young .....	Republican	Hamilton .....	Acting.	1877-1878
Richard M. Bishop .....	Democrat	Hamilton .....	1877	1878-1880
Charles Foster .....	Republican	Seneca .....	1879	1880-1882
Charles Foster .....	Republican	Seneca .....	1881	1882-1884
George Hoadly .....	Democrat	Hamilton .....	1883	1884-1886
Joseph B. Foraker .....	Republican	Hamilton .....	1885	1886-1888
Joseph B. Foraker .....	Republican	Hamilton .....	1887	1888-1890
James E. Campbell .....	Democrat	Butler .....	1889	1890-1892
William McKinley .....	Republican	Stark .....	1891	1892-1894
William McKinley .....	Republican	Stark .....	1893	1894-1896
Asa S. Bushnell .....	Republican	Clark .....	1895	1896-1898
Asa S. Bushnell .....	Republican	Clark .....	1897	1898-1900
George K. Nash .....	Republican	Franklin .....	1899	1900-1902
George K. Nash .....	Republican	Franklin .....	1901	1902-1904

<sup>1</sup> Resigned March 3, 1807.<sup>2</sup> At the October election in 1807, Return Jonathan Meigs, Jr., was elected Governor. Nathaniel Massie, the opposition candidate contested his election on the ground of non-residence. General Meigs was declared ineligible, Mr. Massie refused to serve, and Thomas Kirker, then Acting Governor, filled the position until the fall of 1808, when another election was held and Samuel Huntington was elected Governor.<sup>3</sup> Resigned March 22, 1814.<sup>4</sup> Resigned January 13, 1822.<sup>5</sup> Resigned April 15, 1844.<sup>6</sup> The General Assembly convened on the first Monday in December, 1848, but the House did not complete its organization until January 2, 1849, and on January 22d, Mr. Ford was officially notified of his election and entered upon the duties of his office.<sup>7</sup> The last election under the old Constitution was held in October, 1850; in accordance with the provisions of the new Constitution the first election under it was held "on the second Tuesday of October, 1851," (Constitution 1851, Schedule, Sections 2, 3, 4.)<sup>8</sup> Resigned July 15, 1853.<sup>9</sup> Died, August 29, 1865.<sup>10</sup> Resigned March 2, 1877.

In accordance with the provisions of the Constitution of 1802 (Schedule, Section 6), an election for governor, members of the general assembly, etc., was held on the second Tuesday of January, 1803, and Edward Tiffin was elected governor. The general assembly convened at Chillicothe on the first Tuesday of March, 1803, but it was to hold its regular sessions thereafter "on the first Monday in December, in every year." (Article 1, Section 25, Constitution 1802.)

The following day, March 3d, Governor Tiffin took the oath of office, which he was to hold "until the first Monday of December, 1805." (Article 2, Section 3, Constitution 1802.)

The Constitution of 1851 provided for biennial sessions of the legislature; it also provided that all regular sessions should commence on the first Monday in January, (Article 2, Section 25, Constitution 1851), and the term of office of the governor begin on the second Monday of January, (Article 3, Section 2, Constitution of 1851).

## OHIO.

## STATE OFFICES—CONSTITUTIONAL.

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Secretary of State.....	Constitution of 1802
Auditor of State .....	Constitution of 1802
Treasurer of State .....	Constitution of 1802
Adjutant General .....	Constitution of 1802
Attorney General .....	Constitution of 1851
Board of Public Works.....	Constitution of 1851

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## STATE BOARDS, COMMISSIONS, OFFICES, ETC.—STATUTORY.

Arranged Chronologically.

Board of Canal Commissioners } .....	1825-1836-1851
Board of Public Works } .....	
State Board of Equalization.....	1825
State Commissioner of Common Schools.....	1836
Attorney General .....	1846-1851
Ohio State Board of Agriculture.....	1846
Superintendent of Public Printing.....	1860
Board of State Charities .....	1867
(This Board was abolished in 1872, but was again organized in 1876.)	
Commissioner of Railroads and Telegraphs.....	1867
State Geologist .....	1869
Superintendent of Insurance .....	1872
Inspector of Mines .....	1874
Bureau of Labor Statistics .....	1877
Inspector of Workshops and Factories .....	1884
Ohio Board of Pharmacy .....	1884
Board of Live Stock Commissioners .....	1885
Ohio Dairy and Food Commissioner .....	1886
State Board of Health .....	1886
Ohio Fish and Game Commission .....	1886
Ohio State Board of Pardons .....	1888
Canal Commissioners .....	1888
Bureau of Building and Loan Associations .....	1891
State Board of Dental Examiners .....	1892
State Inspector of Oils .....	1892
State Board of Arbitration .....	1893
State Board of Veterinary Examiners .....	1894
State Board of Medical Registration and Examination.....	1896
State Examiner of Steam Engines .....	1900
State Agent for War Claims .....	1900
State Fire Marshal .....	1900

## COUNTIES OF OHIO.

Counties.	Erected.	Organized.	Named After.	County Seat.
Adams	Proc. July 10, 1797	Date erected	John Adams	West Union.
Allen	Act February 24, 1820	Act February 9, 1831	Colonel Allen	Lima.
Ashland	Act February 24, 1846	Date erected	Ashland, Ky.	Ashland.
Ashtabula	Act February 20, 1807	Act January 22, 1811	An Indian name	Jefferson.
Athens	Act February 20, 1805	Date erected	Athens, Greece	Athens.
Auglaize	Act February 14, 1848	Date erected	An Indian name	Wapakoneta.
Belmont	Proc. September 1, 1801	Date erected	French—descriptive	St. Clairsville.
Brown	Act December 27, 1817	Date erected	General Jacob Brown	Georgetown.
Butler	Act March 24, 1803	Date erected	General Richard Butler	Hamilton.
Carroll	Act December 25, 1832	Date erected	Charles Carroll	Carrollton.
Champaign	Act February 20, 1805	Date erected	Descriptive	Urbana.
Clark	Act December 26, 1817	Date erected	Gen. George Rogers Clark	Springfield.
Clermont	Act February 6, 1800	Date erected	French—descriptive	Batavia.
Clinton	Act February 19, 1810	Date erected	George Clinton	Wilmingon.
Columbiana	Act March 25, 1803	Date erected	Christopher Columbus	Lebanon.
Coshocton	Act January 31, 1810	Date erected	An Indian name	Coshocton.
Crawford	Act February 12, 1829	Act January 31, 1826	Col. William Crawford	Bucyrus.
Cuyahoga	Act January 16, 1810	Date erected	An Indian name	Cleveland.
Darke	Act January 3, 1809	Act December 14, 1816	General William Darke	Greenville.
Defiance	Act March 4, 1845	Date erected	Fort Defiance	Defiance.
Delaware	Act February 10, 1808	Date erected	Indian tribe	Delaware.
Erie	Act March 15, 1833	Act March 16, 1838	Indian tribe	Lancaster.
Fairfield	Proc. December 9, 1800	Date erected	Descriptive	Washington C. H.
Fayette	Act February 19, 1810	Date erected	Marquis de Lafayette	Columbus.
Franklin	Act March 30, 1803	Date erected	Dr. Benjamin Franklin	Wauson.
Fulton	Act February 20, 1850	Date erected	Robert Fulton	Callipolis.
Gallia	Act March 25, 1803	Date erected	Gaul (France)	Chardon.
Geauga	Act December 31, 1805	Date erected	An Indian name	Xenia.
Greene	Act March 24, 1803	Date erected	General Nathaniel Greene	Greene.
Guernsey	Act January 31, 1810	Date erected	Isle of Guernsey (England)	Cambridge.
Hamilton	Proc. January 2, 1790	Date erected	Alexander Hamilton	Cincinnati.
Hancock	Act February 12, 1820	Act January 21, 1823	John Hancock	Findlay.
Hardin	Act February 12, 1820	Act January 19, 1833	General John Hardin	Kenton.
Harrison	Act January 2, 1813	Date erected	Wm. Henry Harrison	Cardiz.
Henry	Act February 12, 1820	Act February 2, 1834	Patrick Henry	Nanoleon.
Hillsland	Act February 18, 1805	Date erected	Descriptive	Hillsboro.
Hocking	Act January 8, 1818	Date erected	Hocking River	Loess.
Holmes	Act January 20, 1824	Act January 4, 1825	Major Holmes	Milfersburg.
Huron	Act February 7, 1809	Act January 31, 1815	Indian tribe	Norwalk.
Jackson	Act January 12, 1816	Date erected	Andrew Jackson	Jackson.

COUNTIES OF OHIO—Concluded.

Counties.	Erected.	Organized.	Named After.	County Seat.
Jefferson	Proc. July 29, 1797	Date erected	Thomas Jefferson	Steubenville.
Knox	Act January 30, 1808	Date erected	General Henry Knox	Mt. Vernon.
Lake	Act March 6, 1840	Act March 20, 1840	Lake Erie	Rainesville.
Lawrence	Act December 21, 1815	Act December 20, 1816	Captain James Lawrence	Ironton.
Licking	Act January 30, 1808	Date erected	Salt Licks	Newark.
Logan	Act December 30, 1815	Date erected	General Benjamin Logan	Belleville.
Loran	Act December 20, 1822	Act January 21, 1824	Province Lorraine	Ellettsville.
Lucas	Act January 20, 1835	Date erected	General Robert Lucas	Toledo.
Madison	Act February 16, 1810	Date erected	An Indian name	London.
Mahoning	Act February 16, 1846	Date erected	James Madison	Youngstown.
Marion	Act February 12, 1820	Act December 15, 1823	General Francis Marion	Marion.
Medina	Act February 12, 1812	Act January 14, 1818	Return J. Meigs, Jr.	Medina.
Meigs	Act January 21, 1819	Date erected	General Hugh Mercer	Pomeroy.
Mercer	Act February 12, 1820	Act January 2, 1824	Indian tribe	Celina.
Miami	Act January 16, 1807	Date erected	James Monroe	Troy.
Miami	Act January 29, 1813	Act February 3, 1815	General Richard Montgomery	Woodsfield.
Montgomery	Act March 24, 1803	Date erected	General Daniel Morgan	Dayton.
Morgan	Act December 29, 1817	Act December 28, 1818	An Indian name	McConnellsville.
Morrow	Act February 24, 1848	Date erected	Jermiah Morrow	Mt. Gilead.
Muskingum	Act January 7, 1804	Date erected	An Indian name	Zanesville.
Noble	Act March 11, 1851	Date erected	Warren P. Noble	Caldwell.
Ottawa	Act March 6, 1840	Act March 18, 1839	Indian tribe	Port Clinton.
Paulding	Act February 12, 1820	Date erected	John Paulding	Paulding.
Perry	Act December 26, 1817	Date erected	Oliver Perry	New Lexington.
Pickaway	Act January 12, 1810	Date erected	Indian tribe (Piqua)	Circleville.
Pike	Act January 3, 1815	Date erected	General Zebulon Pike	Waverly.
Portage	Act February 10, 1807	Date erected	An Indian name	Ravenna.
Preble	Act February 15, 1808	Date erected	Edward Preble	Eaton.
Putnam	Act February 12, 1820	Date erected	General Israel Putnam	Ottawa.
Richland	Act January 7, 1813	Date erected	Descriptive	Mansfield.
Ross	Proc. August 20, 1798	Date erected	James Ross	Chillicothe.
Sandusky	Act February 12, 1820	Date erected	An Indian name	Fremont.
Scioto	Act March 24, 1803	Act January 22, 1824	An Indian name	Portsmouth.
Seneca	Act February 12, 1820	Date erected	Indian tribe	Tiffin.
Shelby	Act January 7, 1819	Date erected	General Isaac Shelby	Sidney.
Stark	Act February 13, 1808	Date erected	General John Stark	Canton.
Summit	Act March 3, 1840	Act March 17, 1849	Descriptive	Akron.
Trumbull	Proc. July 10, 1800	Date erected	Gov. Jonathan Trumbull	Warren.
Tuscarawas	Act February 13, 1808	Act February 13, 1808	Indian tribe	New Philadelphia.
Union	Act January 10, 1820	Date erected	Descriptive	Marysville.

Van Wert .....	Act February 12, 1820.....	Act March 18, 1837.....	Isaac Van Wert .....	Van Wert.
Vinton .....	Act March 23, 1850.....	Date erected .....	Samuel F. Vinton.....	McArthur.
Warren .....	Act March 24, 1803.....	Date erected .....	General Joseph Warren .....	Lebanon.
Washington .....	Proc. July 27, 1788.....	Date erected .....	George Washington .....	Marietta.
Wayne .....	Act February 13, 1808.....	Act January 4, 1812.....	Anthony Wayne .....	Wooster.
Williams .....	Act February 12, 1820.....	Act February 2, 1824.....	David Williams .....	Bryan.
Wood .....	Act February 12, 1820.....	Date erected .....	Colonel Wood .....	Bowling Green.
Wyandot .....	Act February 3, 1845.....	Date erected .....	Indian tribe.....	Upper Sandusky.

## COUNTIES OF OHIO IN THE ORDER OF THEIR ERECTION.

Washington, July 27, 1788.	Monroe, January 29, 1813.
Hamilton, January 2, 1790.	Pike, January 3, 1815.
Adams, July 10, 1797.	Lawrence, December 21, 1815.
Jefferson, July 29, 1797.	Jackson, January 12, 1816.
Ross, August 20, 1798.	Clark, December 26, 1817.
Trumbull, July 10, 1800.	Perry, December 26, 1817.
Clermont, December 6, 1800.	Brown, December 27, 1817.
Fairfield, December 9, 1800.	Morgan, December 29, 1817.
Belmont, September 1, 1801.	Logan, December 30, 1817.
Butler, March 24, 1803.	Hocking, January 3, 1818.
Greene, March 24, 1803.	Shelby, January 7, 1819.
Montgomery, March 24, 1803.	Meigs, January 21, 1819.
Scioto, March 24, 1803.	Union, January 10, 1820.
Warren, March 24, 1803.	Allen, February 12, 1820.
Columbiana, March 25, 1803.	Crawford, February 12, 1820.
Gallia, March 25, 1803.	Hancock, February 12, 1820.
Franklin, March 30, 1803.	Hardin, February 12, 1820.
Muskingum, January 7, 1804.	Henry, February 12, 1820.
Highland, February 18, 1805.	Marion, February 12, 1820.
Athens, February 20, 1805.	Mercer, February 12, 1820.
Champaign, February 20, 1805.	Paulding, February 12, 1820.
Geauga, December 31, 1805.	Putnam, February 12, 1820.
Miami, January 16, 1807.	Sandusky, February 12, 1820.
Ashtabula, February 10, 1807.	Seneca, February 12, 1820.
Portage, February 10, 1807.	Van Wert, February 12, 1820.
Knox, January 30, 1808.	Williams, February 12, 1820.
Licking, January 30, 1808.	Wood, February 12, 1820.
Delaware, February 10, 1808.	Lorain, December 26, 1822.
Stark, February 13, 1808.	Holmes, January 20, 1824.
Tuscarawas, February 13, 1808.	Carroll, December 25, 1832.
Wayne, February 13, 1808.	Lucas, June 20, 1835.
Preble, February 15, 1808.	Erie, March 15, 1838.
Darke, January 3, 1809.	Summit, March 3, 1840.
Huron, February 7, 1809.	Lake, March 6, 1840.
Pickaway, January 12, 1810.	Ottawa, March 6, 1840.
Cuyahoga, January 16, 1810.	Wyandot, February 3, 1845.
Coshocton, January 31, 1810.	Defiance, March 4, 1845.
Guernsey, January 31, 1810.	Mahoning, February 16, 1846.
Madison, February 16, 1810.	Ashland, February 24, 1846.
Clinton, February 19, 1810.	Auglaize, February 14, 1848.
Fayette, February 19, 1810.	Morrow, February 24, 1848.
Medina, February 12, 1812.	Fulton, February 20, 1850.
Harrison, January 2, 1813.	Vinton, March 23, 1850.
Richland, January 7, 1813.	Noble, March 23, 1851.



## TRANSPORTATION.

## ROADS.

The first roadmakers of the Central West were the buffaloes. Mr. Charles Butler Hulbert<sup>1</sup> calls them the "pioneer engineers of the great West," and says, "The routes of the plunging buffalo, weighing one thousand pounds and capable of covering two hundred miles a day, were well suited to the needs of the Indian. One who has any conception of the West as it was a century and a half ago, who can see the river valleys filled with the immemorial plunder of the river floods, can realize that there was but one practicable passageway across the land for either beast or man, and that on the summits of the hills. Here on the hilltops, mounting on the longest ascending ridges, lay the tawny paths of the buffalo and the Indian. They were not only highways; they were the highest ways." Our first roads followed these highways, which were the "great war trails of Indian history," and Indian traces "covered the land as with a network."

When the tide of immigration turned westward, over a hundred years ago, pack horses were used to transport the outfit, carry travelers, provisions, etc. They were driven in lines of from three or four to a dozen or more, each horse being tied to the tail of the one preceding it, one driver managing the entire line. Thus the Indian trails became "packers' paths," and proved of inestimable value to the pioneers. When new routes were selected, woodsmen blazed the trees to mark the way.

As the number of immigrants increased, Pennsylvania wagons, immense covered wagons, drawn by four, six or eight horses, according to the roads, were used for transportation, and to accommodate these wagons the timber had to be cut down and a road made; where the ground was marshy, logs were placed together, forming a "corduroy road."

The United States Government encouraged the building of roads in the new State by providing for a donation of three per cent. from the receipts of land sales in Ohio for that specific purpose.

The second General Assembly, which met in December, 1803, made provision for the appropriation of a three per cent. fund for the construction and improvement of roads. But, according to Mr. Caleb Atwater, it was some time before much improvement was made. He states that ten years after the organization of the State "the roads were few, and it was

<sup>1</sup> Ohio Archaeological and Historical Society Publications, vol. VIII, p. 266.

no easy matter for a stranger to follow them. For ourselves, we preferred following the pocket compass or the sun to most of the roads in the Virginia Military tract."

The first roads were made by plowing two parallel furrows, scraping up the loose dirt and placing it between them to form the roadbed.

As the population increased, the necessity for good roads became greater, and turnpikes, plank and macadam roads were built. The first turnpike in the State extended from Warren, Trumbull county, to Lake Erie. This was soon followed by one from Columbus to Sandusky, another from Cincinnati to Zanesville, etc.

Zane's Trace was the first great thoroughfare, and for many years it was the only one. This road was authorized by an act of Congress passed May 17, 1796, and Ebenezer Zane was employed by the Government to make a wagon road from Wheeling, Va., through Ohio, to Maysville, Ky. It was used so constantly that it was sometimes cut into ruts so deep "that a horse could have been buried in any one of them." Mr. Zane's compensation for the work was three sections of land, but he was required to drive a wagon over the whole route before the work was accepted by the Government. The road passed through Zanesville, Lancaster and Chillicothe.

The first step toward the construction of the National Road, the first great highway through the State, was taken in 1806, when President Jefferson appointed a committee to report on the project, which was suggested by Albert Gallatin, Secretary of the Treasury. They made a favorable report in December of the same year. Cumberland, Maryland, was to be the eastern terminus of the road, and in 1811 the first contract was let for ten miles west of that point. The road was opened to the Ohio River in 1818. The work was commenced in Ohio in 1825, and was completed to the Indiana line in 1834.<sup>1</sup> This old National Road played a prominent part in the settlement of the central portion of the State especially, and has been well named "The Historic Highway of Ohio."

Much time and money have been devoted to roads in later years, but there is still very great room for improvement in Ohio roads.

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## BOATS.

Flatboats, keels and barges were the boats first used in the navigation of the western rivers. In those early days, when the shores of the streams were infested by hostile savages, the safety of boatmen and passengers depended largely on their courage and marksmanship. Under the most favorable conditions, these boats were slow and hard to manage, danger-

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<sup>1</sup> Ohio Archaeological and Historical Society Publications, vol. IX, p. 405.

ous foes lurked along the banks of the river, and the means of communication were uncertain, as it was difficult to tell friend from foe, the Indians using many stratagems to deceive the unwary.

Shipbuilding began at Marietta in 1800,<sup>1</sup> and farmers on the banks of the Muskingum, which was navigable for one hundred and fifty miles, soon turned their attention to the cultivation of hemp, raising in a few years enough to furnish cordage to western vessels and to ship large quantities as freight to the Atlantic cities.

In 1804<sup>1</sup> Captain Jonathan Devol, the earliest of Ohio shipwrights, built a schooner, and in the spring of the following year she was loaded for a voyage on the Mississippi. Among articles noted in her cargo, are 200 barrels of flour, 50 barrels kiln dried corn meal, 4,000 pounds of cheese, 6,000 pounds bacon and 100 sets of rum punchion shooks.

In 1805 there were on the upper Ohio about one hundred and fifty keel boats, of thirty tons each, which made the voyage from Pittsburg to Louisville in about two months, or three trips in a year.

The following communication to the Baltimore Weekly Register is valuable by way of comparison:

"Cincinnati, May 29, 1811

"Arrived at this place on Sunday morning, the 26th inst., barge Cincinnati, Beale Commander, from New Orleans, with a cargo of sugar, hides, logwood, crates, etc. She sailed from New Orleans the 3d of March, arrived at the Falls the 9th of May, sixty-eight days; remained at Falls nine days and sailed from thence on the 17th inst. This is the first rigged vessel that ever arrived at Cincinnati from below. She is but 100 feet keel, 16 feet beam, rigged sloop fashion and burthen 64 tons. She was worked over the falls by eighteen men in half a day."

The New Orleans was the first steamboat to go down the Ohio River. It was a vessel of four hundred tons, and was built at Pittsburg under the direction of Robert Fulton, at a cost of more than fifty thousand dollars. In October of 1811, the boat started for New Orleans and made a successful trip, but in 1814 it ran against a snag at Baton Rouge and was destroyed.

The Enterprise, built in 1814, was the first steamboat to make the return trip, reaching Steubenville in June, 1815.

The first steamship built in Cleveland was completed in 1824.

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## CANALS.

While the first suggestion of a connection of Lake Erie and the Ohio River was made by Washington before the Union of the States, the first

<sup>1</sup> S. P. Hildreth.

action toward the construction of the canals was taken by Hon. Ethan Allen Brown, who from 1816 labored faithfully to this end. Opposition to public improvements and public schools was, however, very strong, and up to 1823-24 nothing definite had been accomplished. But the friends of internal improvements and education made the questions of canals and good schools an issue in the canvass for the twenty-third General Assembly, and the result of the election proved the effectiveness of the work.

On February 4, 1825, an act was passed by the General Assembly providing for the construction of navigable canals in Ohio. Canal Commissioners were appointed to take charge of the construction of the public works, and a Canal Fund Commission was appointed to borrow money and to have control of expenditures. This commission, under authority of law, issued bonds, but failing to dispose of a sufficient amount to eastern capitalists, Mr. S. F. Maccracken was sent to London, England, to negotiate a loan. He succeeded in borrowing several millions of dollars to construct the canals, pledging for security the credit of an undeveloped state.

The State appealed to the General Government for aid in this important work, and in response one million one hundred thousand three hundred and fifty-one acres were given; this land was sold for two million two hundred thousand dollars and the money used in the construction of the canals.

By 1827 that portion of the Ohio Canal between Akron and Cleveland was completed, and the receipts for that year were fifteen hundred dollars. The Miami and Erie division was completed between Cincinnati and Dayton in 1828, and the receipts amounted to eight thousand forty-two dollars and seventy cents.

There were about seven hundred miles of main lines and feeders and six reservoirs constructed, at a cost of fifteen million nine hundred and sixty-seven thousand six hundred and fifty dollars.

The influence of these waterways on the growth of the State and the success of the people can hardly be estimated. Towns and cities sprang up like mushrooms in the vicinity of the canals; and farmers who had heretofore no market were enabled to sell their produce at a good profit. A new impetus was given to immigration and manufactures of all kinds increased with the population. The change wrought in the condition of the people living within reach of the canals was marvelous; they had lain down at night, poverty stricken toilers, in the silence of the forest; they came forth in the morning with the hum of machinery in mill and factory and the noise of the hurrying feet of busy workers in their ears, and found prosperity and comfort awaiting them.

For thirty-five years receipts from the canals exceeded expenditures \$7,073,111 for that period, but since that time expenditures have exceeded receipts and some portions of the system have been abandoned.

## RAILROADS.

The first railroad built in Ohio was the Mad River and Lake Erie. The road was chartered in 1832, when there were but two hundred and twenty-nine miles of railroad in operation in the United States. It opened for traffic from Sandusky to Bellevue (sixteen miles) in 1837 and to Dayton in 1844.

From the following quotation<sup>1</sup> one can get an excellent idea of the difference between railroad construction in 1832 and 1900:

"In order to appreciate the progress that has been made in the railroad business in Ohio one must contrast a track made of wooden rails covered with strap iron, with modern 'T' rails made of steel, weighing 100 pounds to the yard; wooden bridges set on wooden piling, driven into the earth, with steel bridges set on best of stone masonry; double-deck coaches, built like an old-fashioned stage coach, with modern vestibule and Pullman palace cars; a small ten-ton engine, built like a modern thresher engine, with a two hundred and eighty-ton engine with a tank capacity of seven thousand gallons of water and ten tons of coal, with a hauling capacity of two thousand tons up a grade of forty-two feet to the mile at a much higher rate of speed than the first engines were able to make on a level; a wooden freight car, ten-ton capacity, with a car made entirely of steel, with a capacity of fifty tons. And, finally, an engine and a couple of cars, coupled together with link and pin, braking done entirely by hand, lumbering along at a speed of about ten miles per hour, with a service each way once in twenty-four hours, with a train of thirteen cars, each a palace within itself, with every convenience, coupled together with automatic couplers, which admit of the smallest amount of slack, and handled entirely by air brakes, running at a speed of a mile a minute, and so smoothly that the great speed is hardly perceptible to the passengers, with service in either direction, in the most densely populated districts, every half hour."

The following statistics from the annual report of the Railroad and Telegraph Commissioner for the year ending June 30, 1902, will give some idea of the growth of railroads since 1837:

Mileage .....	9,059.80
Cost of roads and equipment .....	\$590,753,033.04
Paid out in salaries .....	\$ 42,334,484.89
Number of employees .....	75,120
Capital stock .....	\$310,705,197.26
Total earnings from all sources .....	\$101,100,341.37
Total number of passengers carried .....	28,499,313
Number of tons of freight carried .....	132,115,976

<sup>1</sup> Ohio Archaeological and Historical Society Publications, Vol. IX, p. 192.

## OHIO'S WAR RECORD.

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1812.

The United States made formal declaration of war against Great Britain June 18, 1812, and in response to President Madison's call for troops Governor Meigs recruited three regiments of volunteers. Tecumseh and his Indian allies joined the British forces. The war began with defeat and disaster to our army. But in 1813 General William Henry Harrison, then commander-in-chief of the western wing of the army, took active measures to retrieve our losses. The raising of the siege of Fort Meigs and the retreat of the allied forces of the English and Indians under Proctor and Tecumseh, was soon followed by Croghan's gallant defense of Fort Stephenson and Perry's victory on Lake Erie, which terminated the war, so far as Ohio was concerned. The victories of General Harrison at the battle of the Thames (Canada) and General Jackson at New Orleans were soon followed by a declaration of peace, and a treaty of peace was signed by American and British commissioners December 24, 1814.

The total number of volunteers furnished by Ohio for this war was 24,703 and she contributed \$312,450 to the expense of the war. This tax was raised by internal revenue duties on the manufacture and sale of distilled spirits, bank stamps, etc.

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1846.

War was declared with Mexico May 13, 1846. Four regiments of volunteers and three independent companies were sent out by Ohio. The total number of men furnished by Ohio was 5,536. This was the largest number contributed by any northern State.

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1861.

On April 15, 1861, President Lincoln issued a proclamation calling for 75,000 troops. Ohio responded at once; within twenty-four hours

twenty companies had offered their services, and within thirty-six hours were on their way to Columbus. They were there organized into the First and Second regiments of Ohio Volunteers and on the 19th they were on their way to Washington. On the 16th of April the Ohio Senate passed an act appropriating one million dollars (\$1,000,000) for war purposes and three days later the House passed it unanimously.

Ohio's quota for troops was 306,322, while the records show the number of enlistments to have been 313,180. Her soldiers took part in every important battle fought during the four years of the war and we may well be proud of the record made by them for patriotism and bravery. Eleven thousand two hundred and thirty-seven were killed or mortally wounded in battle. Thirteen thousand three hundred and fifty-three died from disease before the expiration of their terms of service.

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1898.

On February 14, 1898, the Maine was destroyed in the harbor of Havana and the United States declared war against Spain on the 19th of April following. For this war Ohio furnished 14,255 men.

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#### PENSIONS.

There were on the rolls of the Columbus pension office at the close of the fiscal year for 1903 one hundred and two thousand three hundred and eighteen names, and pensions amounting to fifteen million twenty-six thousand five hundred and sixty-five dollars and sixty-two cents were paid out. But, as many of these pensioners are now living outside of this State, the amount paid to parties living at the present time in Ohio was seven million nine hundred and fifty-eight thousand seven hundred and ninety dollars and fifty-three cents.

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#### SOLDIERS' CLAIMS.

The Ohio Department of Soldiers' Claims was created by an act of the General Assembly, passed April 12, 1900, and Colonel W. L. Curry was appointed commissioner.

Up to May 20, 1903, two thousand claims had been filed against the Government through this department and over twelve hundred adjudicated; thousands of letters are received each year in regard to claims, war data, etc., all of which are given prompt and careful attention.

EDUCATION IN OHIO.

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Before any provision was made for the government of settlers in the Northwest Territory, the Continental Congress passed an ordinance reserving from sale "lot number sixteen of every township for the maintenance of public schools within the said township." Each township was to be six miles square and was to contain thirty-six sections.

The ordinance of 1787 and the constitutions of Ohio (Article 8, Sections 3, 25 and 27, Constitution of 1802, and Article 1, Section 7, Constitution of 1851) recognize the importance of education. It required some years to adjust matters, but finally eleven hundred square miles, a thirty-sixth part of all the land in Ohio, was devoted to the support of public schools.

In addition to the grants of land made for public schools, three townships were reserved for the establishment of schools of a higher grade. One of the agreements made by the Ohio Company in its contract with Congress for the purchase of a million and a half acres of land in the southeastern part of the territory was that two townships should be set apart for the endowment of a university, and the General Assembly of Ohio passed an act in 1804 to establish the Ohio University at Athens, and it was opened for instruction in 1809.

In 1803 Congress gave to the State one township west of the Great Miami River; in 1809 an act was passed by the Legislature to establish Miami University. In 1810 it was located at Oxford, but it was not opened until November, 1824. The Dayton Academy was incorporated in 1807.

Legislative action in regard to education from 1802 to 1821 was confined chiefly to incorporating seminaries and academies and leasing school lands; no tax had as yet been authorized, so the people, by voluntary contributions, supported the schools.

The division of townships into school districts was provided for, under certain conditions, by the school law of 1821. The first association of teachers for mutual improvement was organized in 1822 at Cincinnati.

On February 5, 1825, the General Assembly passed an act authorizing a county tax for the support of common schools, and also provided for the appointment of a Board of Examiners by the Court of Common Pleas.



The first convention held in the interest of public education was held in Columbus, January 13, 1836.

A State School Department was established in 1837, and Hon. Samuel Lewis was the first State Superintendent. The position was not a sinecure. He traveled during the first year over fifteen hundred miles, mostly on horseback, averaging twenty-six miles per day; he visited forty county seats and three hundred schools. His salary for all this work was five hundred dollars. He served in this capacity for three years, when he resigned on account of ill health.

From 1840 to 1853 the Secretary of State performed the duties of State Superintendent of Schools, but in 1853 the office of State Commissioner of Common Schools was restored by an act of the General Assembly.

In 1838 the school tax was made, by legislative enactment, a State instead of a county tax.

In the winter of 1843-44 a good public high school was established in Maumee.

The first teachers' institute in Ohio was held in Sandusky in 1845.

Cincinnati, Cleveland, Dayton and Columbus had, previous to 1847, organized graded schools by special acts of the General Assembly, but under the acts of 1849 and 1853 graded schools were established in all the cities and towns of the State and many of the villages.

Columbus was the first city in the State to create the office of Superintendent of Public Schools and Dr. Asa D. Lord was elected to the office and entered upon his duties in May 1847.

The State Teachers' Association was organized in December, 1847.

The Ohio School Journal, edited by Dr. Lord, was published at Columbus from 1846 to 1852.

Some interesting comparisons may be found in the following table:

	1837	1902
Number of public schools in the State.....	4,336	13,135
Total enrollment of pupils .....	146,440	832,044
Number of teachers employed .....	7,962	26,410
Total amount paid to teachers .....	\$286,757	\$9,267,638.
Total value of school property .....		48,257,961
Total number of high-schools.....		941
Number of centralized township schools.....		45

In addition to the public schools, the School Commissioner's report for 1902 has reports from thirty-seven colleges and universities, fourteen academies, eleven business colleges, ten normal schools, eighteen preparatory schools, sixteen professional schools, four schools for girls, seven

theological seminaries, sixty-five parochial and other private elementary schools, five public schools for deaf children.

This brief outline will give some idea of the growth of education in Ohio during the century.

The General Assembly passed an act on the 22d of March, 1870, to "establish and maintain an Agricultural and Mechanical College in Ohio," and on the 13th of October the Board of Trustees selected a farm of three hundred and twenty acres located in the suburbs of Columbus. In 1878, by legislative enactment, the name was changed to "Ohio State University." The College was opened for instruction in September, 1873. The whole number of students on the catalogue of 1874-75 was sixty-six; the number enrolled for 1902-3 was 1735.

## OHIO LIBRARIES.

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The first library <sup>1</sup> in the northwest Territory of which we have any record was the Putnam Family Library, established at Belpre by Colonel Israel Putnam about 1795. This was, to a certain extent, a circulating library, as all who were willing to share the expense of maintenance were entitled to the privileges of the library.

On March 6, 1802, the second public library was established at Cincinnati.

The "Coonskin Library" was organized in 1804, in Ames township, Athens county, and was incorporated February 19, 1810, as the "Western Library Association." In 1805 The Dayton Library Society was incorporated. A library was established at Granville in 1807 and one at Newtown, Hamilton county, in 1808.

We find a list of over four hundred public libraries which were in operation in Ohio in 1901, circulating libraries, free circulating, school, college, society libraries, etc., which are supported in various ways, some by State appropriation and others by taxation, subscription, fees, endowments, etc., etc. The total number of volumes in all libraries reporting is 2,300,074.

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## THE OHIO STATE LIBRARY.

In 1816 the General Assembly appropriated, as a contingent fund for the Governor, the sum of three thousand five hundred dollars. In the summer of 1817, while on a visit to the Eastern States, Governor Worthington used a portion of this fund for the purchase of five hundred and nine volumes for a State library. He had these books placed in a room over the Auditor's office in the old State House. The action of the Governor was approved by the General Assembly and he was authorized to appoint a librarian. The library at this date (November 15, 1903) contains 90,220 bound volumes and 17,000 documents.

The traveling library system was introduced in 1896 and on November 6th of that year the first traveling library was sent to a woman's club in Mt.

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1 Sketches of Ohio Libraries, C. B. Gallbreath.

Vernon. The system has proved very popular. At this date (December 31, 1903) there are six hundred and ninety-six traveling libraries out, aggregating 20,800 volumes. There are about 25,000 volumes in this department.

There are a few libraries in operation under the county library system; these are also traveling libraries with the county seat as a center of distribution.

The Law Library was a part of the State Library until the Supreme Court and Law Library Rooms, located in the southwest corner of the old State House, were completed, which was about 1860. The library now contains (1901 report) twenty thousand volumes and is one of the best law libraries in the United States. It now occupies fine, commodious quarters in the new Judiciary Building.

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#### OHIO STATE BOARD OF AGRICULTURE LIBRARY.

The Library of the Ohio Department of Agriculture was established in 1846 and the first volume placed on its shelves was "The Proceedings for 1845 of the Russian Imperial Economical Society of St. Petersburg," which was accompanied by a letter from the Secretary of the Society. Hon. Samuel Medary, Secretary of the State Board of Agriculture, made the presentation.

By purchases, gifts and exchanges the library now contains about seven thousand volumes and three thousand pamphlets. It is an agricultural library; is located in the rooms of the Department of Agriculture, State House, and is open to the public for reference during office hours every day in the week.

## OHIO MINES.

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### COAL.

There are about twelve thousand square miles of coal producing strata in Ohio, extending through Trumbull, Geauga, Portage, Summit, Medina, Wayne, Holmes, Coshocton, Licking, Perry, Hocking, Vinton, Jackson and Scioto. Seams of coal and iron ore in the Hocking Valley region were noted by the first white men who visited that portion of the country. Coal was first mined in Summit county in 1810. Mr. Henry Newberry, in 1828, made the first shipment of coal to Cleveland, for the purpose of supplying the lake steamboats.

In 1901 there were thirty coal producing counties; 947 mines in operation (total number 1,006), with a total output of 20,321,290 tons. Of this amount 10,489,814 tons were mined by the use of machinery. Athens headed the list, with a production of 3,066,533 tons. The total number of miners employed during the year was 24,901 and the number of mining machines in use was 429.

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### FIRE CLAY.

There are seventeen counties in the State which produce fire clay. During 1901 the total output was 1,337,181 tons, Stark county furnishing 280,097 tons. The total number of miners engaged in the work was 798.

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### IRON ORE.

There are but four counties producing iron ore, Jackson, Lawrence, Scioto and Vinton. The total output for 1901 was 41,325 tons.

## LIMESTONE.

There are forty-one counties producing limestone and 4,135 persons engaged in the industry. There were 554,523 tons burned for lime; 1,419,087 tons of stone were used for fluxing; dimension stone 318,995 cubic feet; building stone 304,312 cubic yards; for piers and protections 134,874 cubic yards.

## OHIO—MANUFACTORIES.

The first manufactories established north and west of the Ohio River were those demanded by the necessities of the early settlers.

Flouring mills were in operation in the Territory fourteen or fifteen years before Ohio was admitted to the Union. The first successful mills were built in 1789 on Wolf Creek, by Major Haffield White. In the summer of 1791 Captain Devol built a floating mill in the settlement which is described as follows:<sup>1</sup>

“The mill was erected on two boats, one of them being five, the other ten feet wide and forty-five feet long. The smaller one was a pirogue made of the trunk of a large hollow sycamore tree, and the larger of timber and plank like a flat-boat. The boats were placed eight feet apart, and fastened firmly together by heavy cross-beams covered with oak planks, forming a deck fore and aft of the water-wheel. The smaller boat on the outside supported one end of the water-wheel and the larger boat the other, in which was placed the mill stones and running-gear, covered with a light frame building for the protection of machinery and miller. The space between the boats was covered with planks, forming a deck fore and aft of the water-wheel. This wheel was turned by the natural current of the water, and was put in motion and stopped by pulling up or pushing down a set of boards similar to a gate in front of the wheel. It could grind, according to the strength of the current, from twenty-five to fifty bushels of grain in twenty-four hours.\*\*\*With the aid of a bolting cloth in the garrison very good flour was made.”

A little later a grist and saw mill was erected on Duck Creek. Woolen and cotton mills soon followed.

The old Scioto Salt Works were located on the banks of Salt Creek, a tributary of the Scioto. The wells were about thirty feet in depth, but the water was so weak that from ten to fifteen gallons were required to make a pound of salt. These wells were sunk about 1798. The salt was transferred from the kettle in which it was boiled to the backs of pack horses, carried to the settlements, and as late as 1808 it was sold for three or four dollars per bushel.

No doubt such industries as have been noted were established at the various settlements before the admission of Ohio to the Union.

The manufacture of nails by hand was carried on in Steubenville as early as 1803 and machines for this purpose were in use by 1808.

<sup>1</sup> Howe's Historical Collections, vol. 2, p. 800.

In Cincinnati the manufacture of furniture began at an early date; the manufacture of desks, escritaires and veneered tables being advertised in a local newspaper in 1800, and in 1815 mahogany was brought from Central America to be manufactured into tables, chairs and bureaus at Cincinnati, while a shop for the manufacture of cotton and woolen machinery was built there in 1809.<sup>1</sup>

The Baltimore Register for May, 1814, is credited with the following paragraph:

"New Lisbon has a furnace, bloomery and wire mill. Chillicothe has three cotton factories, two nail factories, paper mill, furnace, etc. Cincinnati has a steam mill, cotton and woolen factories and numerous distilleries and breweries."

The following list of the industries in Steubenville in 1817 was given in *The Navigator*, which was published in Pittsburg in 1818.<sup>2</sup>

"One woolen factory worked by steam power, in which are manufactured on an extensive scale cloths of the finest texture and of the most brilliant and lasting colors; one iron foundry in which casting of all kinds is performed; one paper mill, of three vats, in which steam power is used; one brewery in which is manufactured beer, ale and porter of the first quality; one steam flour mill which is kept in continued and profitable operation; one steam cotton factory in which cloths of an excellent quality are made; one nail manufactory; two earthenware factories; one tobacco and cigar factory; one wool carding machine, etc."

Some of these grist mills sent much of their flour to New Orleans.

In 1814 a nine story steam flour mill was erected in Cincinnati and in 1815 large quantities of Indian meal were exported to the West Indies.<sup>3</sup>

A glass factory was built at Cincinnati in 1815, and window glass and hollow ware in 1820.<sup>4</sup>

The first furnace in Ohio was established on Yellow Creek, near Youngstown, in 1804. In 1832 a furnace located in the Hanging Rock district, near the Ohio River, shipped pig iron to New York by way of New Orleans "at a fair profit," and had exported a small amount on order to England. Charcoal was used for fuel until 1846, when a furnace was built in Mahoning county expressly for the purpose of using bituminous coal. The use of coal, by cheapening the cost of production, gave a great impetus to the industry. At a later date coke became the principal fuel.

In 1813 plows were made in Cincinnati, the shares being hammered out upon an anvil. The cast iron plow made its appearance about 1825.

1 U. S. Census Report, 1900, vol. 8, p. 687.

2 Ohio Archaeological and Historical Publications, vol. VI., 239.

3 Daniel Drake, *A Picture of Cincinnati*, 1815, p. 148.

4 U. S. Census Report 1900, vol. 8, p. 688.



Of the three hundred patents issued during this period on cast iron and steel plows over forty were granted to Ohio applicants.

In 1838 the first foundry and machine shop was erected in Springfield by James Leffel, who some years afterwards invented the double turbine water-wheel.

The first steel plows were made in Ohio in 1848 by E. A. Strong, at Gambier. Mr. Strong came to Gambier during the year as a divinity student. It being necessary for him to "work his way" through college, he set up a forge and inserted an advertisement in the Ohio Cultivator, stating that he was prepared to furnish steel plows and would warrant the share and mouldboard of every one to polish in any soil. He secured plenty of orders, and the plows proved entirely satisfactory.

The cast iron double plow made its appearance about 1851. Messrs. Gill & Co., of Columbus, and J. Roberts & Co., of Cincinnati, were among the earliest and most prominent manufacturers of steel plows.

In 1852 William N. Whitely invented the Champion reaper and mower and the great "Champion" industry was established in Springfield.

A woolen mill was put in operation in Steubenville in 1815, and shortly afterwards special looms were built and the first broadcloth manufactured in the United States was made here.

The Dayton Silk Company was incorporated in 1839, with a capital of one hundred thousand dollars. This company proposed to introduce the cultivation of the white mulberry, known as *Morus multicaulis*, a tree that had recently been introduced from China and was said to furnish abundant food for silk worms.

A silk factory was erected in Mount Pleasant in 1841 by John W. Gill and Thomas White, and the first silk velvet and figured silk manufactured in the United States were made here. Mr. Gill, in a letter to the Ohio Cultivator under date of February 25, 1845, gives the following account of their work:

"We have furnished constant employment in the factory alone to fifty persons, besides those employed during the summer in growing cocoons; have purchased cocoons and reeled silk to the amount of over four thousand dollars; the cocoons were procured from Jefferson, Belmont, Guernsey, Crawford, Washington, Franklin, Harrison, Carroll, Muskingum, Hamilton and several other counties in Ohio; from which, with our previous stock, we have manufactured over eight thousand dollars worth of goods and have more than five thousand dollars worth in various stages of progress, from reeled silk to warp in the looms, on which to operate until a new crop is grown.\*\*\*\*I am prepared to furnish all orders for plain and plaid velvets and satins; all varieties and colors of dress and bonnet silks, vestings, cravats, printed pocket-handkerchiefs, shirts, drawers, stockings, half-hose, gloves, pushes, florentines, etc., warranted to give satisfaction and at fair prices."

According to the United States Census Report, there were six silk mills in Ohio in 1880, representing a capital of twenty-four thousand

seven hundred dollars; in 1890 the number was reduced to three, representing a capital of thirty-seven thousand eight hundred and thirty dollars; while in 1900 there are none reported.

In 1840, 1850, 1860 and 1870 Ohio ranked fourth in the value of all manufactures; in 1880 she took the fifth place, which she still holds.

The following table shows the growth of manufactures in Ohio from 1850 to 1900:

MANUFACTURING ESTABLISHMENTS OF ALL CLASSES IN OHIO, 1850, 1900.

(United States Census Report 1900.)

	1850	1900
Number of manufacturing establishments..	10,622	32,398
Capital invested .....	29,019,538	\$605,792,266
Average number of wage earners .....	51,491	345,869
Average number of children under six years of age.....	Not reported	4,369
Total wages paid .....	\$13,467,156	\$153,955,330
Value of products .....	\$62,692,279	\$832,438,113

In 1852 the wage earners engaged in manufactures were 2.6 per cent. of the entire population of the State; in 1900 the rate was 8.3 per cent. of the entire population.

## IRON AND STEEL MANUFACTURES IN OHIO.

(United States Census Report 1900).

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 IRON.

The most important industry in the State is the manufacture of iron and steel.

The first blast furnace in Ohio was located in Mahoning county and began operation in 1808.

In 1900 there were 43 blast furnaces in the State, representing a capital of \$23,296,130, employing 6,039 wage earners and paying \$3,286,644 in wages, with a product valued at \$40,366,637.

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 ROLLING MILLS AND STEEL WORKS.

Ohio reports 64 rolling mills and steel works, with a capital of \$63,181,422, paying \$16,443,825 in wages and products representing an aggregate value of \$98,568,619.

The total value of iron and steel products manufactured in Ohio in 1900 is \$138,935,256.

In 1900 Youngstown was the leading city in this industry.

In this industry Ohio ranks second.

## POTTERY, TERRA COTTA AND FIRE CLAY PRODUCTS FOR 1900.

Number of establishments .....	248
Capital invested .....	\$15,563,969
Average number of wage earners .....	11,870
Wages paid .....	\$5,000,846
Value of products .....	\$11,851,225

The increase in the value of products from 1890 to 1900 was 134.8 per cent. Ohio now ranks first. In 1900 the total value of these products constitutes 26.8 per cent. of the total value for the United States.

## FOUNDRY AND MACHINE SHOP PRODUCTS.

Number of establishments .....	861
Capital invested .....	\$68,766,347
Average number of wage earners .....	41,799
Wages paid .....	\$20,563,268
Value of products .....	\$72,399,632

## LUMBER, PLANING MILL PRODUCTS.

Number of establishments .....	354
Capital invested .....	7,498,314
Average number of wage earners .....	4,696
Wages paid .....	\$2,169,264
Value of products .....	\$11,066,671

## METAL WORKING MACHINERY.

Ohio ranks first in metal working machinery, with an aggregate of products valued at \$10,012,739.

## RAILWAY CARS.

In the construction and repair of steam railway cars Ohio ranks fifth, with a production of \$16,917,554.

## GLASS.

The aggregate value of glass manufactured in Ohio in 1899 was \$4,547,083.

## CARRIAGES AND WAGONS.

In the manufacture of carriages and wagons Ohio ranks first, the product for 1899 amounting to \$18,063,776.

## BOOTS AND SHOES.

The value of the manufactured products of boot and shoe factories for 1899 was \$17,920,854.  
Ohio ranks fourth in this industry.

## LEATHER.

The aggregate value of leather (tanned, curried and finished) products in Ohio for 1899 amounted to \$5,182,065.

## ALCOHOLIC LIQUORS.

Malt liquors, value of product \$18,522,639.  
Distilled liquors, value of product \$12,447,268.

## SALT.

In 1798 the first salt was produced at what is now known as the "Old Scioto Works." There are now ten establishments for its manufacture

in the State and the output for 1899 was 1,460,516 barrels, with a total value of \$818,200.

Ohio ranks third in value of product and fourth in production.

#### MEAT.

In 1899 the value of the slaughtering and meat packing products in Ohio was \$20,660,780.

#### CANNING FACTORIES.

There are 70 establishments for canning fruit and vegetables in Ohio and the value of the product for 1899 was \$1,941,398.

OHIO RANKS IN MANUFACTURES.

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- 1st**—Carriage and wagon materials.  
Carriages and wagons.  
Clay products.  
Metal working machinery.
- 2d**—Agricultural implements.  
Food preparations.  
Iron and steel productions.  
Bicycles and tricycles.
- 3d**—Coffee and spices, roasting and grinding.  
Flouring and grist mill products.  
Foundry and machine shop products.  
Soap and candles.  
Tobacco, cigars and cigarettes.  
Liquors, distilled.  
Tin and terne plate.  
Pumping machinery.
- 4th**—Boots and shoes, factory product.  
Cars and general shop construction and repairs by steam railway companies.  
Clothing, women's, factory product.  
Glass.  
Petroleum, refining.  
Rubber and elastic goods.  
Manufacture of salt.
- 5th**—Clothing, men's, factory product.  
Electrical apparatus and supplies.  
Lumber, planing mill products, including sash, doors and blinds.  
Printing and publishing, book and job, newspapers and periodicals.  
Liquors, malt.

The steady advance in the development of manufacturing in Ohio is not only due to the energy and industry of her sons, but also to her geographical location, which furnishes unequaled commercial advantages. Lake Erie on the north, the Ohio River on the east and south, a number of navigable rivers, answered the limited requirements of the early settlers, and when, with the rapid increase of population, improved transportation facilities were required, canals and railways were constructed, and today Ohio sends her manufactures to every quarter of the globe.



STREET RAILWAYS IN OHIO.

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The earliest charters granted for the construction of street railways in Ohio of which we have been able to find any record were issued in 1859. There were a number of companies incorporated during that year, but the Cincinnati Street Railway Company seems to have been the first to operate a line, using horse cars.

Cleveland constructed the first commercially successful electric street car line in the State, putting it in operation July 27, 1884.

From the State Auditor's report for 1902 we find that there were in Ohio during that year seventy-four lines of electric railway, the gross earnings of which were \$15,186,895.

### TELEGRAPH LINES IN OHIO.

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From "The Telegraph in America," by James D. Reid, we find that the first telegraph line erected in Ohio was operated by the Pittsburg, Cincinnati & Louisville Telegraph Company. It extended from Pittsburg along the north shore of the Ohio River to Steubenville and Wheeling, thence by the National Road to Cincinnati via Zanesville, Columbus and Dayton. The line was completed to Cincinnati August 20, 1847, and by September 10th all the Ohio offices were open for business. The capital stock of this company was \$138,400.

The annual report of the Railroad and Telegraph Commissioner for 1902 gives statistics as follows:

Miles of wire in Ohio.....	70,171.71
Number of employes in Ohio.....	2,844
Gross earnings .....	\$329,552

TELEPHONES AND TELEPHONE LINES IN OHIO.<sup>1</sup>

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The first telephones used in Ohio were made by the Ohio Tube Company, under the direction of Prof. T. C. Mendenhall, who, during his residence in Columbus, always aimed to bring before the public in a popular way every scientific discovery. Six of these instruments were manufactured and put in use on a private line, connecting the residences of Prof. Mendenhall and Mr. George H. Twiss, the Central High School and the Ohio State University. This was immediately after the announcement of the invention in one of the leading scientific papers of the country, which also gave a description of the construction of the apparatus. After the organization of the Bell Telephone Company instruments of their own construction were brought to the city (the use of all others was prohibited) and Mr. Sackett was given the agency for the rental of the telephones. His work was limited to the construction of a line connecting the office of the Ohio Furniture Company with its factory. The first telephone put in use looking to central office service was by Mr. George H. Twiss, from an office on the corner of High and Long streets. Mr. Twiss had a line constructed from his office to the County Fair Grounds (now Franklin Park) for the purpose of placing the telephones on exhibition at the Ohio State Fair of 1878. Tents were constructed, the instruments placed in position and an admission fee of ten cents was charged. The success of this enterprise was greatly aided by the courtesy of the Western Union Telegraph Company, which furnished two transmitters, the first used in Ohio. The exhibition attracted many people, credulous and incredulous, who had never seen or heard the telephone in operation. Newspaper reporters were sent to each end of the line to note and report results. Music, conversations in Greek, Latin, French, German and English were transmitted over the line. During the exhibition Colonel Orlando Smith, then superintendent of the Midland Railway Company, visited the tent and communicated with the operator at the office in the city. He quickly saw the commercial value of this instrument, which most people simply regarded as a curiosity. He said to Mr. Twiss, "Could you extend this line to my office and my residence in such a way as would enable me to communicate with my family from my office as I am now communicating with your operator in town?" Mr.

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<sup>1</sup> We are indebted to Mr. Geo. H. Twiss for the information contained in this article.—Editor.

Twiss replied, "Certainly I can; that is the very object I had in view in constructing this line, to demonstrate the value of the telephone for such purposes." He ordered the instrument placed as soon as possible and the work was promptly done. This was in the fall of 1878. Shortly afterwards a second line was constructed, connecting the American House, Neil House, American Express Company, Ward's ticket brokerage office and the railway station with the central office.

Today telephone lines cover the State like a network.

## OHIO POSTOFFICES.

In 1803 there were one thousand two hundred and fifty-eight post-offices in the seventeen States of the Union. The number established in Ohio, the infant State, must have been very small and many of the pioneers had to travel long distances in order to secure communication with the outside world. The following from an excellent authority<sup>1</sup> illustrates this point:

"For seven or eight years after the first settlement of Franklinton, there was no post-office nearer than Chillicothe, and when other opportunities did not offer, the people of the village would occasionally raise by contribution the means, and employ a man to go to the post-office (45 miles) to carry letters to be mailed for their distant friends, and to bring back such letters or papers as might be in the office for any of the Franklintonians.\*\*\*In the summer of 1805 the first mail contract was taken by Adam Hosac—he being Contractor and Postmaster. A weekly mail left Franklinton each Friday, made Chillicothe next day and returned home on Sunday."

But post routes were soon established in various portions of the State and remote points brought nearer to civilization. In a few years the mail coach took the place of the post boy; then came the transportation of the mails by railroad and the establishment of a system of mail cars.

At the close of the fiscal year, June 30, 1903, there were two thousand nine hundred and twenty postoffices in Ohio.

The first rural free delivery service was established in Ohio October 15, 1896, from Somerville and Collinsville.

Seventy cities have free delivery and there are one thousand five hundred and eighty-one rural routes in operation, while there are thirty-three rural routes authorized, but not yet in operation.

During the year the sales of postage stamps, stamped envelopes and postal cards amounted to one million seven hundred and ninety-five thousand one hundred and ninety-four dollars and seventy-eight cents; while the gross revenue of Ohio postoffices amounted to one million nine hundred and thirteen thousand seven hundred dollars and thirty-three cents.

<sup>1</sup> Martin's History of Franklin County, p. 14.

LIST OF OHIO CITIES CONTAINING A POPULATION OF  
MORE THAN 10,000.

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Cleveland	381,768
Cincinnati	325,902
Toledo	131,822
Columbus	125,560
Dayton	85,333
Youngstown	44,885
Akron	42,728
Springfield	38,253
Canton	30,667
Hamilton	23,914
Zanesville	23,538
Lima	21,723
Sandusky	19,664
Newark	18,157
Portsmouth	17,870
Mansfield	17,640
Findlay	17,613
East Liverpool	16,485
Lorain	16,028
Steubenville	14,349
Marietta	13,348
Chillicothe	12,976
Ashtabula	12,949
Piqua	12,172
Massillon	11,944
Ironton	11,868
Marion	11,862
Tiffin	10,989

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NUMBER OF PATENTS ISSUED FROM 1800 TO 1900.

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The total number of patents issued to citizens of Ohio from 1800 to 1900 was 48,102, and the following table will show the ratio of increase:

1800 to 1829	145
1830 to 1839	281
1840 to 1849	433
1850 to 1859	1,596
1860 to 1869	5,942
1870 to 1879	9,973
1880 to 1889	14,484
1890 to 1899	15,248

In 1900 Ohio ranked 5th in the number of patents secured from the Government.

## LIST OF OHIO BIRDS.

- 
- |                           |                               |
|---------------------------|-------------------------------|
| Holboell's Grebe.         | American White-fronted Goose. |
| Horned Grebe.             | Canada Goose.                 |
| Pied-billed Grebe.        | Whistling Swan.               |
| Loon.                     | Trumpeter Swan.               |
| Black-throated Loon.      | Wood Ibis.                    |
| Red-throated Loon.        | American Bittern.             |
| Brunnich's Murre.         | Great Blue Heron.             |
| Pomarine Jaeger.          | Least Bittern.                |
| Parasitic Jaeger.         | American Egret.               |
| Iceland Gull.             | Snowy Heron.                  |
| Great Black-backed Gull.  | Little Blue Heron.            |
| Herring Gull.             | Green Heron.                  |
| Ring-billed Gull.         | Black-crowned Night Heron.    |
| Bonaparte's Gull.         | Whooping Crane.               |
| Sabine's Gull.            | Sandhill Crane.               |
| Caspian Tern.             | King Rail.                    |
| Forster's Tern.           | Virginia Rail.                |
| Common Tern.              | Sora.                         |
| Roseate Tern.             | Yellow Rail.                  |
| Least Tern.               | Black Rail.                   |
| Black Tern.               | Purple Gallinule.             |
| Double-crested Cormorant. | Florida Gallinule.            |
| Florida Cormorant         | American Coot. . .            |
| American White Pelican.   | Northern Phalarope.           |
| American Merganser.       | Wilson's Phalarope.           |
| Red-breasted Merganser.   | American Avocet.              |
| Hooded Merganser.         | Black-necked Stilt.           |
| Mallard.                  | American Woodcock.            |
| Black Duck.               | Wilson's Snipe.               |
| Red-legged Black Duck.    | Dowitcher.                    |
| Baldpate.                 | Stilt Sandpiper.              |
| Green-winged Teal.        | Knot.                         |
| Blue-winged Teal.         | Pectoral Sandpiper.           |
| Shoveller.                | White-rumped Sandpiper.       |
| Pintail.                  | Baird's Sandpiper.            |
| Wood Duck.                | Least Sandpiper.              |
| Redhead.                  | Red-backed Sandpiper.         |
| Canvas-back.              | Semi-palmated Sandpiper.      |
| American Scaup Duck.      | Sanderling.                   |
| Lesser Scaup Duck.        | Marbled Godwit.               |
| Ring-necked Duck.         | Hudsonian Godwit.             |
| American Golden-eye.      | Greater Yellow-legs.          |
| Barrow's Golden-eye.      | Yellow-legs.                  |
| Buffle-head.              | Solitary Sandpiper.           |
| Old-squaw.                | Willet.                       |
| American Eider.           | Bartramian Sandpiper.         |
| King Eider.               | Buff-breasted Sandpiper.      |
| American Scoter.          | Spotted Sandpiper.            |
| White-winged Scoter.      | Long-billed Curlew.           |
| Ruddy Duck. . . .         | Hudsonian Curlew.             |
| Lesser Snow Goose.        | Eskimo Curlew.                |
| Greater Snow Goose.       | Black-bellied Plover.         |
| Blue Goose.               | American Golden Plover.       |

Killdeer.  
 Semi-palmated Plover.  
 Piping Plover.  
 Turnstone.  
 Bob-white.  
 Ruffed Grouse.  
 Prairie Hen. (Extinct.)  
 Wild Turkey. (Almost Extinct.)  
 Passenger Pigeon. (Almost extinct.)  
 Mourning Dove.  
 Turkey Vulture.  
 Black Vulture.  
 Swallow-tailed Kite.  
 Marsh Hawk.  
 Sharp-shinned Hawk.  
 Cooper's Hawk.  
 American Goshawk.  
 Red-tailed Hawk.  
 Red-shouldered Hawk.  
 Broad-winged Hawk.  
 American Rough-legged Hawk.  
 Golden Eagle.  
 Bald Eagle.  
 Duck Hawk.  
 Pigeon Hawk.  
 American Sparrow Hawk.  
 American Osprey.  
 American Barn Owl.  
 American Long-eared Owl.  
 Short-eared Owl.  
 Barred Owl.  
 Great Gray Owl.  
 Saw-whet Owl.  
 Screech Owl.  
 Great Horned Owl.  
 Snowy Owl.  
 American Hawk Owl.  
 Carolina Paroquet. (Extinct.)  
 Yellow-billed Cuckoo.  
 Black-billed Cuckoo.  
 Belted Kingfisher.  
 Hairy Woodpecker.  
 Downy Woodpecker.  
 Arctic Three-toed Woodpecker.  
 Yellow-bellied Sapsucker.  
 Northern Pileated Woodpecker.  
 Red-headed Woodpecker.  
 Red-bellied Woodpecker.  
 Northern Flicker.  
 Whip-poor-will.  
 Chimney Swift.  
 Nighthawk.  
 Ruby-throated Hummingbird.  
 Kingbird.  
 Crested Flycatcher.  
 Phoebe.  
 Olive-sided Flycatcher.  
 Wood Pewee.  
 Yellow-bellied Flycatcher.  
 Green-crested Flycatcher.  
 Traill's Flycatcher.  
 Least Flycatcher.  
 Horned Lark.  
 Hoyt's **Horned Lark**.  
 Prairie Horned Lark.  
 Blue Jay.  
 Northern Raven.  
 American Crow.  
 Bobolink.  
 Cowbird.  
 Yellow-headed Blackbird.  
 Red-winged Blackbird.  
 Meadowlark.  
 Orchard-billed Redwing.  
 Orchard Oriole.  
 Baltimore Oriole.  
 Rusty Blackbird.  
 Bronzed Grackle.  
 Evening Grosbeak.  
 Pine Grosbeak.  
 Purple Finch.  
 American Crossbill.  
 White-winged Crossbill.  
 Redpoll.  
 American Goldfinch.  
 Pine Siskin.  
 Snowflake.  
 Lapland Longspur.  
 Vesper Sparrow.  
 Savanna Sparrow.  
 Grasshopper Sparrow.  
 Henslow's Sparrow.  
 Nelson's Sparrow.  
 Lark Sparrow.  
 Harris's Sparrow.  
 White-crowned Sparrow.  
 White-throated Sparrow.  
 Tree Sparrow.  
 Chipping Sparrow.  
 Field Sparrow.  
 Slate-colored Junco.  
 Bachman's Sparrow.  
 Song Sparrow.  
 Lincoln's Sparrow.  
 Swamp Sparrow.  
 Fox Sparrow.  
 Towhee.  
 Cardinal.  
 Rose-breasted Grosbeak.  
 Indigo Bunting.  
 Dickcissel.  
 Scarlet Tanager.  
 Summer Tanager.  
 Purple Martin.  
 Cliff Swallow.  
 Barn Swallow.  
 Tree Swallow.  
 Bank Swallow.  
 Rough-winged Swallow.  
 Bohemian Waxwing.  
 Cedar Waxwing.  
 Northern Shrike.  
 Migrant Shrike.  
 Red-eyed Vireo.  
 Philadelphia Vireo.  
 Warbling Vireo.  
 Yellow-throated Vireo.  
 Blue-headed Vireo.  
 White-eyed Vireo.  
 Black and White Warbler.  
 Prothonotary Warbler.  
 Worm-eating Warbler.



Blue-winged Warbler.  
 Golden-winged Warbler.  
 Nashville Warbler.  
 Orange-crowned Warbler.  
 Tennessee Warbler.  
 Northern Parula Warbler.  
 Cape May Warbler.  
 Yellow Warbler.  
 Black-throated Blue Warbler.  
 Myrtle Warbler.  
 Magnolia Warbler.  
 Cerulean Warbler.  
 Chestnut-sided Warbler.  
 Bay-breasted Warbler.  
 Black-poll Warbler.  
 Blackburnian Warbler.  
 Sycamore Warbler.  
 Black-throated Green Warbler.  
 Kirtland's Warbler.  
 Pine Warbler.  
 Palm Warbler.  
 Yellow Palm Warbler.  
 Prairie Warbler.  
 Oven-bird.  
 Water-Thrush.  
 Louisiana Water-Thrush.  
 Kentucky Warbler.  
 Connecticut Warbler.  
 Mourning Warbler.  
 Northern Yellow-throat.  
 Yellow-breasted Chat.

Hooded Warbler.  
 Wilson's Warbler.  
 Canadian Warbler.  
 American Redstart.  
 American Pipit.  
 Mockingbird.  
 Catbird.  
 Brown Thrasher.  
 Carolina Wren.  
 Bewick's Wren.  
 House Wren.  
 Winter Wren.  
 Short-billed Marsh Wren.  
 Long-billed Marsh Wren.  
 Brown Creeper.  
 White-breasted Nuthatch.  
 Red-breasted Nuthatch.  
 Tufted Titmouse.  
 Chickadee.  
 Carolina Chickadee.  
 Golden-crowned Kinglet.  
 Ruby-crowned Kinglet.  
 Blue-gray Gnatcatcher.  
 Wood Thrush.  
 Wilson's Thrush.  
 Gray-cheeked Thrush.  
 Olive-backed Thrush.  
 Hermit Thrush.  
 American Robin.  
 Bluebird.

## INTRODUCED SPECIES.

English Sparrow.

Ring-necked Pheasant.

LIST OF OHIO ANIMALS, SOME OF WHICH ARE NOW  
EXTINCT.

Common Opossum.  
 Gray Rabbit; Cotton Tail.  
 White Rabbit; Northern Hare.  
 Canada Porcupine.  
 Jumping Mouse.  
 Muskrat.  
 Pine Mouse.  
 Meadow Mouse.  
 Rice-field Mouse.  
 Common White-footed Mouse.  
 Wood Rat.  
 Beaver.  
 Ground Hog; Woodchuck.  
 Gray Gopher.  
 Striped Gopher.  
 Ground Squirrel; Chipmunk.  
 Red Squirrel.  
 Gray Squirrel; Black Squirrel.  
 Fox Squirrel.  
 Common Flying Squirrel.  
 Common Shrew; Shrew Mouse.  
 Least Shrew.  
 Mole Shrew; Short-tailed Shrew.  
 Common Mole.  
 Hairy-tailed Mole.  
 Star-nosed Mole.  
 Carolina Brown Bat.

Little Brown Bat.  
 Silver Black Bat.  
 Long-eared Bat.  
 Twilight Bat.  
 Red Bat.  
 Hoary Bat.  
 Red Deer.  
 Wapiti; American Elk.  
 Buffalo.  
 Common Raccoon.  
 Black Bear.  
 American Otter.  
 Common Skunk.  
 American Badger.  
 Wolverine.  
 Sable; Pine Marten.  
 Pekan; Black Cat.  
 Mink.  
 Weasel; Ermine.  
 Least Weasel.  
 Red Fox.  
 Gray Fox.  
 Prairie Wolf.  
 Wolf.  
 Canada Lynx.  
 American Wild Cat.  
 American Panther.

## LIST OF OHIO FISHES.

- Silvery Lamprey.  
 Brook Lamprey; Small Black Lamprey.  
 Shovel Nosed Sturgeon; White Sturgeon.  
 Lake Sturgeon; Rock Sturgeon.  
 Common Gar Pike; Bill-fish.  
 Short-nosed Gar Pike.  
 Mud Fish; Dog Fish; Grindle Fish.  
 Chuckle-headed Cat.  
 Channel Cat; White Cat; Blue Cat.  
 Great Cat-fish of the Lakes.  
 Mud Cat; Flat-head Cat.  
 Yellow Stone Cat; Common Stone Cat.  
 Slender Stone Cat.  
 Variegated Stone Cat.  
 Chubby Stone Cat; Tadpole Cat.  
 Red Mouthed Buffalo Fish; Common Buffalo.  
 Razor Backed Buffalo; Mongrel Buffalo.  
 Sucker-mouthed Buffalo; Small-mouthed Buffalo.  
 Big Carp Sucker.  
 Long-finned Carp Sucker.  
 Lake Carp.  
 Quillback; Spearfish.  
 Northern Sucker.  
 Common Sucker; Fine-scaled Sucker.  
 Hog Sucker; Stone Roller.  
 Chub Sucker; Sweet Sucker.  
 Striped Sucker.  
 Red Horse; White Sucker; "Mullet."  
 Golden Red Horse; Lake Mullet.  
 Big-jawed Sucker.  
 Hare-lip Sucker; Cut-lips.  
 Stone Lugger; Steel-backed Minnow.  
 Red-bellied Minnow.  
 Silvery Minnow.  
 Fat-head; Black-head Minnow.  
 Blunt-nosed Minnow.  
 Nigger Chub; Stone-toter.  
 Silver-fin.  
 Red-fin.  
 Rough-headed Shiner.  
 Long-nosed Dace.  
 Black-nosed Dace.  
 Spotted Shiner.  
 Big-eyed Chub.  
 Horney-head; River Chub.  
 Horned Dace; Creek Chub.  
 Red-sided Shiner.  
 Golden Shiner; Bream.  
 Moon-eye; Toothed Herring.  
 Gizzard Shad; Mud Shad.  
 Round-fish; Pilot-fish.  
 Common White Fish.  
 Lake Herring.  
 Mongrel White Fish.  
 Great Lake Trout.  
 Brook Trout; Speckled Trout.  
 Trout Perch.  
 Killifish.  
 Top-minnow; Top-swimmer.  
 Striped Top-minnow.  
 Mud-minnow; Dog-fish.  
 Little Pickerel.  
 Pike; Lake Pickerel.  
 Muskallunge; Great Pike.  
 Eel.  
 Erock Stickleback.  
 River Silverside; Brook Silverside.  
 Calico Bass; Crappie.  
 Rock Bass; Goggle-eye.  
 War-mouth; Red-eyed Bream.  
 Green Sun-fish.  
 Chain-sided Sun-fish.  
 Blue Sun-fish; Copper-nosed Bream; Dollardee.  
 Long-eared Sun-fish.  
 Common Sun-fish; Pumpkin-seed; Sunny.  
 Small-mouthed Black Bass.  
 Large-mouthed Black Bass.  
 Sand Darter.  
 "Johnny" Darter.  
 Green-sided Darter.  
 Log Perch; Hog-fish.  
 Black-sided Darter.  
 Blue-breasted Darter.  
 Rainbow Darter; Soldier-fish.  
 Red-sided Darter.  
 Least Darter.  
 Yellow Perch; Ringed Perch.  
 Pike Perch; Wall-eye; Jack Salmon.  
 Sauger; Sand Pike; Horn-fish; Gray Pike.  
 Striped Bass; Rock-fish.  
 White Bass.  
 Fresh-water Drum; Sheeps-head.  
 Miller's Thumb; Blob.

## UNITED STATES DEPARTMENT OF AGRICULTURE.

President Washington, in his last message to Congress, December 7, 1796, suggested the desirability of establishing "boards composed of public characters charged with collecting and diffusing information and enabling them by premiums and small pecuniary aid to encourage and assist a spirit of discovery and improvement." The suggestion was considered favorably by the House of Representatives, and the subject was referred to a committee, which recommended the creation of such a society. A bill to that effect was introduced, read twice, but was never brought to a vote.

On February 21, 1817, a bill for the establishment of a Board of Agriculture was presented to the House; it was referred to the committee of the whole, but got no further.

Hon. Henry L. Ellsworth, United States Commissioner of Patents, during 1836, received many plants and seeds of various kinds from Government representatives and friends abroad, and, without aid from the Government, distributed them to farmers throughout the country. In his next annual report he called attention to the importance of the agricultural interests of the country and urged the necessity of government aid. Mr. Ellsworth's active interest in the work led to the making of an appropriation of one thousand dollars by Congress in 1839, for collecting and distributing seeds, prosecuting agricultural investigations and securing agricultural statistics. The Commissioner of Patents was to do the work without additional compensation and the money was to be taken from the Patent Office fund. For many years the work of distributing seeds, collecting and publishing agricultural information, etc., was done under the direction of the Commissioner of Patents. In 1849 the Department of the Interior was established, and the Patent Office, with its agricultural work, became a part of it. The establishment of a separate department for agriculture was urged from time to time, but no definite action was taken until May 15, 1862, when a law creating a Department of Agriculture was passed by Congress; but the new department occupied its old quarters in the Patent Office until its permanent home was ready for occupancy. The main building was completed and occupied during Commissioner Capron's term (1867-1871). On February 9, 1889, Congress passed an act making the Department of Agriculture an executive department of the Government, and the title of the head of the department was changed from Commissioner of Agriculture to Secretary of Agriculture.

BUREAUS AND DIVISIONS OF THE UNITED STATES  
DEPARTMENT OF AGRICULTURE.

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(Year Book of the U. S. Department of Agriculture.)

Bureau of Animal Industry. In 1878 a special appropriation of ten thousand dollars was made by Congress for investigating the diseases of animals, and during Commissioner Loring's administration a veterinary experiment station was established at Washington under Dr. D. E. Salmon. On May 29, 1884, Congress passed an act establishing the Bureau of Animal Industry.

Division of Chemistry, established in 1862; made a bureau later.

Division of Entomology, established in 1863.

Division of Statistics, established in 1863; made a bureau later.

Division of Botany, established in 1869; now included in the Bureau of Plant Industry.

Division of Vegetable Physiology and Pathology, established in 1886; now included in the Bureau of Plant Industry.

Division of Pomology, established in 1886; now included in the Bureau of Plant Industry.

Division of Gardens and Grounds, established in 1862; now included in the Bureau of Plant Industry.

Division of Forestry, organized by order of the Commissioner in 1881 and established by act of Congress in 1886.

Office of Experiment Stations was established in 1888.

Division of Soils (formerly Division of Agricultural Soils in the Weather Bureau) was established as an independent division of the department in 1894 and later made a bureau.

Section of Foreign Markets established in 1894 and made a division of the department later.

Division of Biological Survey established in 1886.

Office of Public Road Inquiries, established in 1893.

Division of Publications, established in 1889 as a section of the Division of Statistics; in 1890 it was organized as the Division of Records and Editing and in 1895 it was made the Division of Publications.

The Weather Bureau was established as a part of the department service in 1891, the work being transferred from the War Department.

ORGANIZATION OF THE U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

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(Year Book of the U. S. Department of Agriculture.)

Secretary of Agriculture, Hon. James Wilson.  
Assistant Secretary of Agriculture, Hon. Joseph Brigham.

Bureaus and Divisions.

Weather Bureau, Willis L. Moore, Chief.  
Bureau of Animal Industry, D. E. Salmon, Chief.  
Dairy Division, Henry E. Alvord, Chief.  
Bureau of Chemistry, Harvey W. Wiley, Chemist.  
Bureau of Plant Industry, Beverly T. Galloway, Chief.  
Office of Experiment Stations, A. C. True, Director.  
Bureau of Forestry, Gifford Pinchot, Forester.  
Bureau of Soils, Milton Whitney, Chief.  
Division of Statistics, John Hyde, Statistician.  
Section of Foreign Markets, Frank H. Hitchcock, Chief.  
Division of Entomology, L. O. Howard, Entomologist.  
Division of Biological Survey, C. Hart Merriam, Biologist.  
Office of Public Road Inquiries, Martin Dodge, Director.  
Division of Publications, Geo. Wm. Hill, Chief.

AGRICULTURAL EXPERIMENT STATIONS OF THE  
UNITED STATES, WITH LOCATIONS AND  
NAMES OF DIRECTORS.

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(Year Book of the U. S. Department of Agriculture.)

Alabama (College), Auburn, P. H. Mell.  
 Alabama (Canebrake), Uniontown, J. M. Richeson.  
 Alabama (Tuskegee), Tuskegee, G. W. Carver.  
 Arizona, Tucson, R. H. Forbes.  
 Arkansas, Fayetteville, R. L. Bennett.  
 California, Berkeley, E. W. Hilgard.  
 Colorado, Fort Collins, L. G. Carpenter.  
 Connecticut (State), New Haven, E. H. Jenkins.  
 Connecticut (Storrs), Storrs, W. O. Atwater.  
 Delaware, Newark, A. T. Neale.  
 Florida, Lake City, T. H. Taliaferro.  
 Georgia, Experiment, R. J. Redding.  
 Idaho, Moscow, J. A. McLean.  
 Illinois, Urbana, E. Davenport.  
 Indiana, Lafayette, Arthur Goss.  
 Iowa, Ames, C. F. Curtiss.  
 Kansas, Manhattan, J. T. Willard.  
 Kentucky, Lexington, M. A. Scoville.  
 Louisiana (Sugar), New Orleans, William C. Stubbs.  
 Louisiana (State), Baton Rouge, William C. Stubbs.  
 Louisiana (North), Calhoun, William C. Stubbs.  
 Maine, Orono, C. D. Woods.  
 Maryland, College Park, H. J. Patterson.  
 Massachusetts, Amherst, H. H. Goodell.  
 Michigan, Agricultural College, C. D. Smith.  
 Minnesota, St. Anthony Park, St. Paul, W. M. Liggett.  
 Mississippi, Agricultural College, W. L. Hutchinson.  
 Missouri (State), Columbia, H. J. Waters.  
 Missouri (Fruit), Mountain Grove, J. T. Stinson.  
 Montana, Bozeman, S. Fortier.  
 Nebraska, Lincoln, E. A. Burnett.  
 Nevada, Reno, J. E. Stubbs.  
 New Hampshire, Durham, W. D. Gibbs.  
 New Jersey (State), New Brunswick, E. B. Voorhees.  
 New Jersey (College), New Brunswick, E. B. Voorhees.  
 New Mexico, Messilla Park, Luther Foster.  
 New York (State), Geneva, W. H. Jordan.  
 New York (Cornell), Ithaca, I. P. Roberts.  
 North Carolina, Raleigh, B. W. Kilgore.  
 North Dakota, Agricultural College, J. H. Worst.  
 Ohio, Wooster, C. E. Thorne.  
 Oklahoma, Stillwater, John Fields.  
 Oregon, Corvallis, J. Withycombe.  
 Pennsylvania, State College, H. P. Armsby.  
 Rhode Island, Kingston, H. J. Wheeler.  
 South Carolina, Clemson College, H. S. Hartzog.  
 South Dakota, Brookings, J. W. Heston.  
 Tennessee, Knoxville, A. M. Soule.  
 Texas, College Station, L. H. Connell.  
 Utah, Logan, J. A. Widtsoe.  
 Vermont, Burlington, J. L. Hills.  
 Virginia, Blacksburg, J. M. McBryde.  
 Washington, Pullman, E. A. Bryan.  
 West Virginia, Morgantown, J. H. Stewart.  
 Wisconsin, Madison, W. A. Henry.  
 Wyoming, Laramie, E. E. Smiley.

AGRICULTURAL IMPLEMENTS.

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(U. S. Census Report for 1900.)

Until 1850 the manufacture of agricultural implements was generally conducted in small shops and was little more than a "hand trade." The capital then employed, as reported by the establishments in operation, was \$3,564,202, while in 1900 the factories in operation reported a capital of \$157,707,951.

There had been issued up to December 31, 1901, 42,174 patents on agricultural implements or parts thereof.

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## PLOWS.

The plows used by the colonists in America were made entirely of wood and it was only in the last century that they were even tipped with iron. Those early farmers did not welcome improvements; they "contended that cast iron plows poisoned the ground, produced weeds and spoiled the crops." The first cast iron plow seen in this country was imported from Holland after the War of the Revolution.

Previous to 1797 Thomas Jefferson invented a new form of moldboard, fixing its curvature to avoid friction, and later his son-in-law, Colonel Randolph, invented a hillside plow.

A patent was granted in 1797 to Charles Newbold, of Burlington county, New Jersey, for the first cast iron plow constructed in America.

In 1819 Jethrow Wood was granted a patent covering the adjustable cast iron point. The invention of the chilled plow, the use of steel in point and moldboard, the sulky plow and the introduction of steam and electricity for motive power, have marked eras in the evolution of the plow. Activity in the invention of steam plows began in 1861 and by the close of 1901 there had been 223 patents issued in that class. In 1888 the first patent was granted for an electric plow, and up to this time ten patents have been issued in this class.

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## HARROWS.

There are three general classes of harrows, spike tooth, spring tooth and disk. The spring-tooth harrow was patented by David L. Garver,

of Michigan, in 1869. The disk harrow was patented in 1877, but was wonderfully improved in 1892.

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### CULTIVATORS.

The first patent granted for a cultivator was to Borden, in 1830. Many improvements have been made since then. Riding and walking cultivators, with and without wheels, are now in use.

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### SEEDERS AND PLANTERS.

The first patent issued in the United States for a seeding machine was granted to E. Spooner, of Vermont, in 1799. The wheelbarrow planter was patented in 1825 and the slide broadcast seeder, a riding implement, in 1835. In the more recent improvements the disk feature has been applied to the drill and the broadcast seeder attachment to the disk harrow.

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### HARVESTING IMPLEMENTS.

The first patent granted in America for the invention of an implement of any kind was issued to Joseph Jenks by the General Court of Massachusetts Bay in 1646, for "an engine for the more speedy cutting of grass," the invention "substituting for the short and clumsy English scythe a long slender blade supported by a rib along its back, a construction easily recognized as that of the modern scythe. The invention seems also to have extended to scythe-making." Mr. Jenks applied to the General Court for the patent in order, as he naively says, that his "study and cost may not be in vayne or lost."

The first patent issued by the United States on a machine for cutting grain and grass was granted May 17, 1803, to Richard French and J. T. Hawkins, of New Jersey.

A patent covering a machine for mowing by horse power was granted in 1812. The invention of Obed Hussey, patented in 1833, has been the model from which most of the later improvements have been designed.

John Hooday, of Gloucester county, Virginia, invented a machine which he claimed would get the "wheat out of the ear clean and neat and with more expedition than could be done by thrashing, or treading with cattle, and that without loss of the chaff or detriment to the straw," and he submitted to the Virginia Assembly in 1774 a request for a reward. A



resolution was passed by the assembly allowing him one hundred pounds for his invention.

The first practicable threshing or separating machine was invented by Hiram A. and John A. Pitts, of Winthrop, Maine, and from this machine has developed the labor-saving thresher and separator now in general use.

Since the establishment of the United States Patent Office, the following patents have been issued in the various classes of agricultural implements:

Plows .....	11,625
Harrows and Diggers .....	5,774
Seeders and Planters .....	8,566
Harvesters .....	11,258
Threshing .....	4,951
Total .....	42,174

Total Value of Agricultural Implements manufactured in 1899, \$101,207,428.  
Total Value of exports of agricultural machinery for 1899, \$16,009,149.

American agricultural implements are exported to the following countries:

EUROPE—Austria-Hungary, Azores and Madeira Islands, Belgium, Denmark, France, Germany, Gibraltar, Greece, Italy, Netherlands, Portugal, Roumania, Russia, Spain, Sweden and Norway, Switzerland, Turkey in Europe, United Kingdom.

NORTH AMERICA—Bermuda, British Honduras, Canada.

CENTRAL AMERICAN STATES—Costa Rica, Guatemala, Honduras, Nicaragua, Salvador, Mexico.

WEST INDIES—British and Danish, Dutch, French, Cuba, Haiti, Porto Rico, Santo Domingo.

SOUTH AMERICA—Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, British Guiana, Paraguay, Peru, Uruguay, Venezuela.

ASIA—Aden, Chinese Empire, British East Indies, Hongkong, Japan, Turkey in Asia.

OCEANICA—British Australasia, Guam, Hawaii, Philippine Islands.

AFRICA—British Africa, Canary Islands, Egypt, French Africa, Portuguese Africa

UNITED STATES POSTOFFICE DEPARTMENT.

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Upon the formation of the United States Government, the office of Postmaster-General was continued by temporary enactments until May 8, 1794, when the department was established by an act of Congress, and in 1829, under President Jackson's administration, it was made an executive department. The rates of postage fixed in 1792, and operative for many years, were based on distance only and were paid in currency. For thirty miles and under, six cents; over thirty and not exceeding sixty miles, eight cents; between sixty and one hundred miles, ten cents; between one hundred and one hundred and fifty miles, twelve cents; between one hundred and fifty and two hundred miles, fifteen cents; between two hundred and two hundred and fifty miles, seventeen cents; between two hundred and fifty and three hundred and fifty miles, twenty cents; between three hundred and fifty and four hundred and fifty miles, twenty-two cents; over four hundred and fifty miles, twenty-five cents.

In 1845 a scale was introduced which was based on both distance and weight. Letters not exceeding one-half ounce were carried any distance under three hundred miles for five cents; over three hundred miles, ten cents, and an additional rate for every additional half ounce or fraction thereof.

In 1851 a letter weighing not more than one-half ounce, for distances under three thousand miles, was carried for three cents, and for six cents if over that distance.

In 1855 the rate was made three cents for all distances under three thousand miles and ten cents for greater distances.

In 1863 a uniform rate of three cents was made on all domestic letters not exceeding one-half ounce. And in 1883 the rate was made two cents for each ounce or fraction thereof.

A committee was appointed by the House of Representatives in 1814, "to inquire into the expediency of revising the laws regulating the general postoffice establishment of the United States, and so amending them as to render them more conformable than they are at present to the principles of the Constitution." At that time "the gross revenue had reached the sum of but \$730,000 annually; there were 2,670 postoffices and 41,736 miles of post routes."

The money order system went into operation **November 1, 1864**. Postage stamps were first issued under an act of Congress passed March 3,

1847, and stamped envelopes were issued in June, 1853. Postal cards were issued May 1, 1873. The registry system was introduced July 1, 1855. Free delivery service (city) was established July 1, 1863, and the railway postoffice in 1864.

Number of post offices at close of last fiscal year.....	74,169
Appropriation for same .....	\$139,475,026.00
Gross revenue .....	\$134,224,443.24
Expenditures .....	\$138,784,487.97
Number of cities having free delivery .....	1,065
Number of rural routes in operation.....	19,971
Number of miles covered by same.....	not computed for this year
Appropriation for this branch of the service by the last Congress	
{ City Free Delivery Service.....	\$19,505,450.00
{ Rural Free Delivery Service.....	\$ 8,054,400.00
Number of rural routes authorized but not yet in operation... 390 changing daily	
Number of miles covered by railway service.....	192,852.03
Total miles of postal cars.....	50,499.62
Total number of employees in all branches of the service .....	Estimated at about 200,000
Total receipts from sale of postage stamps.....	} \$123,511,549.70
Total receipts from sale of stamped envelopes.....	
Total receipts from the sale of postal cards.....	

## RAILROADS IN THE UNITED STATES.

The first tram-road in the United States was built from the granite quarries at Quincy, Massachusetts, to the Neponset River, in 1826.

In 1827 a gravity road, for the transportation of coal, was constructed at Mauch Chunk, Pennsylvania.

The first road built expressly for transporting freight and passengers was the Baltimore & Ohio, which was commenced in 1828. Among the first experiments with the steam locomotive on a railroad in this country were those made by Peter Cooper on the Baltimore & Ohio in 1829 and 1830. In the latter year trials of a small steam engine built by Mr. Cooper, were made on the Baltimore & Ohio, but this road did not adopt the steam locomotive until 1832.

The "Stourbridge Lion," a locomotive engine imported from England, made a trial trip August 8, 1829, at Honesdale, Pennsylvania, on a mining railroad constructed of hemlock timbers and strap iron rails, which was considered a great success.

The South Carolina R. R. Co., which was incorporated but had not commenced work, was so impressed by the performance of the Stourbridge Lion that a resolution was at once adopted to employ steam as a motive power, and a contract was made with the West Point Foundry Company to construct a locomotive engine and it was placed on the road November 2, 1830. This was the first railroad in the United States or elsewhere to adopt the locomotive engine and this was the first engine built in this country for railway service.

In 1901, the following report was made by the Government on railroads:

Miles operated in the United States.....	194,975
Gross receipts from passengers.....	\$360,702,686
Gross receipts from freight.....	\$1,126,267,652
Miscellaneous .....	\$125,478,488
Total gross receipts .....	\$1,612,448,826
Net traffic earnings.....	520,294,729

## TELEGRAPH LINES IN THE UNITED STATES.

The first telegraph line connected Baltimore and Washington, forty miles. It was completed in 1844 and the first telegraphic message, "What has God wrought?" was transmitted on the 27th of May of that year.

The first telegraphic charter issued in the United States was granted by the Legislature of Maryland in 1845, to "The Magnetic Telegraph Co.," Professor Morse being one of the incorporators. The line from New York to Baltimore was completed June 5, 1846. The cash receipts of the company for the first year amounted to \$4,228.77. Capital stock \$30,000.

From the Statistical Abstract of the United States for 1902 we take the following figures with reference to the Western Union Telegraph Company and the Postal Telegraph Cable Company, which, for comparison with the business done in 1846, are of special interest:

## WESTERN UNION TELEGRAPH CO.

Miles of line operated.....	196,115
Miles of wire .....	1,029,984
Messages sent .....	69,374,883
Capital stock .....	\$100,000,000
Receipts .....	28,073,095
Expenses .....	20,780,766
Profits .....	7,292,329

## POSTAL TELEGRAPH CABLE CO.

Miles of poles and cables operated.....	47,519
Miles of wire .....	266,122
Number of offices .....	16,248
Messages sent .....	20,086,930

## STREET RAILWAYS IN THE UNITED STATES.

The first street car line in the United States was laid in New York, on the Bowery and Fourth avenue, from Prince street to Harlem river, by John Stephenson, of that city, in 1831; and on this line was placed an omnibus car with three compartments, each holding ten persons, with seats on the roof for thirty more; the car was drawn by horses. Until 1873 horses furnished the motive power for all street cars, but in that year Andrew Hallidie constructed a cable road in San Francisco, California, and the cable system was introduced in a number of the larger cities of the country.

The first electric street car line in the United States was put in operation in Cleveland, July 27, 1884. (Johnson's Encyclopedia.)

The Statistical Abstract of the United States for 1902 gives the following figures for electric and elevated lines:

United States in 1901 .....	1,062
Miles electric railway track.....	22,063
Capital stock .....	\$1,324,072,053

## TELEPHONE LINES IN THE UNITED STATES.

The first known telephone line connected the office of Charles Williams, electrician, in Boston, and his house in Somerville, April, 1877, and the first telephone exchange was established in Boston during the same year.

The statistics given below are taken from the Statistical Abstract of the United States for 1902, and they certainly indicate a marvelous growth:

## THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY, 1901.

Number of exchanges .....	1,411
Branch offices .....	1,594
Aggregate length of wire operated .....	2,445,284
Total number of subscribers .....	1,020,647
Total number of employees .....	40,864
Number of instruments under rental Jan. 1, 1902.....	2,525,606
Number of exchange connections daily .....	7,531,761
Total number of exchange connections yearly .....	2,425,000,000
The Company received for rental of telephones in 1901.....	\$2,647,909.64
Paid its stockholders in dividends .....	\$5,050,023.75
Capital stock .....	\$104,650,600.00
Gross earnings for 1901 .....	\$11,606,816.94
Net earnings .....	\$7,398,285.86

## UNITED STATES.

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(United States Census Report of 1900)

In 1800 the gross area (land and water surface) of the United States was about 827,844 square miles. The gross area in 1900, exclusive of Alaska and Hawaii, is 3,025,600 square miles. Land surface 2,970,038 square miles; water surface 55,562 square miles.

### POPULATION OF THE UNITED STATES FROM 1800 TO 1900.

1800.....	5,308,483	
1810.....	7,239,881	
1820.....	9,638,453	
1830.....	12,866,020	
1840.....	17,069,453	
1850.....	23,191,876	
1860.....	31,443,321	
1870.....	38,558,371	
1880.....	50,189,209	(including Alaska.)
1890.....	63,069,756	(including Indian reservations, Alaska and Hawaii).
1900.....	76,303,387	(including Indian reservations, Alaska and Hawaii).

In 1800 the center of population was 18 miles west of Baltimore, Md., and in 1900 it was 6 miles southeast of Columbus, Ind.



NUMBER AND VALUE OF FARMS AND FARM PROPERTY IN THE UNITED STATES IN 1899.

(U. S. Census for 1900.)

Total number of farms in the United States.....	5,739,657
Number of acres in farms .....	841,201,546
Value of farm land with improvements, including buildings.....	\$16,674,690,247
Value of implements and machinery.....	\$761,261,550
Value of live stock.....	\$3,078,050,041
Total value.....	\$20,514,001,838
Total value of farm products for 1899.....	\$4,739,118,752

ACREAGE, PRODUCTION AND VALUE OF CEREALS IN THE UNITED STATES FOR 1899.

(U. S. Census for 1900.)

Name.	Acres.	Bushels.	Pounds.	Value.
Corn .....	94,916,911	2,666,440,279		\$828,258,326
Wheat .....	52,588,574	658,534,252		369,945,320
Oats .....	29,539,698	943,389,375		217,098,584
Barley .....	4,470,196	119,634,877		41,631,762
Rye .....	2,054,292	25,568,625		12,290,540
Buckwheat .....	807,060	11,233,515		5,747,853
Kafir Corn .....	266,513	5,169,113		1,367,040
Rice .....	351,344		283,722,627	7,891,613

PRODUCTION OF WHEAT IN THE UNITED STATES FROM 1850 TO 1900.

(U. S. Census Report for 1900.)

1850 .....	100,485,943 bushels
1860 .....	173,104,924 bushels
1870 .....	287,745,626 bushels
1880 .....	459,483,137 bushels
1890 .....	468,373,968 bushels
1900 .....	658,534,252 bushels

POSITION OF THE CENTER OF WHEAT PRODUCTION  
FROM 1850 TO 1900.

- 1850—57 miles east-northeast of Columbus, Ohio. 40 degrees, 14 minutes, 18 seconds north latitude, and 81 degrees, 58 minutes, 49 seconds west longitude.
- 1860—18 miles north by east of Indianapolis, Indiana. 39 degrees, 59 minutes, 59 seconds north latitude, and 86 degrees, 1 minute, 38 seconds west longitude.
- 1870—82 miles northeast of Springfield, Illinois. 40 degrees, 39 minutes, 17 seconds north latitude, and 88 degrees, 48 minutes, 40 seconds west longitude.
- 1880—69 miles northwest of Springfield, Illinois. 40 degrees, 36 minutes, 14 seconds north latitude, and 90 degrees, 30 minutes, 46 seconds west longitude.
- 1890—138 miles south by east of Des Moines, Iowa (in Missouri). 39 degrees, 33 minutes, 53 seconds north latitude, and 93 degrees, 9 minutes, 18 seconds west longitude.
- 1900—70 miles west of Des Moines, Iowa. 41 degrees, 39 minutes, 19 seconds north latitude and 94 degrees, 59 minutes, 23 seconds west longitude.

In 1850 the center of the wheat production in the United States was situated about 57 miles east-northeast of Columbus, Ohio; this was not very far distant from the location of the center of corn production. In the next fifty years the center moved to a point about 70 miles west of Des Moines, Iowa. It thus moved about 99 miles to the north and about 680 miles to the westward, nearly one and one-half times the westward movement of corn.

PRODUCTION OF CORN IN THE UNITED STATES FROM 1850 TO 1900.

(U. S. Census Report for 1900.)

1850 .....	592,071,104 bushels
1860 .....	838,792,742 bushels
1870 .....	760,944,549 bushels
1880 .....	1,754,591,676 bushels
1890 .....	2,122,327,547 bushels
1900 .....	2,666,440,279 bushels

POSITION OF THE CENTER OF CORN PRODUCTION FROM  
1850-1900.

- 1850—86 miles east-southeast of Columbus, Ohio. 39 degrees, 14 minutes, 54 seconds north latitude, and 81 degrees, 43 minutes, 38 seconds west longitude.
- 1860—47 miles west-southwest of New Albany, Indiana. 38 degrees, 1 minute, 54 seconds north latitude, and 86 degrees, 29 minutes, 4 seconds west longitude.
- 1870—90 miles southwest of Indianapolis, Indiana. 38 degrees, 47 minutes, 13 seconds north latitude, and 87 degrees, 14 minutes, 15 seconds west longitude.
- 1880—36 miles southeast of Springfield, Illinois. 39 degrees, 28 minutes, 12 seconds north latitude, and 89 degrees, 7 minutes, 43 seconds west longitude.
- 1890—55 miles northwest of Springfield, Illinois. 39 degrees, 16 minutes, 57 seconds north latitude, and 90 degrees, 26 minutes, 49 seconds west longitude.
- 1900—54 miles southwest of Springfield, Illinois. 39 degrees, 19 minutes, 33 seconds north latitude, and 90 degrees 27 minutes, 6 seconds west longitude.

Since 1850 it has moved westward with each decade and is now located almost due west of its former position. It is now about five miles north of where it was fifty years ago and four hundred and eighty miles further west. From 1850 to 1860 the center, in moving west, inclined somewhat to the south; from 1860 to 1870 it turned a trifle to the north; in the next decade it moved quite a distance to the north; from 1880 to 1890 it fluctuated back toward the south; and in the last decade moved almost due west.

PRODUCTION OF OATS IN THE UNITED STATES FROM 1850 TO 1900.

(U. S. Census for 1900.)

1850 .....	146,584,179 bushels
1860 .....	172,643,185 bushels
1870 .....	282,107,157 bushels
1880 .....	407,858,999 bushels
1890 .....	809,250,666 bushels
1900 .....	943,389,375 bushels

In 1850 the center of the oat production of the United States was about eighty miles east by south of Columbus, Ohio. In 1900 it had moved a little less than one hundred and twenty miles north and about five hundred and seventy miles to the west, being about fifty miles north of Burlington, Iowa.

ACREAGE, PRODUCTION AND VALUE OF HAY AND FORAGE CROPS AND  
PRODUCTION AND VALUE OF CLOVER AND OTHER GRASS SEEDS IN  
THE UNITED STATES FOR 1899.

Name.	Acres.	Bushels.	Tons.	Value.
Hay and forage .....	61,691,166		84,011,299	\$484,256,846
Clover seed .....		1,349,209		5,359,578
Other grass seed .....		3,515,869		2,868,839

## TOBACCO.

Production of tobacco in 1899 .....	868,163,275 lbs.
Total value of crop .....	\$56,993,003

ACREAGE, PRODUCTION AND VALUE OF SPECIFIED VEGETABLES IN  
THE UNITED STATES IN 1899.

(U. S. Census for 1900.)

Name.	Acres.	Bushels.	Value.
Potatoes .....	2,938,952	273,328,207	\$98,387,614
Sweet potatoes .....	537,447	42,526,696	19,876,200
Onions .....	47,983	11,791,121	6,637,625

TOTAL EXPENDITURE FOR COMMERCIAL FERTILIZERS IN THE UNITED STATES IN 1899, ARRANGED BY STATES IN ORDER OF EXPENDITURE.

(Compiled from U. S. Census of 1900.)

Georgia .....	\$5,738,520
Pennsylvania .....	4,685,920
New York .....	4,493,050
South Carolina .....	4,479,043
North Carolina .....	4,479,040
Virginia .....	3,681,790
Ohio .....	2,695,470
Maryland .....	2,618,890
Alabama .....	2,599,290
New Jersey .....	2,165,320
Indiana .....	1,553,710
Hawaii .....	1,352,847
Massachusetts .....	1,320,600
Connecticut .....	1,078,240
Louisiana .....	1,076,890
California .....	937,050
Mississippi .....	932,098
Kentucky .....	908,250
Tennessee .....	898,070
Illinois .....	830,660
Maine .....	819,680
Florida .....	753,120
Delaware .....	539,040
Michigan .....	492,360
Vermont .....	447,065
West Virginia .....	405,270
Missouri .....	370,630
New Hampshire .....	367,980
Iowa .....	337,190
Wisconsin .....	294,320
Kansas .....	268,360
Rhode Island .....	264,140
Minnesota .....	251,120
Arkansas .....	172,510
Nebraska .....	153,080
Texas .....	124,716
Washington .....	29,165
Oregon .....	27,395
Colorado .....	23,225
District of Columbia .....	22,600
Idaho .....	17,150
Utah .....	14,300
North Dakota .....	13,855
South Dakota .....	12,940
Wyoming .....	12,700
Montana .....	3,940
Arizona .....	2,921
New Mexico .....	2,880
Total .....	\$54,783,757

NUMBER AND VALUE OF SPECIFIED CLASSES OF DOMESTIC ANIMALS  
IN THE UNITED STATES, ON FARMS AND RANGES, JUNE 1, 1900.

Class.	Number.	Value.
Cattle .....	67,822,336	\$1,476,499,714
Horses .....	18,280,007	896,955,343
Asses and Burros .....	95,603	5,824,539
Mules .....	3,271,121	196,812,560
Sheep .....	61,605,811	170,337,002
Swine .....	62,876,108	232,027,707

Receipts from sale of live animals in 1899.....\$722,913,114  
Value of animals slaughtered on farms in 1899..... 189,873,310

VALUE OF POULTRY, AND PRODUCTION AND VALUE OF EGGS FOR 1899.

	Dozen.	Value.
Poultry .....		\$136,891,877
Eggs .....	1,293,819,186	144,286,158

BEEES, HONEY AND WAX.

Value of bees June 1, 1900.....\$10,186,513  
Value of honey and wax produced in 1899..... 6,664,904

DAIRY INDUSTRY OF THE UNITED STATES.

(U. S. Census Report for 1900, Vol. 9, p. 437.)

In order to present the dairy interest of the United States as a whole, there are here brought together certain statistics of agriculture and of manufactures. The totals for the census year 1900, thus combined, are as follows:

Cows kept for milk, on farms, number.....	17,139,674
Cows kept for milk, not on farms, number.....	973,033
Total number of cows kept for milk.....	18,112,707
Milk produced, on farms, gallons.....	7,266,392,674
Milk produced, not on farms, gallons <sup>1</sup> .....	462,190,676
Total gallons of milk produced.....	7,728,583,350
Butter, made on farms, pounds.....	1,071,745,127
Butter, made in factory creameries, pounds.....	420,126,546
Butter, made in urban dairy establishments, pounds.....	827,470
Total pounds of butter made.....	1,492,699,143
Cheese, made on farms, pounds.....	16,372,330
Cheese, made in factories, pounds.....	281,972,324
Cheese, made in urban dairy establishments, pounds.....	662,164
Total pounds of cheese made.....	299,006,818
Condensed milk produced, pounds.....	186,921,787
Value of total butter made, at 18 cents.....	\$268,685,845
Value of total cheese, at 9 cents.....	26,910,614
Value of total condensed milk.....	11,888,792
Value of total cream sold.....	4,435,444
Value of total sundry factory products.....	1,261,359
Value of total milk consumed <sup>1</sup> .....	277,645,100
Aggregate value dairy products of United States.....	\$590,827,154

VALUE OF WOOL SHORN IN THE FALL OF 1899 AND SPRING OF 1900 IN THE UNITED STATES.

	Pounds.	Value.
Wool .....	276,991,812	\$45,723,739

1 Estimated.



VALUE OF ALL CROPS AND ANIMAL PRODUCTS IN THE UNITED STATES  
IN 1899.

Total value of all crops, including forest products, for 1899.....	\$3,020,128,531
Total value of animal products for 1899.....	1,718,990,221
Total value of all crops and animal products, 1899.....	\$4,739,118,752

FLOURING AND GRIST MILLS IN THE UNITED STATES.

(U. S. Census Report for 1900.)

The products of the flouring and grist mills of the United States for 1899, with values, are reported as follows:

	Barrels.	Pounds.	Value.
Wheat flour .....	103,524,094		\$348,183,800
Rye flour .....	1,739,374		4,916,001
Buckwheat flour .....		2,135,562,952	5,065,185
Barley meal .....		99,730,423	1,113,958
Corn meal .....	40,035,977		73,177,402
Hominy .....		305,725,866	2,723,443
Feed .....		10,061,312,069	81,347,132
Offal .....		6,559,835,116	38,112,424
Other products, etc. ....			6,079,718
Total value .....	.....	.....	\$560,719,063

The flouring and grist mills of the United States have reported the production of 103,524,094 barrels of flour, representing 489,914,004 bushels of wheat at a value of \$348,183,800.

The total amount of wheat flour exported during the fiscal year ending June 30, 1900, was 18,699,194 barrels; 101,950,389 bushels of unground wheat of domestic production were exported.

## VALUE OF SPECIFIED PRODUCTS OF THE UNITED STATES.

(U. S. Census Report for 1900.)

Total value of non-metallic mineral products.....	\$567,261,144
Total value of metallic products .....	518,268,377
Estimated value of mineral products unspecified.....	1,000,000
Grand total .....	<u>\$1,086,529,521</u>

## LUMBER PRODUCTS.

Total value of lumber products for 1900.....	\$566,832,984
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## PACKING HOUSES.

Value of slaughtered and meat packing products.....	\$785,562,433
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## OLEOMARGARINE.

Number of establishments .....	24
Value of products .....	\$12,499,812

## UNITED STATES EXPORTS, SPECIFIED CLASSES.

Agriculture .....	\$851,465,622
Domestic manufactures .....	403,641,401
Mining .....	39,216,112
Forest .....	48,188,661
Fisheries .....	7,705,065
Miscellaneous .....	5,265,000
Total .....	<u>\$1,355,481,861</u>

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# CONTENTS.

---

	Page.
<b>OHIO.</b>	
History of agriculture, with statistics .....	9-13
State board of agriculture .....	20-28
Agricultural education .....	29-30
State grange .....	31
Horticulture, with statistics .....	32-35
Live stock .....	36-48
Trees .....	48-49
Grasses .....	49-50
Tables .....	50-53
History .....	56-79
Taxation .....	80-81
Governors .....	82-83
State offices .....	84
Counties .....	85-88
Transportation .....	89-93
War record .....	94-95
Education .....	96-98
Libraries .....	99-100
Mines .....	101-102
Manufacturers, with statistics.....	103-112
Street railways .....	113
Telegraph lines .....	114
Telephone lines .....	115-116
Postoffices .....	117
Population of cities .....	118
Patents .....	118
Birds .....	119-121
Animals .....	121
Fishes .....	122
<b>UNITED STATES.</b>	
Department of agriculture .....	123-125
Agricultural implements .....	127-129
Postoffice department .....	130-131
Railroads .....	132
Telegraph lines .....	133
Street railroads .....	134
Telephone lines .....	135
Statistics .....	136-146
<b>BIBLIOGRAPHY</b> .....	147-148

## INDEX.

## A

	Page.
Agricultural education .....	29-30
Implements .....	48, 127-129
Experiment stations, list of .....	126
Societies, county .....	23-25, 64
Agriculture in Ohio, 1803-1903 .....	9-13
Ohio state board of .....	20
Ohio state board of, list of members .....	3-6
Ohio state board of, list of officers .....	7
Alcoholic liquors .....	109
Amendments to Constitution of U. S., XIII, XIV and XV .....	70, 71
Amendments to state constitution .....	70-71, 74, 75, 76, 78-79
Animals, list of .....	121
Area of Ohio .....	56
Area of U. S. ....	136
Asparagus, acreage and production .....	19
Asses and burros on farms .....	44, 143
Average yield per acre of various crops (Table) .....	51

## B

Barbed wire required for fences (Table) .....	51
Barley, acreage, production and value .....	17
Beans, green, acreage and production .....	19
Bees, honey and wax .....	46, 143
Beets, acreage and production .....	19
Bessemer steel .....	71
Birds, list of .....	119-121
Bishop, R. M. ....	73, 76
"Black Laws" .....	58, 66
Board of Live Stock Commissioners of Ohio .....	36
Boats .....	90-91
Boots and shoes .....	109
Brough, John .....	69-70
Broom corn, acreage, production and value .....	19
Brush dynamo .....	73
Buckwheat, acreage, production and value .....	17
Buell, Gen. Don Carlos.....	77
Bureaus and division of the U. S. department of agriculture, list of ....	124
Burr and Blennerhassett .....	58-59
Butter and cheese produced on farms .....	45
Produced by factories .....	45
Butterworth, Benj. ....	77

## C

	Page.
Cabbages, acreage and production .....	19
Canals .....	63, 91-92
Canning factories .....	110
Carriages and wagons .....	109
Carrots, acreage and production .....	19
Cattle, dairy, number and value.....	45
Dairy products, amount and value .....	45
Introduction of, in Ohio .....	38-42
Number and value on farms .....	44
Celery, acreage and production .....	19
Center of population .....	136
Cereals, acreage, production and value .....	137
Cincinnati riot .....	74
Cities containing a population of more than 10,000 .....	118
Civil war .....	68-70, 94-95
Clover and other grass seeds .....	18, 141
Coal .....	101
Commercial fertilizers .....	47, 142
Constitution of Ohio, 1851 .....	67
Constitutional conventions .....	57, 66, 72
Corn, acreage, production and value .....	17
Center of production .....	139
Production of in bushels, 1850, 1900 .....	17, 139
Production of by counties .....	17
Corwin, Thos. ....	70
Counties of Ohio, list of .....	85-87
In order of erection .....	88
County agricultural societies .....	23-25
Fair, first held .....	24
Cox, S. S. ....	75
Cucumbers, acreage and production .....	19
Cultivators .....	128
Custer, Gen. G. A.....	73

## D

Dairy cows, number and value .....	45
Products, amount and value .....	45
Dairy industry of U. S.....	144
Distance for planting vegetables (Table) .....	52
Domestic animals, number and value .....	143
Dry measure (Table) .....	50

## E

Edison, Thos. A. ....	73
Education, agricultural .....	29-30
Education in Ohio .....	96-98
Egg and poultry production .....	46, 143
Ewing, Thos. ....	77

## F

	Page
Fair, county, first held .....	24
Ohio state, table giving location and receipts .....	7
Farm land, total acreage, 1850-1900 .....	47
Farm products, value of .....	18
Farms, classification of .....	46
Flower and plant, number and value .....	35
Machinery, live stock, etc., value of .....	47, 137
Number and value .....	46
Nursery, number and value .....	35
Principal sources of income .....	46
Farmers' institutes .....	26-28
Fertilizers, commercial, expenditure for .....	47, 142
Fire clay .....	101, 107
First blast furnace .....	107
Coal mine operated .....	66
Constitutional convention .....	57
County agricultural society .....	23
County fair .....	24
Gas well .....	74
General assembly .....	57
Oil well .....	61
Press telegram .....	66
Railroad .....	92
State fair .....	22
Steamboat .....	60
Street railroad .....	113
Telegraph line .....	114
Telephone line .....	115
Fishes, Ohio, list of .....	122
Flouring and grist mills .....	48, 145
Forage, acreage and production .....	17
Foraker, J. B. ....	75
Forest products, value of .....	49
Foundry and machine shop products .....	108
Fruits, production and value .....	34-35

## G

Garfield, Jas. A. ....	73
Giddings, Joshua R. ....	70
Glass .....	109
Goats, number and value on farms .....	44
Governors of Ohio, list of .....	82-83
Grain, quantity of seed required for an acre (Table) .....	51
Grange, Ohio state .....	31
Grapevines, product and value .....	35
Grant, U. S. ....	62, 74
Grasses, list of .....	49-50
Grist and flouring mills .....	48



## H

	Page.
Harrison, Benj. ....	78
Harrows .....	127
Harvesting implements .....	128
Hay and forage .....	17, 141
Hayes, R. B. ....	63, 71, 73, 76
History of agriculture in Ohio, 1803-1903.....	9-13
Honey, bees and wax .....	46, 143
Hops .....	19
Horses, introduction of, in Ohio .....	36-38
Number and value on farms .....	44
Howells, Wm. Dean .....	65

## I

Implements, agricultural .....	48
Indian war .....	60
Institutes, farmers' .....	26-28
Iron ore .....	101
Iron and steel manufactures .....	107

## L

Labor, expenditure for .....	47
Lawrence, Judge Wm. ....	78
Leather .....	109
Legal size of measures .....	51
Lettuce, acreage and production .....	19
Libraries, Ohio .....	99-100
Limestone .....	102
Lincoln, Abraham .....	68, 70
Live Stock Commissioners of Ohio.....	35
On farms .....	18
Introduction of, in Ohio .....	26-45
Receipts from sales .....	45
Slaughtered on farms, value of .....	45
Louisiana Purchase .....	58
Lumber, planing mill products .....	10S, 146

## M

McKinley, William .....	65, 75, 76, 77, 78
Manufactories .....	103, 112
Manufacturing establishments in Ohio .....	106
Meat .....	110
Metal working machinery .....	109
Mexican war .....	66, 94
Michigan-Ohio boundary line .....	62, 64
Mines .....	101, 102
Mormon church .....	63-64
Mules, number and value on farms .....	44
Muskmelons, acreage and production .....	19

## N

	Page.
Newell, Dr. ....	78
Nursery farms, number and value .....	35

## O

Oats, acreage, production and value .....	17
Center of production .....	140
Production in bushels, 1850-1900 .....	17, 140
Ohio Agriculture, sketch of .....	9-13
Area of .....	56
Brief history of .....	56-79
Horticulture .....	32-35
Governors, list of .....	82-83
Grasses, native list of .....	48-49
Population of cities .....	118
Population of, by counties .....	56
Rank .....	14, 17, 18, 19, 45, 46, 47, 56, 106, 107, 109, 110, 111, 118
State Board of Agriculture, sketch of .....	20-28
State Board of Agriculture, list of members .....	3-6
State Board of Agriculture, list of officers .....	7
State fair .....	22-23
State fair, table giving location and receipts of fairs .....	7
State Grange .....	31
State University .....	73
Trees, native, list of .....	48-49
Ohio-Michigan boundary line .....	62, 64
Ohio's war record .....	68-70, 94-95
Oleomargarine .....	46, 146
Onions, acreage and production .....	19, 141
Orchard trees, value of products .....	34
Organization of the U. S. Department of Agriculture .....	125

## P

Packing house production .....	146
Parsnips, acreage and production .....	19
Patents issued to Ohio citizens, 1800-1900 .....	118
Peas, green, acreage and production .....	- 19
Pendleton, Geo. H. ....	75
Pensions .....	95
Plant and flower farms .....	35
Plows .....	127
"Plunder Law" .....	65
Population by counties .....	56
Population of U. S., 1800-1900 .....	136
Postal service .....	117, 130-131
Potatoes, acreage and production .....	19, 141
Pottery, terra cotta and fire clay products .....	107
Poultry and egg production .....	46, 143
Pumpkins, acreage and production .....	19

## Q

	Page.
Quantity of seed (cereals) required to the acre (Table) .....	51
Of seed (vegetables) required to the acre (Table) .....	53

## R

Radishes, acreage and production .....	19
Railroads .....	93, 132
Railway cars .....	109
Republican party, organization in Ohio .....	67-68
Roads .....	89-90
Rolling mills and steel works .....	107
Rosecrans, Gen. ....	77

## S

Salt .....	109
Schenck, Robert C. ....	75
Schools, centralization of township .....	78
Seeders and planters .....	128
Sheep, introduction of, in Ohio .....	42-43
Number and value on farms .....	44
Sheep and wool .....	45
Sherman, John .....	78
Sherman, W. T. ....	62, 76
Silk factory .....	105
Sheridan, P. H. ....	75
Soldiers' claims .....	95
Spanish-American War .....	77, 95
Spinach, acreage and production .....	19
Squashes, acreage and production .....	19
Stanton, Edwin M. ....	71
State fair, sketch of .....	22-23
Grange .....	72
Boards, commissions, etc.—statutory .....	84
Offices—constitutional .....	84
STATISTICS—	
Clover Seed .....	18, 141
Commercial fertilizers .....	142
Corn .....	15-16, 17, 137, 139
Farms, etc. ....	46-48, 137
Fruits .....	34-35
Forest products .....	49
Live stock .....	44-46, 143-145
Manufactures .....	106-110
Oats .....	17, 137, 140
Potatoes .....	18, 141
Railroads .....	93, 132
Street railroad .....	113, 134
Taxation .....	80-81
Telegraph .....	114, 133
Telephone .....	115, 135
Vegetables .....	19, 141
Wheat .....	13-15, 17, 137

	Page.
Street railroads .....	118
Swayne, Noah H.....	74
"Sweeping Resolutions" .....	59-60
Sweet corn, acreage and production .....	19
Sweet potatoes, acreage and production .....	19, 141
Swine, introduction of, in Ohio .....	43-44
Number and value .....	44
TABLES—	
Average yield per acre of various crops .....	51
Barbed wire required for fences .....	51
Distances for planting vegetables .....	52
Dry measure .....	50
Legal size of measures .....	51
Quantity of seed (cereals) required per acre.....	51
Quantity of seed (vegetables) required per acre .....	53
Vitality of seeds .....	51
Yield of farm products per acre .....	52
Taft, Alphonso .....	76
Tax duplicate by decades .....	80-81
Taxation .....	80-81
Telegraph lines .....	114, 133
Telephone lines .....	115-116, 135
Terra cotta, pottery and fire clay products .....	107
Thurman, Allen G. ....	76
Tobacco, acreage and production .....	19, 141
Tod, David .....	69, 70, 71
Tomatoes, acreage and production .....	19
Transportation .....	89-93
Trees, orchard .....	34
Turnips, acreage and production .....	34

## U

United States Bank .....	61-62
Department of Agriculture .....	123-125
Exports .....	146
Postoffice Department .....	130-131

## V

Value of all crops in United States .....	145
Of specified products in the United States.....	146
Vegetable production, value .....	19
Vegetables, quantity of seed required to sow an acre .....	53
Vitality of seeds (Table) .....	51

## W

Wade, Benj. F. ....	73
Waite, Morrison R. ....	75
War of 1812 .....	60, 94
Watermelons, acreage and production .....	19
Wax, bees and honey .....	46, 143

	Page.
Wheat, acreage and production .....	17
Center of production .....	138
Production of by counties .....	13-14
Production of in bushels, 1850-1900 .....	13, 137
Willows, acreage and production .....	19
Wool .....	45, 144

## Y

Yield of farm products per acre (Table) .....	52
---	----

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