

building material of substantial quality, and so the brick-maker's art is encouraged and his business enlarged. No better clays can be found for the manufacture of the finest quality of pressed brick than are now obtained in numerous places in this state." Superior clay for the manufacture of stoneware and the finer forms of pottery is found in numerous places.

Gypsum is found along the Des Moines river in the vicinity of Fort Dodge, Webster county. About three miles south of Fort Dodge, including the bluffs on both sides of the river, is the largest and most important deposit of gypsum yet discovered in the United States. It is found here not in "heaps" or "nests," as in the states farther east, but in the form of a 'regularly stratified, continuous formation as uniform in texture, color and quality throughout the entire region from top to bottom of the deposit (about thirty feet,) as is the granite of the Quincy quarries in New England.'*

This bed of gypsum extends about seven miles along the river and is apparently inexhaustible. The rock is of a gray color, but becomes quite white by grinding and still whiter by the calcining process necessary in the preparation of plaster of Paris. It is used as a building rock, a fertilizer and for the manufacture of stucco. In the latter form it was very largely used in the manufacture of "staff," that formed the external covering of the World's Fair buildings in Chicago in 1893. This gypsum industry gives employment to about sixty men and the annual production is about \$55,000.

CHALK.

There is a deposit of chalk in the vicinity of the Big Sioux river, in

*This bed of gypsum is found under the drift and over the coal measures; it is therefore older than the former and newer than the latter. It contains no fossils and seems to be a formation of the Mesozoic age.

Northwest Iowa, especially in Sac, Woodbury and Sioux counties, that is as valuable as any in England and that, in the not distant future, will doubtless furnish the raw material for a number of important manufacturing industries.

This chalk formation consists of fine calcareous layers not unlike clay, and has a thickness of 25 feet along the Sioux river in Iowa, 50 feet at Ponca, Nebraska, 130 at Yankton, South Dakota, and 200 feet at the mouth of the Niobrara river. This rock, wherever it is exposed, is of a pure white or yellowish color, soft in texture and may be quarried in great blocks that are easily cut with a common saw into any required dimension. It is composed of the more or less broken skeletons of the little shell creatures called Foraminifera and of minute coralline plants known as Coccoliths. It is formed only in the bottom of a clear, open sea, remote from land, flood deposits or other disturbances.

This chalk deposit, found only in the cretaceous series of this section, is intensely interesting to the student of Nature, since it proves beyond a doubt that this whole region was once the bottom of a wide and deep sea. It rests upon a bed of Dakota limestone, an accumulation that was doubtless formed when the region about Sioux City was covered with shallow, brackish water. "The sand composing this deposit was carried into the sea from land that was not very far away, probably only a few miles eastward. The sea between was not stationary, but was slowly subsiding, the rate of subsidence being greater, however than the rate at which the sandstone accumulated.

"As a result of the subsidence, the sea became deeper over the given area, as at Sioux City, and for the same reason encroached gradually upon the land, and the shore line became more and more remote. With increasing depth of sea and increasing distance of the shore, the coarser sand failed to reach Sioux City. Only the finer mechanical sediments were carried so far seaward. * * * The waters deepened still more over the site of Sioux City until the bottom was no longer affected by waves and currents, and the shore line, now east

of the middle of the state, was so remote that practically no flood material from the land found its way to the area we are considering. Neither sand nor clay was deposited in any appreciable amount as far west as Yankton, St. Helena or even Sioux City.

Now it was in this clear, open, quiet sea that the Niobrara chalk was slowly deposited. The little shell creatures called Foraminifera, flourished upon the bottom of it or serenely floated in its depths. And either floating or resting upon the bottom, were the peculiar coralline plants of which the bodies called Coccoliths and Rhabdoliths were constituent parts.

All these organisms secrete carbonate of lime, and it was the dead skeletons of successive generations of such organisms, accumulating under the conditions described, that made the entire bulk of our American chalk, the region of which extends from Iowa to the Rocky Mountains, and from Texas to the Arctic Sea. It was about the time that the subsidence reached its maximum that the chalk was deposited near Auburn, in Sac county."*

FOREST AND SHADE TREES.

Wood, for many years, was the principal and preferred fuel of the people of this state. Forest trees can be cultivated upon all varieties of the soil of the state as successfully as a crop of corn. The principal kinds of native trees that have been used as fuel, before the general use of coal, are the following, their order indicating their estimated relative abundance: Oaks, several varieties, including white, laurel, burr and black; cottonwood, elm, white maple, linden, hickory, sugar maple and black walnut. Other native trees, such as the hackberry, ash, honey-locust, slippery elm and butternut, have also been used, but their number has been more limited.

Experience and observation indicate that the following named forest trees give good results under cultivation, their order indicating their rapidity

*Samuel Calvin in *Geology of Iowa*, Vol. 3, 218.

of growth, and their inverse order their relative value for fuel: Cottonwood, white maple, box-elder, black walnut, oak, sugar maple and hickory.

The black walnut and hickory succeed well upon the prairie by artificial propagation from the seed and with very little labor. So rapid is the growth of the cottonwood that, it is estimated, ten acres planted, at the end of five years, will supply a large family continually with all the necessary fuel. For rapidity of growth the white maple ranks next to the cottonwood and makes better fuel. It succeeds well upon all varieties of soil and is readily propagated from the seed. These facts indicate that in a prairie region the farmer may not only determine "the location of his fields and woodlands, but also the kinds of crop, whether of grain or trees, that shall be grown upon each."

WATER.

It would be difficult to find a region more bountifully watered than the state of Iowa, and so general is the drainage through its numerous rivers, creeks and rivulets, that almost its entire surface is available for agricultural purposes. Valuable springs are frequent in the valleys, and even upon the highest prairies no difficulty has been experienced in obtaining excellent water a few feet beneath the surface.

All the water of Iowa is hard, holding in solution more or less carbonate of lime. It is nevertheless pure and wholesome, giving vigor to youth, strength to manhood and solace to age. In the moonlight fountains and the sunny rills, in the warbling brook and the giant river, the water of Iowa is clear, beautiful and invigorating. "The beneficent Creator gave to Iowa a wealth of resources of more priceless value than mountains of precious metals, in her ever recurring showers, her numerous springs and perennial streams."

“Merry laughing, sparkling water,
O'er the prairies flowing free;
Making all so bright and happy,
In the vale and on the lea,
How I love thee!”

Waters of medicinal value are also found here. There are streams that flow from fountains that give strength to the weak and restore health to the sick.

The mineral springs at Colfax have become so famous that that health resort has been designated the “Saratoga of the West.” This fountain flows from a boring sunk for coal four hundred and fifteen feet in depth. Other medicinal wells are found at Des Moines, Cherokee, Lineville and other places. On the western shore of Wall Lake, Sac county, there is a natural spring known as the Lake View Mineral Spring, that has a considerable reputation for the cure of many of the ills to which our mortal nature is subject.

CLIMATE. *

Of the two essential elements of agricultural prosperity, a fertile soil and a favorable climate, the latter may be said to be the more important, for nothing can fully compensate for the lack of rainfall during the growing season. Only a small portion of any arid region can be made productive by irrigation.

The claim may be made that in respect to these two essentials, soil and climate, Iowa stands foremost among the agricultural states of the Union. There is no question as to the exceeding richness and depth of the soil, for it has maintained a large measure of its original fertility under a system of continuous cropping that would have reduced to barrenness the thinner soils of less favored sections. And its climate has served as a fit complement of its soil in the production of those vast crops that have figured so con-

*Gleaned from *Climatology*, by John R. Sage, Director of the Iowa Weather and Crop Service.

spicuously in the agricultural statistics of the country.

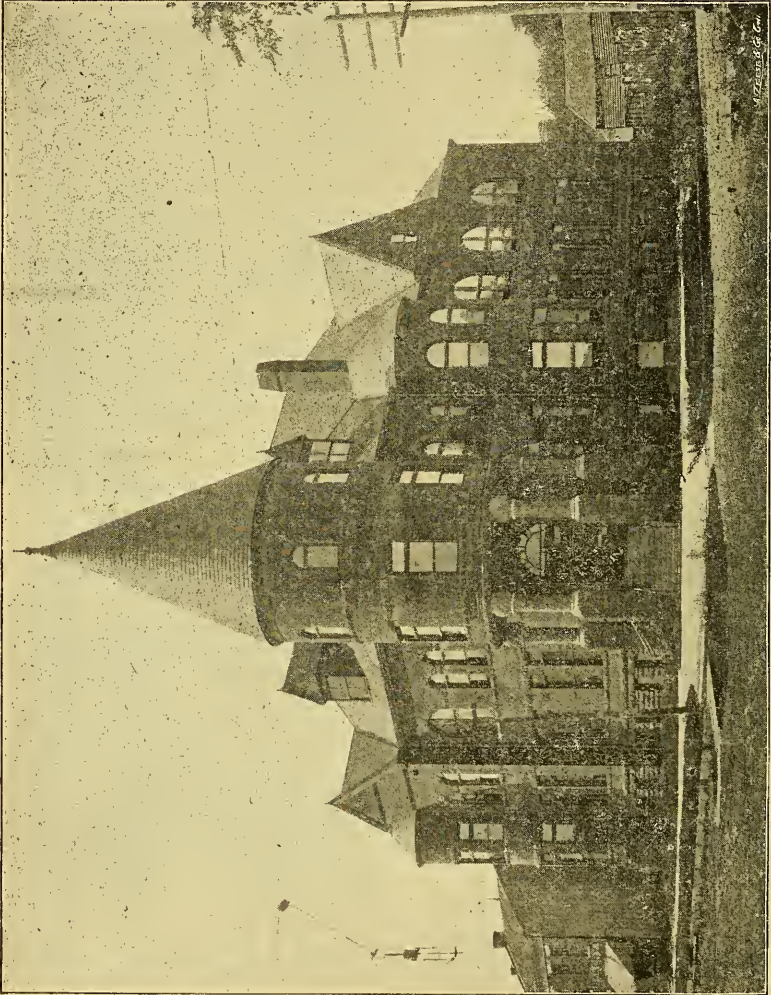
Situated midway between the oceans the climate of Iowa is strictly continental. Its altitude ranges from four hundred and forty-four feet above the sea level at the confluence of the Des Moines and Mississippi, to one thousand six hundred and fifty feet at a point near Spirit Lake; and as there are no mountain ranges nor extensive forests the physical conditions give to the state a climate very similar throughout.

The moisture precipitated over Iowa comes almost entirely, either directly or indirectly, from the Gulf of Mexico. And as the gulf is permanent there is no danger that this region will ever become arid or unproductive.

Blodget's rain chart for the continent shows the average annual rainfall in the eastern and southeastern counties is forty-two inches, through the central belt from southwest to northeast it is thirty, and in the extreme northwestern section twenty-five inches.

The annual precipitation in Iowa is equal to that of any of the Atlantic or Middle states in the same latitude, with the exception of points along the sea-coast or in mountainous districts.

Dr. Gustavus Hinrichs, who originated the Iowa Weather Service and served over twelve years as its director, said in his last annual report: “While Iowa has a continental climate in regard to temperature, it enjoys the fertilizing advantages of a high and well distributed rainfall usually restricted to the coast only. In fact, there is no region in the interior of any continent that has a climate like that of Iowa, in which the extremes of temperature are coupled with an abundance of fertilizing moisture. Right close to the south the immense boiler of the gulf is furnishing vapor; the heated continental expanse north causes the southerly current prevailing throughout the



CLOSE HALL, ONE OF THE STATE UNIVERSITY BUILDINGS, IOWA CITY.

summer. These southerly winds carry the moisture of the gulf all over the Mississippi valley, where it descends normally in great abundance, making it the best watered valley in the world."

In Iowa the summers are decidedly warmer and the winters slightly colder, though marked by a diminution in the amount of snow, than in the eastern states on the same parallels. The relatively dry atmosphere during the winter months has a favorable effect upon the health and comfort of the inhabitants of this region, enabling them to easily withstand the low temperature of that season of the year.

AGRICULTURAL RESOURCES.

The following exhibit will serve to show the marvellous development of the agricultural resources and the industrial condition of the state of Iowa in the years 1850, 1880 and 1895, respectively:

	1850	1880	1895
Wheat, bus.....	1,530,381	31,151,205	14,612,051*
Oats "	1,524,345	50,610,591	201,600,000
Corn "	8,056,799	275,024,247	285,000,000
Potatoes	282,368	10,084,975	16,700,000*
Butter, lbs.	2,171,188	55,481,958	45,245,627
Cheese "	209,840	1,075,988	449,416
Horses	38,536	792,322	1,333,302
Cows.....	45,704	854,857	1,087,279
Hogs.....	323,247	6,034,336	5,044,577
Sheep.....	149,960	455,359	492,875
Other cattle.....	91,000	1,755,343	2,110,305

*1896.

In 1897, the aggregate value of farm products amounted to \$130,934,328.00.

In the year 1891, the estimated value of all the agricultural products of Iowa, including the crops and stock of all kinds, was \$464,219,308.

The Iowa corn crop alone brings annually more gold and silver than the products of all the mines in all of the states of the Union, combined.

In the great staples, that together make up the food of the country, Iowa ranks out of all proportion to her population. In the year 1879, the

yield of corn equaled a production of 9,480 pounds for every inhabitant of the state; of wheat 1156 pounds; of oats 997 pounds and of all cereals 11,809 pounds. There was also raised that year 371 pounds of potatoes for each inhabitant. The production of these elements of food that year in Iowa reached the enormous aggregate of 12,180 pounds, or six tons and one hundred and eighty pounds for every man, woman and child within her borders. The state thus produced nearly four times as much of these elements of food, proportionately, as did the country at large. It is believed this aggregate of production in proportion to population, is without a parallel anywhere or at any time.

The live stock interests of the state have also grown to immense proportions. In 1870, Iowa ranked seventh in the number of horses, but ten years later only Illinois and Texas had more.

In 1870, there were seven states that had more milch cows, but ten years later Iowa ranked next to New York and Illinois.

In 1880, Iowa ranked fourth in the production of butter, New York, Pennsylvania and Ohio producing a larger quantity; but in the manufacture of creamery butter, Iowa stood first, making nearly one-third of the creamery product in the United States. In 1897, there were in the state 773 creameries, 118 skim stations and 76 cheese factories. The value of the butter products shipped by the railroads was \$13,936,680.17.

In 1870, six states raised more swine, but ten years later Iowa had nearly a million head more than any other state and more than one-eighth of the whole number throughout the country. Iowa can beat the world in raising cheap pork, because there are here the finest clover pastures and as cheap corn as can be produced anywhere. The Iowa farmer, by judi-

cious management and careful handling, can double his capital invested in hogs every few years, if not in a single year, raising his own grain and milk for the pigs, and fattening them for the fall or early winter market.

During all the years of the general financial depression—from 1892 to 1896—when the price of nearly every commodity went constantly downward, the value of Iowa farms steadily mounted higher. Her people rank among the most intelligent, thrifty and public-spirited of any state. They do not live in Iowa as they do in some places, “merely because they have to do so.” Here they build fine houses and live to enjoy life.

The late Stephen A. Douglass, who, as a member of the Committee on Territories, in 1846, presented to congress the bill for the admission of Iowa into the Union, said: “Vermont is a good place to be born in, if one should emigrate quite young, but Iowa is a good place to be born in and a good place to stay in.”

This observation reminds one of an interesting incident that occurred at a certain revival meeting held in the early days:

“All persons in the congregation,” said the evangelist, “who want to go to Heaven will please rise to their feet.” Every person in the house rose, but one godless granger sitting on the back seat.

“Now,” continued the evangelist, “if there is any person in the congregation who desires to go to the ‘bad place’ let him stand up,” looking hard at the granger, who still kept his seat. The evangelist descended from the pulpit and, approaching the case-hardened sinner who refused to testify in the way proposed, said, “My perishing friend, you seem to have no desire to reach Heaven, nor to plunge into perdition; where do you want to go?” “I don’t want to go any where,” replied the man, “I

want to stay right here in Iowa.”

It is quite probable that he was the only one in the house who told the whole truth.

COMMERCIAL FACILITIES—RAILROADS.

The position of Iowa enables her to command the advantages of 20,000 miles of inland water navigation, the cheapest of all forms of transportation. Her great rivers are permanent fixtures, and as the years roll on and population and wealth increase, public interest will demand that these great channels of interior communication and transportation be maintained in the most perfect condition, and their benefit will increase with each succeeding generation. These divinely formed channels of trade and transportation were the first to be utilized and will be indispensable to Iowa. They will yet bear a large proportion of the products of her farms, orchards, dairies, mines and manufactories to distant markets and bring in return immense supplies of commodities and material that her industries and people will demand.

The first settlers of Iowa came from the east by teams. When they crossed the Mississippi the only means of interior transportation in the aid of trade were the shoulders of the dusky squaw, the Indian pony, canoe or an occasional pack-horse of a venturesome hunter. These were supplemented by the ox teams and horses brought by the settlers, which constituted the only means of interior transportation, until the closing years of the sixties. There were then no wagon roads or bridges, and the sloughs and streams had to be wallowed through or forded. How changed the scene today! Now there are in this state 110,000 miles of well constructed highways provided with innumerable culverts and thousands of well constructed bridges.

In 1847 a meeting was held at Dubuque for the purpose of securing a

railroad connection with Chicago. In the winter of 1848, just fifty years ago, a convention was held at Iowa City that projected two railroads, one to extend from Dubuque to Keokuk and the other to span the state from Davenport, via Iowa City, to some point on the Missouri, at or near Council Bluffs. The first of these roads was never built. The first railroad company organized within the state was the one formed at this time to build the latter road from Davenport to Council Bluffs. The congress of the United States was asked to aid in its construction, and in 1850 that body adopted the policy of making land grants to encourage the building of western railroads.

The year 1856 marked a new era in the history of Iowa. In 1854, the Chicago and Rock Island had been completed to the east bank of the Mississippi, opposite Davenport, and in the same year the corner-stone of the railroad bridge that was to be the first that spanned the "Father of Waters," was laid with appropriate ceremonies at this point. January 1, 1856, this railroad, the first in Iowa, was completed to Iowa City. In the meantime, two other railroads had reached the east bank of the Mississippi—the Burlington and Quincy opposite Burlington, and the Illinois Central opposite Dubuque.

On May 15th, that year, (1856) congress passed an act, approved by President Pierce, that made the first grant of land in aid of railroad building in the state of Iowa. This act provided for the grant of the alternate, or odd numbered sections, for a distance of six miles on each side of four main lines of railway across the state.

On August 8, 1846, congress had granted to the Territory of Iowa, for the purpose of improving the navigation of the Des Moines river from its mouth to the Raccoon fork, the alternate sections, remaining unsold, in a

strip five miles in width, on each side of that river. This grant proved a fruitful source of legislation and corruption, the river, unsatisfactory for navigation, and the grant was finally utilized for the construction of a railroad up the valley of the river to Des Moines.

Under these two grants, and others that followed soon after, the railroads in Iowa received land as follows:

	Acres
Burlington & Missouri river (C. B. & Q.)	237,095
Miss. & Missouri river (C. R. I. & P.)	550,194
Ia. Cent. Air Line (Chicago & N.W.)	775,454
Dubuque & Pacific (Ill. Cent.)	1,226,558
McGregor & Missouri (C. M. & St. Paul)	372,293
Sioux City & St. Paul	407,879
Des Moines River Improvement Co.	1,105,968

Total.....1,674,745

This was a princely donation, but the settlers asked for it and expected the benefits derived therefrom would be commensurate. The few settlers in the interior counties were laboring in privation, difficulty and poverty, and were unable to convey their surplus to market. Lands were then taken slowly at \$1.25 per acre and there was not sufficient wealth in the state to provide the transportation facilities that were needed.

Although this land was granted and the surveys made, the railroads were not immediately constructed. The financial crisis of 1857 stopped all railroad enterprise, and before the country had sufficiently recovered to justify new and great undertakings, the civil war began, and railroad construction was suspended until after the collapse of the rebellion.

At the close of the war, there followed a period of great activity in railroad building in Iowa. The Chicago and Northwestern, first to cross the state, reached Council Bluffs in 1867. The Chicago, Rock Island and Pacific, and the Chicago, Burlington and Quincy reached that city early in 1869; and during the following summer the Illinois Central reached

Sioux City. Other roads soon followed, and today the state is crossed by five great railways and covered with a network of steel tracks, that extend into all the 99 counties and bring to her people commercial advantages unsurpassed by those of any other state. There are now 8,600 miles of railway within the boundaries of the state that, together with the rolling stock, depots and terminals, represent a cost of \$25,000 per mile and a total cost of \$212,500,000. They give employment to 30,192 men, whose annual salaries amount to \$17,807,915.89.



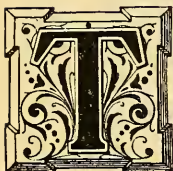
IX.

THE STATE INSTITUTIONS AND BUILDINGS OF IOWA.

"Education is the cheap defense of nations."—GARFIELD.

IOWA'S CAPITOL, DES MOINES.

"Peerless Iowa, 'tis of thee,
Fair state of industry,
Of thee I sing."—H. P. BRANCH.



THE present capitol building, of which a cut appears on page 14, is a fine specimen of modern architecture. It is an object of beauty and a source of pride to every citizen of the state.

The first act for the erection of this building was passed by the 12th General Assembly and approved April 6, 1868. The first Board of Commissioners, appointed in 1870, to determine its plan and superintend its construction, consisted of Governor Samuel Merrill, chairman ex-officio; Gen. G. M. Dodge, Hon. James F. Wilson, of Fairfield, and six other members chosen by the senate and house of representatives in joint convention, viz: James Dawson, of Washington county; Simon G. Stein, of Muscatine; James O. Crosby, of Clayton; Charles Dudley, of Wapello; Col. J. N. Dewey, of Des Moines, and William L. Joy, of Woodbury county. A. R. Fulton was chosen secretary of this Board. The plans approved were prepared by Messrs. Cochrane and Piquenard, of Chicago, Ill. In 1872, when this Board was reorganized, the following persons became members of it, namely: John G. Foote, of Des Moines

county; M. L. Fisher, of Clayton; R. S. Finkbine and Peter A. Dey, of Johnson county.

Its construction was begun in June, 1871, the first stone being laid August 1st and the corner-stone, November 23d following. On this last occasion the following distinguished citizens delivered addresses: Hon. James F. Wilson, Hon. Samuel Merrill and Hon. John A. Kasson; and a poem was read by Hon. John B. Grinnell.

The corner-stone, 7x3x3 feet, was cut from granite obtained in Buchanan county, and presented for that purpose by David Armstrong, of that county. The stone for the foundation was obtained from the Madison county quarries near Winterset, and for the basement from the old Capitol quarry in Johnson county, near Iowa City. The outside steps and platform are of the "Forest City" stone, from near Cleveland, Ohio, and the rails of granite from Sauk Rapids, Minnesota. All the columns, piers and pilasters in the corridors of the first story, are from Lemont, Illinois; most of those in the basement, from Anamosa, and the red granite columns of the second story, from Iron Mountain, Missouri.

The statuary, beginning north of



THE NATURAL SCIENCE BUILDING OF THE STATE UNIVERSITY .
It is constructed of brick, 114 by 74 feet, and contains four large lecture rooms, four laboratories, a large museum and professors' rooms.

the library door, represent History, Science, Law, Fame, Literature, Industry, Peace, Commerce, Agriculture, Victory, Truth and Progress.

The four pictures on the ceiling of the supreme court room, are of the type of Greek mythology, and represent Justice, Columbia, Justice and Peace ruling over the land and bringing prosperity, culture and happiness, and Ceres, the goddess of agriculture.

Its general dimensions are: length north and south, 363 feet; breadth, 246 feet, and height to top of finial, 275 feet. The height of the first story is 23 feet; of the second, 22 feet, and of the third, 20 feet. The diameter of the rotunda is 66 feet and of the dome, 80 feet. The senate chamber is 58x91 feet, the house of representatives 74x91 feet and the library 52x108 feet. It is lighted by an electric light that requires an engine of eighty-horse power.

The last stone was laid June 18, 1881, and the interior was completed two years later. The work was all done by the day, the structure was paid for as completed and the cost was nearly \$3,000,000.

“From spire and from dome,
From shop, school house and home,
Ring a glad chime;
Sing of her constant gain,
Her wealth of brawn and brain,
Noble, sublime.”

STATE UNIVERSITY OF IOWA, IOWA CITY.

(See group of buildings, p. 60.)

“Blessings on Science and her hand-
maid Steam!
They make Utopia only half a dream;
And show the fervent of capacious
souls,
Who watch the ball of Progress as it
rolls.”—MACKAY.

In the year 1840, the congress of the United States passed an act setting apart two townships for the use and support of a University within the Territory of Iowa, whenever it should become a state. This gift was accepted, as set forth in the constitu-

tion of the state, and in 1847, the University of Iowa was organized by an act of the legislature of Iowa, approved February 25, 1847. The General Assembly at this session granted the capitol building at Iowa City, together with the ten acres of land on which it was situated, for the University. It also donated at the same time, two townships or seventy-two sections of land, to constitute a permanent fund for the endowment of the institution and such branches as might be later established.

The organization was completed by the appointment of a Board of fifteen trustees, who held their first session July 15, 1847. In January, 1849, two branches of the University were established—one at Fairfield and the other at Dubuque. The latter gained only a nominal existence. At Fairfield, the board of directors organized and erected a building at a cost of \$2,500. This was nearly destroyed by a hurricane the following year, but was rebuilt by the citizens of Fairfield. This branch never received any aid from the state, and January 24, 1853, its relation to the state was terminated. In February, 1854, the Medical College located at Keokuk, was recognized and established as the medical department of the University.

Very little, however, was accomplished until 1855, when the institution at Iowa City was first opened for the reception of students.

In April, 1858, the University was suspended in all its departments, in order that the productive fund might accumulate so as to enable the institution to be established upon a more liberal basis. The University was subsequently reorganized, and under the new organization reopened on September 19, 1860, and this may fairly be regarded as the date of the beginning of the existing institution.

The control of the University is in-

trusted to a Board of Regents, consisting of the Governor of the state and the Superintendent of Public Instruction, ex-officio, and one member from each congressional district, who are elected by the General Assembly to serve six years.

The University comprises the following six departments: Collegiate, Law, Medical, Homeopathic Medical, Dental and Pharmacy.

The Collegiate Department embraces four general courses of study—one classical, two philosophical and one general scientific; and two technical courses—civil engineering and electrical engineering.

The growth of the University has been very encouraging. The last catalogue issued (1898) shows an enrollment of 1313 students in the various departments. With the progress of years, new buildings have been erected until there are now twelve fine, large buildings, costing \$424,000, supplied with apparatus costing \$150,000, all available for the various uses of the University.

The central building in the group that appears on page 60, is the former state capitol. It is built of stone, 120x60 feet, and is two stories in height. At the right of it are the Medical and West buildings, and on the left the Dental building. Cuts of Close Hall, the Natural Science building, the Chemical Laboratory and the Medical Hospital may also be seen in this volume.

Prof. A. N. Currier is acting-president of this institution; President Charles A. Schaeffer having died September 23, 1898.

THE IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, AMES, IOWA.

WM. BEARDSHEAR, LL. D., PRESIDENT.

"The farmer's trade is one of worth;
He's partner with the sky and earth;
He's partner with the sun and rain;
And no man loses for his gain;

And men may rise, and men may fall;
The farmer he must feed them all."

The Iowa Agricultural College, erected in 1868, occupies a delightful and healthful location upon high, rolling land just west of Ames, Story county, thirty-seven miles north of Des Moines. The college domain includes 860 acres, of which about 120 acres in the southwest part, have been set apart for the college buildings and grounds. Fifteen commodious buildings, heated mainly by steam and lighted by electricity, have been erected by the state at a cost of \$500,000, for the exclusive use of the various departments of the college. These buildings are clustered around an attractive and beautiful campus, that affords delightful scenery and a most healthful environment.

The entire equipment of this institution, in buildings, lands and endowment provided by the state and nation, represent an investment of \$1,250,000. It is the pride of those in authority, to equip each department with the tools, apparatus and facilities that will most wisely and thoroughly furnish a suitable outfit for the efficient work of the students and faculty. Tuition is free to students of Iowa; those outside the state are charged \$30 a year, though this is usually remitted to worthy students by the faculty or trustees. The college library contains 11,500 volumes, catalogued by the Dewey system. The Museum of Natural History is comprehensive, and the cabinet of Mineral Specimens furnishes material from many parts of the globe, for the study of geology.

The curriculum provides for a short course in Agriculture and Dairying; a three years' course in Veterinary Science, and four-year courses in Agriculture, Science, Mechanical, Civil, Electrical and Mining Engineering; and a Special course for ladies. For the study of Horticulture the fields,

gardens, green-house and grounds afford exceptional advantages. The national government gives the college annually about \$35,000, for original investigation and experimentation in agriculture and the sciences related to the industries. This enables those in authority to make the fields and the barns veritable laboratories of extensive and most practical investigation and observation. After this year (1898) the college commencement will be held in June instead of November, and the college year will open the last of July instead of February.

The history of this institution begins with the year 1858, when the legislature passed an act appropriating \$10,000 for the purchase of a farm on which to locate an Agricultural College. In 1859, a tract of 648 acres in Story county was purchased, and that county made a donation of \$10,000 towards it, that was supplemented by \$7,000 contributed by citizens of Story and Boone counties.

In July, 1862, congress appropriated to the several states in the Union, for agricultural colleges, 30,000 acres of land, for each senator and representative in congress. Every state accepting this grant was required to erect the necessary college buildings within five years from the acceptance of the grant, and without using any of the proceeds of the lands for that purpose. The state of Iowa, at the special session held in September, 1862, accepted this grant and received 240,000 acres. These lands were selected, from those that had not been previously homesteaded or sold in the various counties of the state, and they were designated "Agricultural College" land. The income from these lands is intended to meet the annual expenditures of this institution, although a part was used for the purchase of additional land as a suitable site for the college buildings and grounds.

In 1890, a bill for the more complete endowment and support of these colleges, was approved by President Harrison. It appropriated \$15,000 for the year ending June 30th, that year, and provided for an annual increase of the amount of each appropriation thereafter for ten years, by an additional sum of \$1,000 over the preceding year.

The object of this institution is "to advance and conserve the interests of agriculture and the mechanic arts," with the practice of agriculture, and to seek to make use of this intelligence in developing the agricultural and industrial resources of the state. Its aim is to make the student familiar with the things immediately around him, the powers of nature he employs and the material, through which under the blessings of Providence, he lives and moves and has his being; and since Agriculture, "the great mother science and industry of the ages," more than any other of the industrial arts is important to man, it follows that this should receive the highest degree of attention. Whatever is necessary for man to have done is honorable for man to do, and the grade of honor ensuing is dependent upon the talent and fidelity exhibited in performing it. All students, without regard to pecuniary circumstances, are therefore required, at this institution, to perform manual labor as an essential part of the college education, discipline and training.

"He that by the plough would thrive Himself must either hold or drive."

The Iowa Experiment Station, in connection with this institution, was established in accordance with an act of congress, approved March 2, 1887, for the purpose of aiding "in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and ex-

periments respecting the principles and applications of agricultural science." It is subject to the regulations of the United States department of agriculture. The results of all agricultural investigations and experiments, including those relating to live stock, are published in bulletins that are issued quarterly, and sent free to all farmers of the state applying for them.

Views of the Main building, Morrill Hall and the Farm Barns may be seen on pages 64, 68 and 72.

THE IOWA STATE NORMAL SCHOOL,
CEDAR FALLS,

HOMER H. SEERLEY, A. M., PRESIDENT.

"Study to show thyself approved;
* * * apt to teach."—PAUL.

The public belief in the special education of teachers as a necessity, existed before the year 1876, when the legislature of Iowa decided to found a Normal school and maintain it thereafter as one of the necessary state institutions. The Normal school graduate from New York, Pennsylvania and other states, had already proved the practical advantage of such education and had created a public demand for professional teachers, before there was any local supply.

Hon. T. S. Parvin, of Cedar Rapids, at the very beginning of the school system in Muscatine, had sent to New York to obtain a trained teacher, in the person of D. Franklin Wells, and had introduced the spirit and methods of Normal work among the teachers. In the year 1849, by an act of the legislature, the state was divided into three Normal districts, and a Normal school located in each as follows: One at Andrew in Jackson county, one at Mt. Pleasant in Henry county and one at Oskaloosa in Mahaska county. Of the three schools thus located, only one—that at Andrew—was opened; and it was maintained only for a few years, the state

in 1855, ceasing to make the annual appropriation towards its support. In the same year a Normal department was added to the State University, that was maintained for seventeen years. Prof. D. F. Wells became principal of this Normal Department of the State University and by his instruction to the advanced students in the "science and art of teaching," made it the most prominent department of that institution. In 1873 this Normal Department of the University was abolished and in its place there was established a chair of Didactics—the first professorship of teaching, established, it is said, in any college or university in the United States.

The founding of a Normal school was now advocated by state superintendents, by the state teachers' association and by leading teachers and citizens, so that the demand was prominent in public opinion. In the year 1876, Hon. H. C. Hemenway, the representative in the General Assembly, from Black Hawk county, supported energetically the measure and secured the passage of a bill, with a majority of one vote, that gave to the present institution at Cedar Falls, a legal existence.

The Board of Regents, appointed by Governor Kirkwood, did a wise act in the selection of Prof. J. C. Gilchrist as the first president of the faculty, as he was the best informed man in Iowa at that time, to undertake the great task, and he probably accomplished a work, during his ten years of public service, at this institution that is rarely equaled for permanency and efficiency. The other members of the first faculty, M. W. Bartlett, D. S. Wright and Miss Frances L. Webster, were also wisely chosen.

This institution, established for the special training of teachers for the common schools of the state, was opened for the reception of students,

September 6, 1876. It has now an equipment consisting of six buildings and forty acres of ground, estimated at \$167,500, that are used exclusively for the work of the school and residences of its officers. North Hall, previously one of the soldiers' orphans' homes, was transferred March 5, 1876, and became the original home of the school. The superintendent's home was transferred at the same time and both buildings were reconstructed to adapt them to their new uses. South Hall, in which are the chapel and laboratories of physics and chemistry, was erected in 1882, at a cost of \$30,000. Central Hall, containing the president's offices, the library and the museum, was erected in 1895, at a cost of \$35,000. The steam plant that heats the entire institution was erected in 1896. The library, which is free to all students, contains more than 8,000 volumes.

The students are charged an expense fee of \$5.00, a term of twelve weeks. To secure entrance as a teacher-student, it is necessary for each applicant to sign the following declaration. "I hereby declare that, in becoming a student of the Iowa State Normal School, it is my intention, in good faith to follow the business of teaching in the state of Iowa."

The moral and religious influences of this institution are very excellent. There is, perhaps, no school in the state that has more religious work in progress or that is more successful in influencing students to undertake and maintain a life of high moral and religious culture.

The use of tobacco, being a hindrance to intellectual progress and unbecoming in a teacher, is not allowed in any form at this institution. Games of chance and other amusements that hinder study, are also prohibited, and indulgence in the use of intoxicating liquors is regarded as a very serious offense.

Two members of the first faculty, Prof. M. W. Bartlett and Prof. D. S. Wright, continue in charge of their respective departments; Miss Anna E. McGovern since 1880, and Prof. Seerley since 1886.

New departments have been added as follows: Music in 1878; Special Training in 1884, discontinued two years later and reorganized in 1891; Latin in 1897 and the Military in 1892. The latter is in charge of a retired U. S. army officer, Major W. A. Dinwiddie.

In the year 1878, the first graduating class numbered four persons, and in 1898, there were 186 graduates, making the whole number in twenty-two years, 1325. The number of students in attendance last year was 1318.

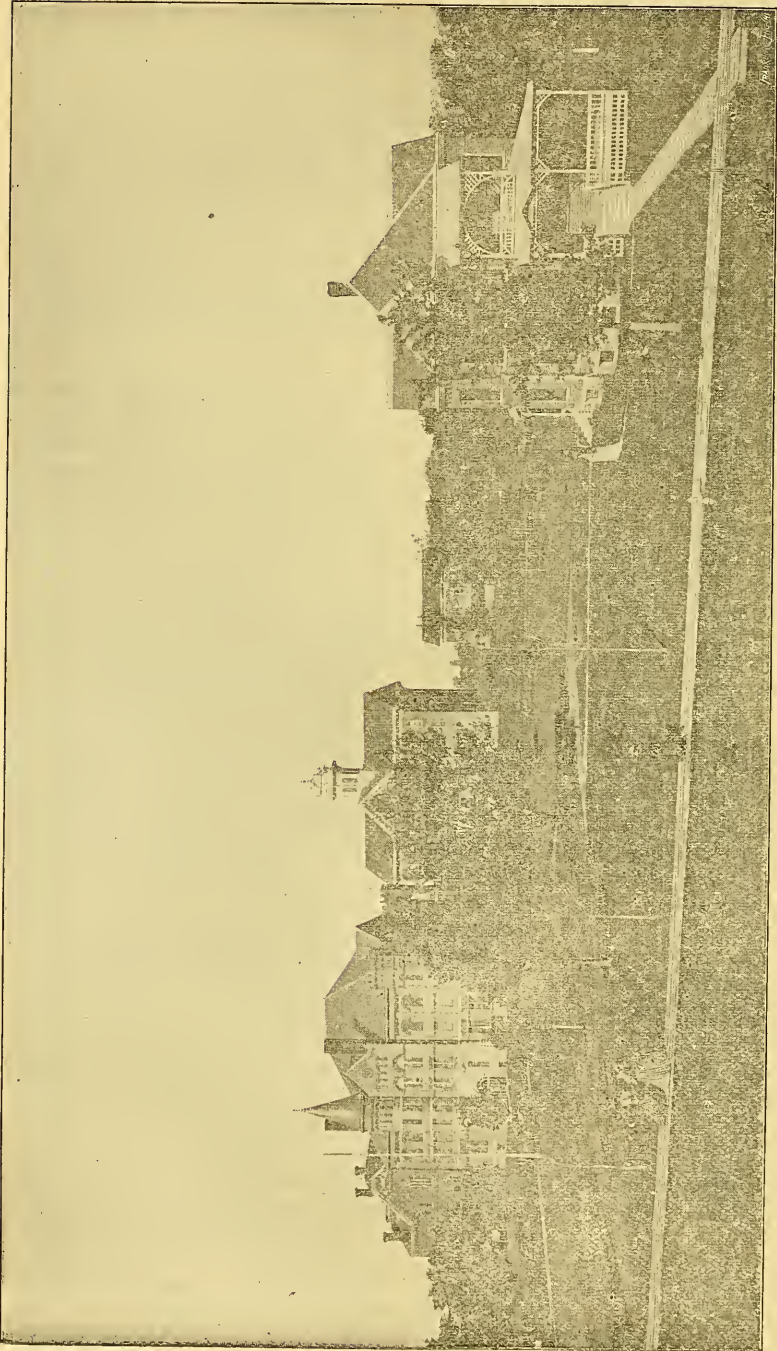
THE IOWA COLLEGE FOR THE BLIND,
VINTON.

THOMAS F. MCCUNE, A. M., PRIN.

"I will bring the blind,
By a way they knew not;
I will lead them in paths
They have not known."—ISAIAH.

The Iowa College for the Blind, established at Iowa City in 1852, and opened for students the year following, was transferred to its present location at Vinton, Benton county, in 1862. The college, as its name indicates, is a school, not a home, and the annual session begins on the first Wednesday of September and ends on the second Wednesday of June, following. During the summer vacation the students are required to return to their homes, and all officers and employes are then discharged, except those necessary for the care, cleaning and repair of the buildings.

The biennial report of 1897 shows that 186 pupils were in attendance that year, and 208 the year previous. During the forty-five years of the existence of this institution, 1007 students have been enrolled, of whom fifteen per cent make their own living and forty per cent are educated and



STATE NORMAL SCHOOL BUILDINGS AND GROUNDS, CEDAR FALLS, IOWA.

Central Hall.

North Hall.

Superintendent's Residence.

President's Cottage.

South Hall.

respectable members of society. Of the whole enrollment, ten per cent have completed the literary course and received their diplomas. Four have become successful ministers of the gospel; one is an evangelist of more than ordinary power; one is rapidly rising into prominence as a writer of stories for children, and another, as author and lawyer, has attained a marked standing in one of the largest cities of the land.

The main building, 108x70 feet, is located near the center of the grounds that comprise forty acres. These are beautifully arranged and ornamented with all kinds of trees and shrubs. The estimated value of the buildings, grounds, machinery, etc., represented by this institution, is \$313,650.

Its design is to furnish to the blind children of the state equal educational advantages with children who enjoy the boon of sight. The branches taught are raised print, point system, arithmetic, spelling, geography, history, grammar, natural philosophy, civil government, political economy, geometry, English and American literature.

The department of music is supplied with twenty-three pianos, one pipe organ, three cabinet organs and a sufficient number of violins, guitars, bass viols and brass instruments. Every student capable of receiving it is given a complete course in this branch.

In the industrial department the girls are required to learn knitting, crocheting, fancy work, hand and machine sewing; the boys, netting, mattress making and cane seating. Those of either sex who desire, may learn carpet weaving and broom making.

Several years ago, congress appropriated \$250,000 as a permanent fund, the interest of which, \$10,000, was to be paid semi-annually to the trustees of the American Printing House for the Blind, a corporate body, in Louisville, Ky., to be expended in publish-

ing embossed books and manufacturing apparatus for the blind. These books and apparatus are supplied to the thirty-seven institutions for the blind in the United States, in proportion to the number of pupils in attendance at each.

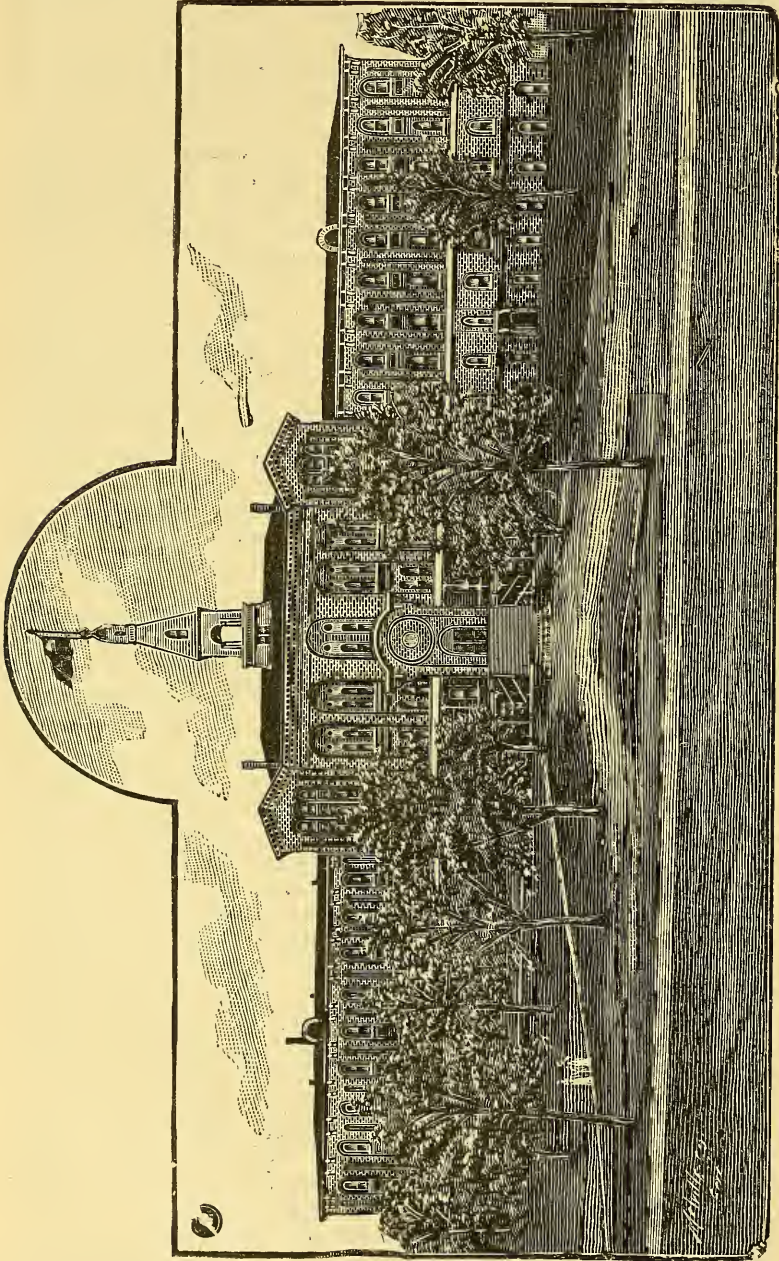
No work presents more complex problems than that of educating the blind, yet no work has made greater progress than this during the last quarter of a century.

INDUSTRIAL HOME FOR THE BLIND, KNOXVILLE.

The Industrial Home for the Blind was established in 1890, by the Twenty-third General Assembly, which appropriated \$40,000 for the purchase of grounds and the erection of buildings. Under the provisions of this act, the governor appointed a board of commissioners to select a location and superintend the construction of the buildings. They selected Knoxville, Marion county, as the site for the Home, and by January 1, 1892, had it ready for the admission of inmates, with accommodations for two hundred.

The object of this institution is the instruction of the adult blind of the state in some suitable trade or vocation, and to furnish a working home for the blind, who have learned a trade or vocation and desire to be employed therein. It is open to every blind person who has a legal residence in the state and is physically and mentally able to perform such labor as may be required in the trade or vocation carried on therein. Broom making is the principal industry. Hammocks and nets are also made. All assignments of work are made on the basis of adaptation. Each works at that for which he is specially fitted and is paid what he earns, according to a schedule of wages.

The legislature makes biennial appropriations for its support, those last made for the years 1898 and 1899, amounting to \$18,000.



IOWA SCHOOL FOR THE DEAF, COUNCIL BLUFFS.

Center of building is five stories high, wings four stories each. Entire length is 320 feet, width 60 feet. Established in 1855.

During the first five years of its existence, or the period ending June 30, 1897, ninety-one inmates had been received and they had made 26,966 dozens of brooms, 8,411½ dozens of whisks, 1,071 hammocks and 330 nets.

The value of the property represented by this institution is estimated at \$30,000, and it is in charge of three trustees who are elected by the legislature for a term of six years. Cam. Culbertson is the present superintendent.

IOWA SCHOOL FOR THE DEAF,
COUNCIL BLUFFS.

HON. HENRY W. ROTHEBT, SUPT.

G. L. WYCKOFF, PRINCIPAL.

“Education is a capital to a poor man, and an interest to a rich man.”
—HORACE MANN.

The Iowa School for the Deaf is located in Pottawattamie county, three miles east of the city of Council Bluffs. Arrangements were made for the establishment of this institution by the General Assembly of Iowa, in January, 1855. It was located first at Iowa City, where Mr. W. E. Ijams, a gentleman of liberal education and considerable experience in the instruction of the deaf, had established a private school for their benefit. In December, 1870, it was transferred to Council Bluffs, where permanent and commodious buildings have been provided for its use. It was first called a “State Institution for the Deaf and Dumb,” but this name was changed to its present form in 1892.

The main building is one of the largest structures in the state, being 350 feet long, 60 feet wide and five stories high in the central part. The wings of this building are used chiefly for sleeping apartments, while in the central part provision is made for study, the care of the sick and the reception of friends. The school house, two stories in height, contains twenty large, well ventilated recitation rooms. The center building of the Industrial

Schools was erected in 1889, to meet the growing and urgent requirements of the Industrial Department of this institution. It contains a large steam cylinder press, on which a weekly paper, The Deaf Hawkeye, is printed. The south wing of this building was erected in 1875, and at that time it was considered ample to provide for the wants of this school. The Chapel and Dining Hall are in the same building, 70x85 feet, two stories in height. All of these buildings are of brick, and together with grounds, apparatus, etc., represent an investment by the state of \$400,000.

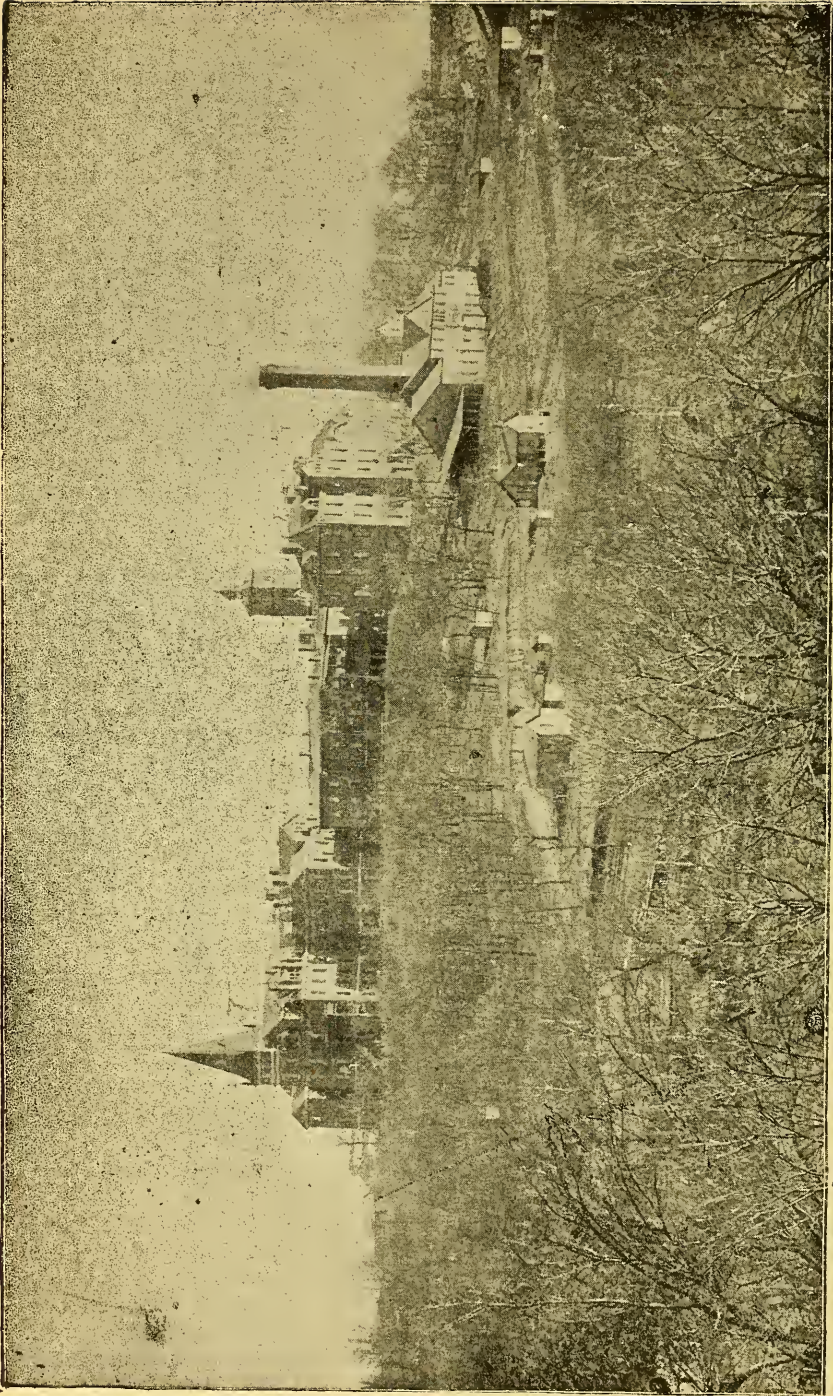
This institution is free to all from the age of nine to twenty-five, who are too deaf to be educated in the common schools, but who are sound in mind, free from immoral habits and free from contagious or offensive diseases. A competent corps of instructors of long and successful experience is employed in every department. The trades taught in this institution are printing, shoe-making, carpentering, dress-making, farming and gardening, drawing and painting; light housework, plain sewing and knitting are also taught. The session of the school begins the 1st day of October and continues until the last day in June of each year.

IOWA INSTITUTION FOR FEEBLE MINDED
CHILDREN.

“The secret of life—it is giving;
To minister and to serve.”

—LUCY LARCOM.

This worthy institution is located at Glenwood, Mills county. Three homes for orphan children had been founded during the war of 1861-1865, and maintained by the state until 1876, when the number of dependent children having greatly diminished, it was decided to unite them in the present institution at Davenport. This closed the homes at Cedar Falls and Glenwood, and the former became the State Normal School and



IOWA INSTITUTION FOR FEEBLE MINDED CHILDREN, GLENWOOD. (Before the Fire.) Established 1876. F. M. POWELL, Supt.

the latter the Institution for Feeble Minded Children. The first child was admitted, September, 1876. For a time there was an unwillingness on the part of parents of this class of children to turn them over to its care, but now that diffidence has been largely outgrown. The present buildings cost \$350,000, the furnishings and machinery \$35,000 and together with the 300 acres of land on which they are located, represent an investment of \$405,000.

The aim of this institution is to provide special methods of training for that class of children, who are deficient in mind or marked with such peculiarities as may deprive them of the benefits and privileges provided for children with normal faculties. It aims to make the children as nearly self-supporting as practicable and enable them to approach as nearly as possible the actions of normal people. It further aims to provide a home for those who are not susceptible of mental culture, but must rely wholly on others to supply their simple wants.

In the school department, lessons are imparted in the simple elements of instruction taught in the public schools, as well as in the industries suited to their capacities. Children are admitted between the ages of five and eighteen years.

THE IOWA SOLDIERS' ORPHANS' HOME
AND HOME FOR INDIGENT CHILDREN, DAVENPORT.

At the outbreak of the rebellion, in 1861, the state of Iowa was settled chiefly by young men of limited means, who were maintaining their families, to a great extent, by agricultural pursuits. The call for volunteers was answered patriotically. Large numbers went to the front and many, falling in the defense of their country and homes, left their families in destitute circumstances. Some of the benevolent people of Davenport, among them Hon. Hiram Price, Hon.

John L. Davies, Mrs. P. V. Newcomb and many others, conceived the plan of founding a home for the orphan children of Iowa soldiers, to be supported by the charity of Iowa people, assisted by the comrades of the fallen heroes. Similar enterprises were undertaken at Farmington, Glenwood and Cedar Falls.

The Davenport Home was first organized December 1, 1863, as a private charitable institution, and was opened for the reception of children, July 13, 1864, utilizing the old barracks, known as Camp Roberts.

In June, 1866, it became a state institution, under the name of the Iowa Soldiers' Orphans' Home, the legislature assuming control of it and providing a special fund for its maintenance and for its permanent location at that place. In 1876 it became the only home for soldiers' orphans, in Iowa, by the transfer of those at Cedar Falls and Glenwood. The sphere of its usefulness was widened the same year by opening its doors to other dependent children of the state. Two classes of children are therefore now received; first, soldiers' orphans, who are maintained by the state, and second, county orphans, who are maintained by the counties sending them.

Only children healthy in body and mind are admitted, and these for no period less than one year. None are received under the age of one year, and the boys are not kept beyond fifteen, nor the girls after sixteen. Homes in families are then solicited for them.

This institution now consists of eighteen well equipped cottages, accommodating from twenty-five to thirty-five children each, a school-house with seating capacity for 500 children, a large, two-story hospital, a laundry and engine house, a manual training building and a barn with a storage capacity for 100 tons of hay and stable room for twenty-five cows

and six horses. These buildings are located on a beautiful plot of ground containing 57 acres, in the east suburban part of the city, and represent an investment of \$180,595. The average number in the home the last year (1897) was 487.

THE SOLDIERS' HOME, MARSHALLTOWN.

The legislature made provision for the establishment of the Iowa Soldiers' Home at Marshalltown, in 1886, and the main building was opened with proper ceremonies, November 30, 1887. Since that time enlargements and improvements have been made so that the estimated value of the buildings is \$183,200; the grounds, over 400 acres, \$25,000, and miscellaneous property, \$16,000; total value, \$224,200.

This institution is maintained for dependent, honorably discharged Union soldiers, sailors and marines, their dependent widows, wives and mothers and dependent army nurses. It is a worthy monument of the grateful patriotism of the people of the state towards its defenders, who, broken in health, or suffering from wounds received in their country's dangerous service, now need its care. Women were first received in 1893, when four were enrolled. The annual enrollment shows that the number of persons at this home has been as follows:

1888.....140	1893.....376
1889.....258	1894.....404
1890.....349	1895.....516
1891.....432	1896.....605
1892.....426	1897.....632

A number of cottages have been erected for the accommodation of married veterans needing the advantages of this home.

INDUSTRIAL SCHOOLS, ELDORA AND MITCHELLVILLE.

Two industrial or reformatory schools, one for boys, at Eldora, Hardin county, and one for girls, at Mitchellville, Polk county, have been founded by this state, and are maintained for the purpose of reforming youthful

offenders or those who, through lack of proper home control, promise to become criminals.

The school at Eldora was opened September 1, 1868. The improvements consist of a main building, costing \$50,000, five family buildings costing the same amount, a hospital, shop, chapel, barn, electric and steam heating plants and other necessary improvements, on 760 acres of land that altogether represent an investment of \$201,500. About 450 boys are now cared for at this institution.

The school for girls was opened at Mitchellville in 1879, as a branch of the former. The improvements consist of a main building, two family buildings, hospital, barn, electric plant, steam heating apparatus, etc., located on 160 acres of land, all valued at \$90,125.

The children who are committed to these schools are not the hardened, irredeemable criminals, but those who are young in years—eight to sixteen—and whose natures are still susceptible to the influence of kindness, moral training and proper discipline. These beneficent influences could never accomplish the desired results amid the environments of prisons and penitentiaries.

Our state has wisely taken these facts into consideration, and no less in self-defense than in charity, has established these institutions as homes for our unfortunate youth. It has enjoined upon those who have the supervision of these schools the duty of having the boys and girls instructed in morality, such branches of useful knowledge as are adapted to their age and capacity and in some regular course of labor. The results of the work done by these schools prove beyond a doubt the possibility to reclaim wayward youth and make good citizens of them when they are put under proper control.

HOSPITALS FOR THE INSANE, MOUNT PLEASANT, INDEPENDENCE, CLARINDA AND CHEROKEE.

Liberal provision has been made by the people of this state for the care of the insane, by the erection of four large and commodious hospitals or asylums.

The one at Mount Pleasant, Henry county, was established January 24, 1855, by an appropriation of \$44,425 for 160 acres of land and buildings. It was formally opened March 6, 1861. The development of this institution is expressed in the following estimates of value: Buildings \$800,000; grounds, including farm, \$58,000; miscellaneous property \$100,000; total value \$958,000.

The second, located at Independence, Buchanan county, was opened May 1, 1873. The investment here is as follows: Real estate \$26,400; buildings \$1,015,950, making with other improvements, \$1,112,020.

The third, located at Clarinda, Page county, was opened December 15, 1888. This institution has 513 acres of land and accommodations for 1000 patients. The inventory shows value of land \$38,475 and of buildings \$821,000, making with other permanent improvements and fixtures, \$923,356.

The fourth, located at Cherokee, Cherokee county, in 1894, is not yet completed. The appropriations have been \$24,000 for 640 acres of land and \$400,000 for the erection of buildings.

PENITENTIARIES, FORT MADISON AND ANAMOSA.

This state has now two penitentiaries, one at Fort Madison, in Lee county, and the other at Anamosa, Jones county.

The one at Fort Madison was established by an act of the territorial legislature, January 25, 1839. In the act of congress, establishing the territory of Iowa, provision was made for the government to appropriate money for

the erection of public buildings, and under this provision the old Capitol at Iowa City (now used by the State University) and the main building of the penitentiary at Fort Madison were built. The latter was completed in 1841, and is probably the only building of the kind provided for any state at the expense of the national government. The value of the present buildings and wall is \$500,000; other property additional, \$45,000.

In 1872, an additional penitentiary was built, mainly by convict labor, at Anamosa. It is a very fine structure and has a library of more than 3300 volumes. The present value of buildings and grounds is estimated at \$2,650,000; machinery and supplies additional, \$32,000.

The criminal statistics show that the number of inmates in these institutions during the past ten years has been, in December, as follows:

1886.....	666	1892.....	662
1887.....	638	1893.....	806
1888.....	588	1894.....	898
1889.....	599	1895.....	999
1890.....	603	1896.....	1086
1891.....	668	1897.....	1145

OTHER STATE ORGANIZATIONS AND SOCIETIES.

The State Library, established in 1860, and the State Historical Department, organized July 1, 1892, have their location in the Capitol, at Des Moines. Though separate and distinct institutions, they are managed by the same board of trustees, consisting of the Governor, the Supreme Judges, the Secretary of State and the Superintendent of Public Instruction.

The State Library was founded for the special benefit of the Supreme Court, but afterwards there were added other books useful to the members of the legislature and other state officers. In 1895, it contained 45,000 volumes, of which 21,000 were in the law department. It has grown until it has become known as one of the best libraries in the United States, and is,

therefore, a great institution for reference and study.

The Historical Department, commonly known as the Aldrich collection, was established for the purpose of promoting the collection and preservation of historical materials relating to Iowa, and the territory from which it was established. Three rooms located in the southeast basement story of the Capitol have been set apart for this collection and they are in charge of Hon. Charles Aldrich, curator, the founder of the collection.

In 1884, Mr. and Mrs. Chas. Aldrich, residents of Webster City, through the trustees of the State Library, presented the state their autograph collection, on the condition it should be kept by itself, in suitable cases, in the library, and that they should be permitted to make additions to it from time to time thereafter. From this beginning, through the personal efforts of Mr. Aldrich, has grown the "Historical Department of Iowa," with its wealth of facts, curios and collection—a veritable depository of varied and valuable historical matter—perhaps the most elaborate possessed by any state in the Union. This collection is always open to the free inspection of the people, to whom it now belongs.

The Historical Society, organized in 1857, for the purpose of collecting, arranging and preserving a library of books, pamphlets, statuary and other material, illustrative of the history of Iowa, has its headquarters at the State University, Iowa City. It publishes quarterly a periodical of 80 pages entitled, *The Annals of Iowa*.

The Agricultural Society, organized in 1854, held the first state fair in October of that year. Previous to 1885, the annual exhibitions of the products of the state were held in different localities, but that year large and valuable grounds were purchased at Des Moines, and the official

headquarters of the society were located permanently in the Capitol.

The Horticultural Society, organized in 1864, has for its object the promotion and encouragement of horticulture and arboriculture in Iowa, by the collection and dissemination of practical information regarding the cultivation of such fruits, flowers and trees as are best adapted to the soil and climate of the state. It publishes lists of fruits, as well as trees for timber or ornament, that may be successfully grown in this state. In order to facilitate this work the state is divided into twelve districts, each having its own director, and holding its own yearly meeting. It has now established twenty experimental stations in different parts of the state for the purpose of testing trees, shrubs, plants and fruits before recommending them for cultivation.

It is a voluntary association, the annual membership fee being \$1.00, and a life membership \$5.00. The annual meetings, since 1892, are ordinarily held at their rooms in the Capitol, on the second Tuesday of December, and the proceedings are published in an annual report that is usually full of interesting and valuable papers. This is sent free to all the members of the society.

The Improved Stock Breeders' Association, organized in 1874, has for its object the improvement of Iowa live stock and the promotion of that industry.

The Iowa State Teachers' Association is a voluntary organization of educators from the various departments of that work in the state. This association was formed at Muscatine, May 10, 1854, and holds an annual convention during the holidays.

The Iowa Academy of Sciences, organized in 1886, has for its object the encouragement of scientific work and the collection of a library for the state, consisting of the publications of

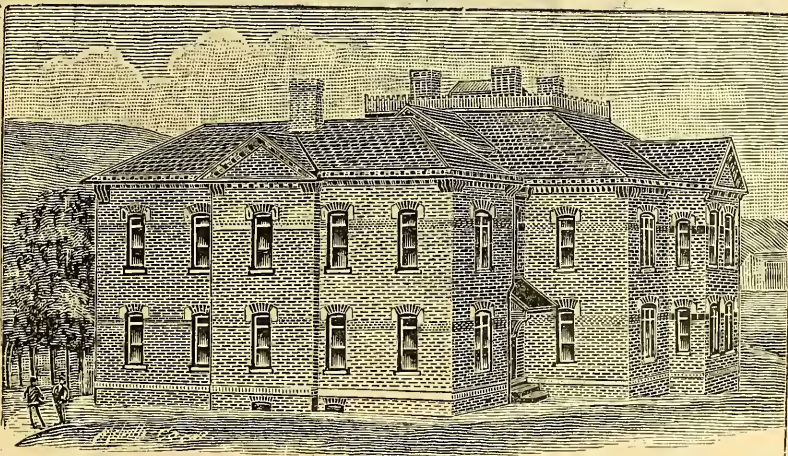
the scientific societies of the world. It holds an annual meeting at the same time and place as the State Teachers' Association.

The Educational Board of Examiners was created in 1882, to encourage training in the science and art of teaching, and consists of the Superintendent of Public Instruction, the Presidents of the State University and State Normal School and two additional persons, one of whom must be a woman, appointed by the governor. This Board holds at least two examinations annually, and issues state certificates for five years and state diplomas for life, to competent, experienced teachers who are examined by it.

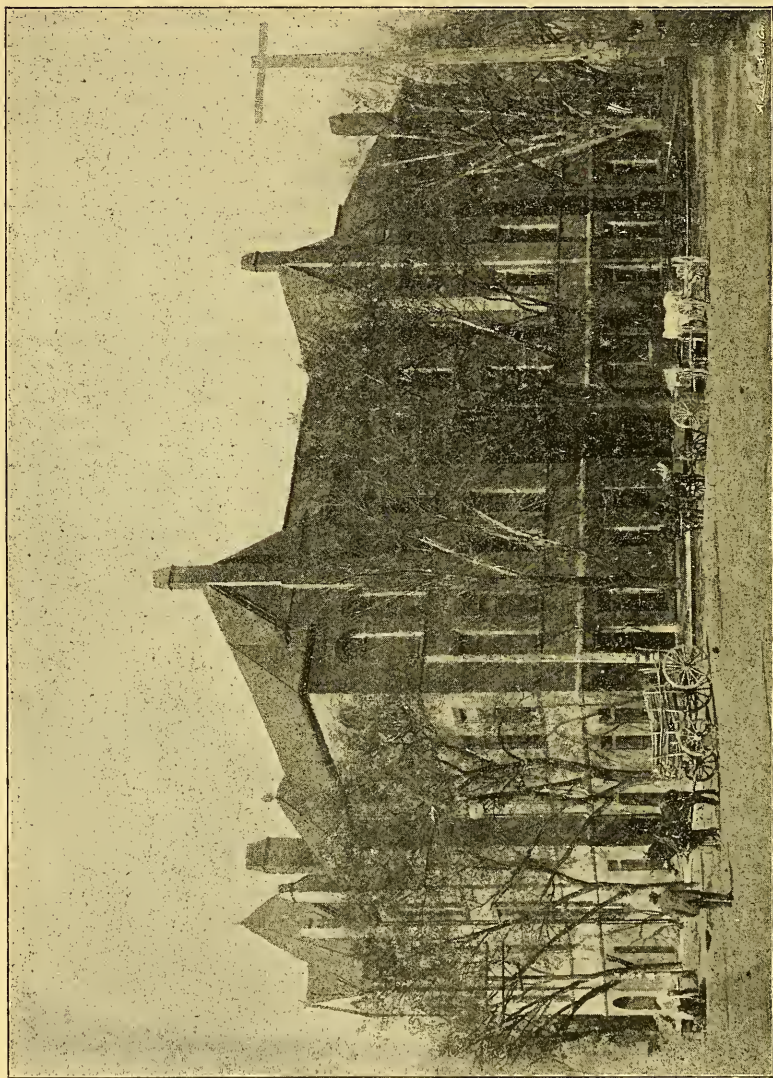
There are three State Boards of Control that issue certificates to those entering their respective fields of effort, namely: The Commissioners of Pharmacy, created in 1880; the Board of Dental Examiners 1882, and the Board of Health, in 1886.

The members of the latter are appointed by the governor, one each year, and they hold office for a term of seven years. To regulate the practice of medicine, a State Board of Medical Examiners was created in 1886, to consist of the physicians of the State Board of Health and its Secretary. Every person practicing medicine in the state of Iowa is required to procure a certificate from this Board.

The first geological survey of the state was instituted January 31, 1855, by the appointment of James Hall, of New York, as State Geologist. The second was authorized April 2, 1866, by the appointment of Charles A. White, of Iowa City, as State Geologist, and he published two volumes of valuable information. The third survey was authorized in 1892, when the Geological Board appointed Samuel Calvin, of Iowa City, as State Geologist. Three valuable volumes have been prepared by him and the survey is still in progress.



SCHOOL HOUSE OF SCHOOL FOR THE DEAF, COUNCIL BLUFFS.



THE CHEMICAL LABORATORY, STATE UNIVERSITY, IOWA CITY.

X.

EDUCATION, RELIGION AND PATRIOTISM.

"The rewards of Heaven are to be the development of something within us, rather than the addition of something from without."—STINSON.

EDUCATION.

"An investment in knowledge always pays the best interest."



THE first school in the present limits of Iowa was taught by Berryman Jennings, at Nashville, Lee county, in the last months of the year 1830. In December of the same year, J. K. Robinson began a term of school at Keokuk. In the winter of 1833-4, Geo. Cabbage taught a school in a log church in Dubuque. The first lady teacher was Mrs. Rebecca Palmer at Fort Madison in 1834. In 1837, Louisa King opened a school for young ladies, at Dubuque, and conducted it for several years. In 1839, Alonzo Phelps established in the same city a classical school for both sexes, that was afterwards continued by Thomas H. Benton, Jr.

The first building used chiefly as a public school house, was erected of roughly hewn logs, donated by the patrons, at Burlington in 1833. The school house built at Dubuque in 1844 was the first one erected from funds derived by taxation under the law of January 1, 1839, which granted the voters of any school district the power to levy a tax, select a place and build a school house.

The constitution under which Iowa entered the Union in 1846, declared: "The General Assembly shall encour-

age by all suitable means the promotion of intellectual, scientific, moral and agricultural improvement." It also required that every school district support a school at least three months each year. The right and duty of a state to maintain a general system of popular education and generously to support the same by a uniform levy of taxes, became thus clearly recognized and permanently established as the policy of the new state.

The school law of 1849, authorized the electors of any district to determine whether a school of higher grade should be maintained, and several of the more populous districts, availing themselves of this favorable enactment, very early began to classify and grade their schools.

During the fifties, the increase in population became very rapid and there was a corresponding development of school facilities. Rural communities and villages multiplied as if by magic, towns put on the air of cities, larger school-houses were demanded and supplied, and the need of graded and high schools became more keenly felt. Before 1860, the cities of Dubuque, Davenport and Tipton had made provision for a systematic organization and the selection of a city superintendent.

Previous to 1857, the money raised by general taxation proved insufficient to maintain the schools as long a period each year as the people desired, and the term of school was supplemented by subscriptions on the part of the parents or guardians of the pupils in attendance. An enlightened public sentiment at this time demanded that the schools be free and wholly supported by general taxation.

In 1858, the General Assembly of Iowa passed a comprehensive act, creating a State Board of Education, providing for the examination of teachers and, in general, embodying the essential features of the admirable system of education in this state, of which, including recent modifications, we append a brief summary.

1. Each civil township forms a school district and it is divided into as many sub-districts as there are neighborhoods requiring separate schools. When it is fully settled, the township will ordinarily consist of nine sub-districts, each embracing the families residing on four sections of land. Each sub-district elects annually, on the second Monday in March, a sub-director. These sub-directors compose the Board of Directors for the township, and meet regularly on the third Monday in March and September. In rural independent sub-districts,* the Board consists of three members, one of whom is elected annually to serve a term of three years. In the independent districts of cities of the first class, the Board consists of seven members and in other independent city or incorporated town districts, of five members all of whom are elected for a term of three years. It is the duty of these Boards of Directors to select sites and make contracts for the erection of school houses, to employ teachers, to determine the amount of tax necessary to be

raised in the district in addition to the state and county apportionment and to maintain a free school in each sub-district, at least six months in each year.

* 2. Each county elects biennially a Superintendent of Public Schools, who examines teachers, issues and revokes certificates, visits schools, hears and determines cases appealed from the board of directors, has general oversight of the public schools of the county and makes an annual report to the Superintendent of Public Instruction.

3. A State Superintendent of Public Instruction is elected biennially by the people, who has general supervision of the County Superintendents and of the public schools of the state. He renders written opinions on the administration of the school laws, determines cases appealed from the decisions of County Superintendents, appoints Teachers' Institutes in the various counties, prepares and distributes school laws and blanks to the County Superintendents and makes a biennial report to the General Assembly.

4. The public schools are maintained chiefly by funds derived from the following sources:

First, By the interest on the Permanent School Fund. This fund, now amounting to several millions of dollars, and constantly increasing, is derived from the sale of public lands donated by Congress, being section number sixteen in each township, the additional grant of 500,000 acres in the Act of December 28, 1846, admitting Iowa into the Union and from five per cent on the sale of government lands within the state.

Second, By a county tax of not less than one mill nor more than two and one-half mills on the dollar, on the assessed value of all taxable property in each county.

Third, By a district tax—amount unlimited—on all the taxable property

*Lizard Township, Pocahontas County.

in each district township.

5. In addition to the provisions made for the support of common schools, the state appropriates fifty dollars annually to each county holding a teachers' institute.

The bible shall not be excluded from any public school or institution in the state, but no child shall be required to read it contrary to the wishes of his parent or guardian.

"Four things a man must learn to do
If he would make his record true:
To think without confusion clearly;
To love his fellow-men sincerely;
To act from honest motives purely;
To trust in God and Heaven securely."

—HENRY J. VANDYKE.

The pioneer log school house increased in numbers until 1861, when 893 were reported out of a total of 3,479. As population and wealth increased school houses were built larger, of better material, more inviting in appearance and more frequently supplied with the facilities necessary for the attainment of the highest degree of success in school work.

In 1849, the average value of each of the 387 school houses was about \$100; in 1850 the average of the 3,208 buildings was \$376; in 1874 of the 9,228 \$802; and in 1891 of the 13,273, \$1,040. The gradual and continued improvement in the school houses and their surroundings is an index of the great advancement in all valuable and desirable particulars.

If natural shade does not already exist on the school grounds, the law directs that trees for shade and ornament shall be planted. This enactment of 1882 prepared the way for the state-wide observance of tree planting and since May 4, 1887, Arbor Day has been designated for this annual festival and the floating of the flag from the school house.

In 1850, seventy teachers out of every hundred employed were men. This difference gradually diminished until 1862, when the number of the

gentler sex employed became the greater, and in 1897 they numbered 22,208 and the men only 5,824. The eminent fitness of women for the office of teacher has thus been favorably recognized in Iowa.

The constant and rapid increase in the amount expended for educational purposes is indisputable evidence that the public schools are appreciated by the people. The amount paid in 1897 for school purposes was \$11,910,706.58—all raised by voluntary taxation except the semi-annual apportionment of \$816,044.27, a part of which is derived from the interest on the permanent fund.

The census of 1880 credited Iowa with a lower percentage of illiteracy than any other state of the Union. The interest the people of Iowa have always manifested in all that pertains to education furnishes abundant ground for confidence in the continued growth and development of their matchless system of free schools. Intelligent labor insures prosperity, and the public schools of Iowa afford the humblest boy an opportunity to acquire the intelligence necessary to enable him to fill high positions with credit and honor.

The higher education is provided for in the State University, State Normal School, Agricultural College and the 275 other educational institutions established throughout the state by the churches or by individual enterprise, employing, in 1895, 1,391 instructors, and representing an investment in buildings and grounds of \$4,179,250, with an additional permanent endowment fund of \$1,157,000.

THE STATE BOARD OF EDUCATION.

After the adoption of the constitution of 1857, the system of education in Iowa was modified by the creation of a State Board of Education that was continued until March 23, 1864. On December 24, 1858, this Board abolished the office of State Superin-

tendent of Public Instruction, and the secretary of this Board performed the usual duties of that public officer, from December 29, 1858, to March 23, 1864, when the Board of Education was abolished and the office of Superintendent of Public Instruction was restored.

THE STATE BOARD OF CONTROL.

There are sixteen State Institutions in Iowa, established by the legislature. As they were founded provision was made for their management by the appointment of a separate board of trustees for each institution. This system of administration proved a source of considerable trouble to the several state officers in making their biennial reports to the Governor and was unsatisfactory from the economic standpoint. For these reasons the legislature in 1898 abolished the several separate systems of independent management and organized a new system under one management, called "The State Board of Control." This Board, consisting of three members, appointed by the Governor with the approval of two-thirds of the senate in executive session, assumed control July 1, 1898. It has been assigned complete authority over thirteen of the State Institutions, which includes all of them except the University, the Agricultural College and the Normal School. Over these three it exerts supervisory control only so far as the management of their financial affairs is concerned. This Board has its office in Des Moines, and its first or present members consist of Hon. William Larrabee, Hon. L. G. Kinne and Hon. John Cownie.

CHURCHES AND CHURCH WORK.

Walk about Zion,
Mark ye well her bulwarks;
Consider her palaces,
That ye may tell it to the generation following.—DAVID.

If the people of Iowa have shown great interest in securing for their

youth the means of an intellectual culture essential to useful and honorable life, they have also recognized the importance of the proper culture of the moral faculties, and, desiring the prevalence of sobriety, piety and good order, they have not only taxed themselves to provide facilities for public education, but have contributed voluntarily large gifts to promote religious instruction, moral culture and the public worship of God.

Devoted christian men and women came with the first immigration in the permanent settlement of this territory. Loyal to their God, their christian profession and the moral interests of the communities they were establishing, they soon invited the services of the ministers of religion, and in their humble circumstances generously planned and labored to secure this beautiful region to the dominion of their Lord. They endured privations, worshiped in lowly cabins, often in the shady groves, "God's first Temples," and by their fidelity to christian principles, made the religious freedom, privileges and moral excellence we now enjoy, a gracious possibility.

Enthusiasm in religious work led to the discovery of Iowa. The settlement of the territory did not immediately follow its discovery. One hundred and sixty years passed before the first settlers came to found homes in the area now constituting this state. In that period of time, through the leadings of Divine Providence, great intellectual and political changes occurred. Inventive genius evolved new agencies of moral as well as intellectual, mechanical and military power, that resulted in vast changes, not only in their geography, but also in the social condition and the religious ideas pervading christian nations. Under divine guidance this fertile and divinely favored region was reserved for settlement until these forces

were in effective operation and an intelligent, liberal christian citizenship, hating oppression and loving righteousness, should bring to this beautiful land the highest type of christian civilization ever enjoyed by men.

The country east of the Mississippi river was thrown open for settlement in 1828, and Galena, in the vicinity of the lead mines, became an active frontier town, with a resident minister. In 1833, the permanent settlement of Iowa began and on the 8th of August that year, a Congregational minister from Galena, held religious services at the home of Mrs. Willoughby, in the settlement at Dubuque. So far as known, this was the first religious service held within the boundaries of the state. Soon thereafter, in the same settlement, Father McMahon, a Catholic clergyman, celebrated mass in the home of Patrick Quigley.

On the 6th of November the same year, Rev. Barton Randle, a missionary of the Methodist Episcopal church, visited Dubuque and held services in a private house. Early in the following year, he organized a class* in the town and this appears to have been the first religious society formed in Iowa. During that season this society built a small church of logs, 20x26 feet, and this was the first church building erected in the state. In the winter of 1835-6, Rev. Cyrus Watson, a Presbyterian minister, preached about three months in this log building, alternatnig with the Methodists. A Presbyterian church was organized and at his instigation measures were taken for securing a house of worship that resulted in the erection of a stone church, that after the lapse of some years, was transferred to the Christian church. The corner-stone of this building was laid July 1, 1836, in the presence of Judge Dunn, Chief Justice of the Territory of Wisconsin that embraced at that time the whole vast

section west of Lake Michigan to the Missouri river and north of the states of Illinois and Missouri. This was the first Presbyterian church erected in all this territory. The Catholics erected their first church in Iowa at this place the same year.

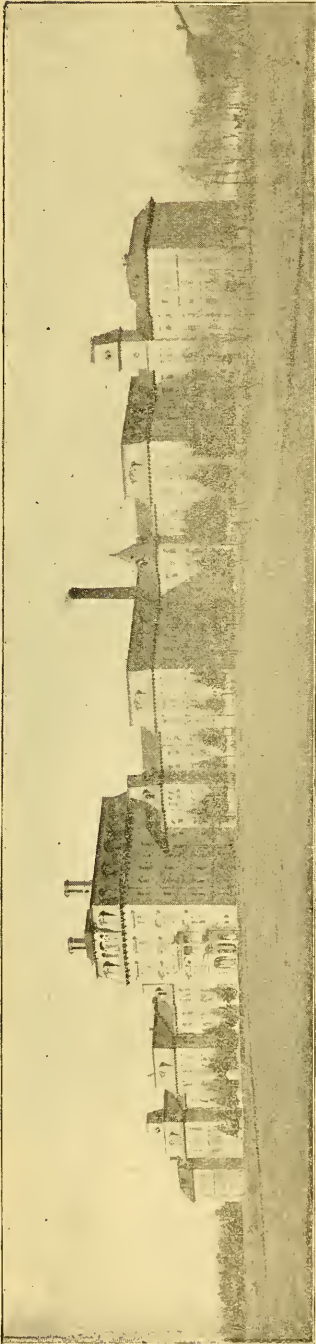
From these small beginnings, that but dimly suggested speedy enlargement, have grown the great religious organizations that now flourish with richness of blessing, in all parts of the state and yield their rich fruitage of cultured christian beneficence to carry the tidings of grace to other communities. Many of the three score and four years, that have passed since the first church was built in Iowa, were years of privation and hardship, nevertheless the progress of the churches has been wonderful. Beautiful and substantial church edifices have been erected in every center of population and in addition thereto 206 colleges, academies and other ecclesiastical institutions of learning have been erected through their instrumentality. These religious educational institutions represent a benevolent investment of more than \$5,000,000, of which \$1,000,000 is in the form of a permanent endowment for their support. Thousands have devised liberal things for the establishment and maintenance of the church and her handmaid christian education, in Iowa.

EXHIBIT OF CHURCH GROWTH IN IOWA.

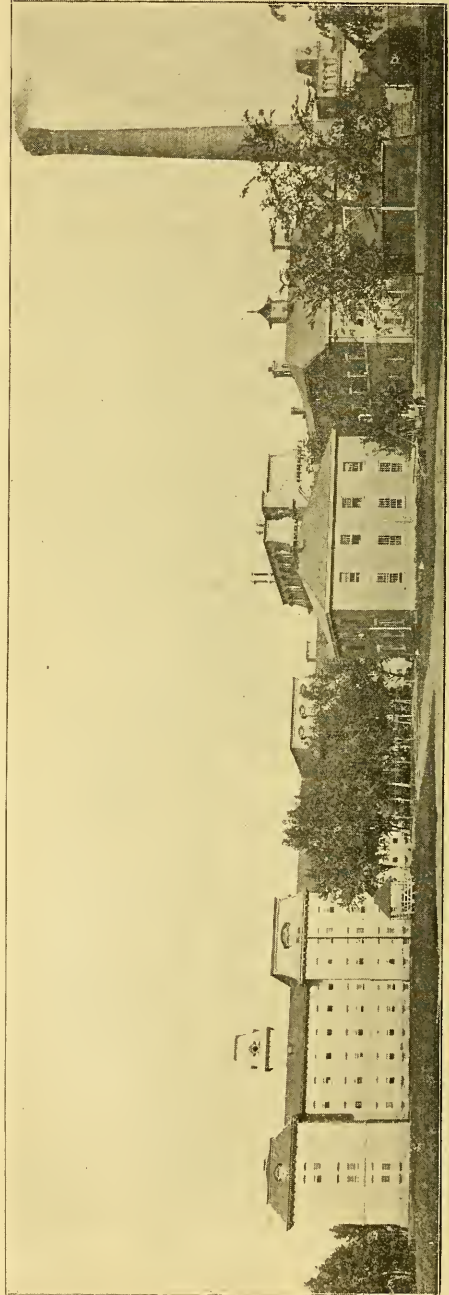
	1850	1870	1895
Church buildings,	207	1446	4480
Value of b'dgs,	\$177,425	\$5,730,352	\$15,105,085
Average of "	\$809	\$3,963	\$3,375
Seating capacity,	43,529	431,709	1,305,804
Denominations rep.,	13	—	43
Meth. church b'dgs,	76	492	1,382
Pres. " "	38	222	454
Luth. " "	5	45	124
Cath. " "	18	195	411
Bap. " "	23	165	398
Christ. " "	11	48	255
Cong. " "	14	125	251
U. B. " "	"	28	156
Friends " "	5	60	82
Ref'd " "	4	17	66
Epis. " "	5	36	65
Other denominations	17	148	536
Population,	192,214	1,194,020	2,978,069

The statistics for the year 1895 show

*Four members,



HOSPITAL FOR THE INSANE, INDEPENDENCE.—Front View of Main Building. Opened May 1, 1873.



HOSPITAL FOR THE INSANE—Rear View of Main Building and Central Heating Plant.

that the communicant membership of the church was at that time, 571,264 and the Sunday School membership was 365,441. The voluntary offerings of the people for the support of the church that year, which was one of "hard times," were as follows:

Salary of clergy.....	\$2,076,055
Contingent Expenses paid.....	806,779
Paid for new buildings in 1894.....	816,555
Paid for support of Sunday Schools....	172,442
Making annual support of church.....	\$3,901,831
Value of Church buildings was.....	\$15,105,085
Value of Parsonages was.....	2,492,906
Making churches and parsonages.	\$17,597,991
Amount Invested in Christian Educational Institutions was.,	5,000,000
Making the amount of.....	\$22,598,091

Permanently invested in buildings and property belonging to the church in Iowa, and freely donated during the first half century of her history.

It will be perceived this exhibit does not show the missionary offerings of the churches which now amount to nearly half a million dollars annually. It should also be noted that the voluntary offerings for the support of the church in 1892, before the hard times set in, were more than \$5,000,000, instead of the \$3,901,831 of 1895.

The work of the church in every community is a vital factor in promoting its best interests. The work done by those devoted, godly men and women who laid the foundations for these grand results in the formative years of this commonwealth, did much to insure and accomplish its prosperity. This liberality demonstrates, not only that the christian people of Iowa are of a progressive disposition, but also that they are in prosperous circumstances and have regard for their religious convictions and privileges.

Iowa has an active working State Sabbath School Association that holds an annual convention. In 1895, there were nearly 5,000 Sunday Schools, rep-

resenting a membership of 365,441 persons, and the amount contributed for their support was \$172,442. Mrs. Mattie M. Bailey, for many years the efficient secretary of this association, reported that 75 per cent of the Sunday Schools of the state are continued throughout the year; that at least one million copies of Sabbath School papers are distributed through them and that their libraries of religious books contain at least 100,000 volumes. These facts show that the people of Iowa are earnestly and generously engaged in the work of training the rising generation in the principles of morality and religion.

PATRIOTISM.

When Iowa was opened for permanent settlement, after the Black Hawk Indian war of 1832, the contentions regarding the limitation or extension of Negro slavery that culminated in the civil war, had begun to agitate the country. The Missouri Compromise, adopted in 1820, as a settlement of this troublesome question, was in its most vital force, when in 1833 the pioneers crossed the Mississippi to found permanent settlements in Iowa. By the provisions of this compromise the area forming this state was consecrated to freedom. Although, according to the census of 1840, sixteen slaves were held within its borders, under its territorial government, ultimate freedom from slavery was fully assured to this region. "Immigrants from the New England states flocked to this new field, bringing with them as one of their chief possessions, an intelligent patriotism—a legacy of patriotic sires, who stood bravely for freedom at Lexington, Bennington and Bunker Hill. Other settlers coming from the Central and Eastern states to this free western country to establish a new commonwealth, brought with them a hearty affinity with that spirit. Others coming from the slave-cursed South, came to enjoy

a deliverance from the scenes and associations of that oppression. They believed that all men were endowed equally by the Creator, with the right to their own muscle, bone and natural powers, and with equal rights to freedom of thought and action in the pursuit of happiness."*

When there was a manifest tendency to extend the baneful institution of slavery by the repeal of the famous Missouri Compromise of 1820, that from the time of its enactment had been regarded as a perpetual guaranty of freedom, to the great north-western portion of this country, the people of Iowa cast a decisive majority vote on the platform, declaring "We most unqualifiedly and emphatically disapprove of the efforts now made in congress to legislate slavery into the territory of Nebraska."

They then believed that the broadest possible freedom was essential to the true happiness of the people and real prosperity of the state. They claimed civic freedom for themselves and their posterity and patriotically gave voice and vote that others settling new territories throughout this broad West, should enjoy these same heaven-bequeathed advantages. Inspirations of the noblest patriotism determined the lines of development that have made Iowa, in her brief history, not only one of the freest and most progressive but also one of the most orderly states of the Union.

When in April, 1861, the stirring message that rebel hosts assailing Fort Sumpter had made necessary the proclamation of President Lincoln, summoning the states to send armed men to maintain the national authority, the citizens of no other of the twenty-four loyal states were more earnest in patriotic determination and deed than were the people of this state. The patriotism of the people of Iowa had its expression in the fact

that more men volunteered for service at their country's call than were required from this state. Her citizen soldiery toiled in almost every march, fought in almost every battle and bravely fell everywhere at the front. Her generals from hamlet and farm, made honorable history, earning renown on many fields and no foul stain tarnished the honor of Iowa in that terrible hour.

Forty-nine regiments of infantry (forty-eight of white troops and one of colored), nine regiments and two extra companies of cavalry, and four batteries of artillery were enrolled in the patriotic force, making 56,364 men in duly organized and reported Iowa troops, while there were 19,155 enlistments of Iowa men in other states, that made the grand army of 75,519 men enrolled, or one for each ten persons of her population at the close of the struggle. Of those reported in Iowa organizations, 3,360 were killed or died of wounds received in battle and 8,810 died of disease or fell by accident, making a total loss of 12,170 men.

"Sleep sacred dust of noble dead,
Spring's brightest bloom shall deck
your head."

Iowa's part in the conflict for perpetual, national unity in a redeemed country was costly in precious lives. Her homes were made sad by the sorrows of war, but her people faltered not when called to patriotic duty.

A beautiful monument, costing \$150,000, was erected in 1895, by the State of Iowa, south of the Capitol in Des Moines, to commemorate the heroism of the Iowa soldiers and sailors of 1861 to 1865. It is an upright shaft surmounted with the statue of victory.

"Situated in the central region of the grand constellation of states, Iowa favors their perpetual union. Her intelligent citizens regard each star with equal respect. In the na-

*Hand. book of Iowa, 355.



IOWA SOLDIERS' AND SAILORS' MONUMENT.

Erected in 1895 at a cost of \$150,000, south of the Capitol, Des Moines.

tional parliamentary halls her citizens have won fame and honor; in the highest judicial chambers her citizens have gained honored name; in the high duties of cabinet councils and diplomatic offices her representatives have rendered distinguished service. Exalting the fatherhood of God and the brotherhood of man, she recognizes each of her citizens as having equal rights to life, liberty, the advantages of her schools and the protection of her government."

"Land of the noble heart and brave!
How leaped thy men in the thickest fray,
When died our noblest sons, to save
Our mighty realm to freedom's sway;
Thy children know where honor lies,
The deeds that greatness consecrates:
And on their matchless virtues, rise
The pillars of a peerless state."

—HORATIO N. POWERS.

SUCCESSION OF GOVERNORS.

The following gentlemen have filled the executive chair of the state since the admission of Iowa into the Union:

	Date Of Service.	County Represented.
Ansel Briggs.....	1846-1850,	Jackson.
Stephen Hempstead...	1850-1854,	Dubuque.
Jas. W. Grimes.....	1854-1858,	Des Moines.
Ralph P. Lowe.....	1858-1860.	Lee.
Samuel J. Kirkwood...	1860-1864,	Johnson.
William M. Stone.....	1864-1868,	Marion.
Samuel Merrill.....	1868-1872,	Clayton.
Cyrus Carpenter.....	1872-1876,	Webster.
Samuel J. Kirkwood...	1876-1877,	Johnson.
Joshua G. Newbold....	1877-1878,	Henry
John H. Gear.....	1878-1882,	Des Moines.
Buren R. Sherman.....	1882-1886,	Benton.
William Larrabee.....	1886-1890,	Fayette.
Horace Boies.....	1890-1894,	Black Hawk
Frank D. Jackson.....	1894-1896,	Polk.
Francis M. Drake.....	1896-1898,	Appanoose.
Leslie M. Shaw.....	1898 to pres.	Crawford

Joshua G. Newbold was elected Lieutenant-Governor, but became Governor on the resignation of Sam-

uel J. Kirkwood upon his election as United States senator.

CABINET OFFICERS.

Six citizens of Iowa have held positions in the cabinet of the President of the United States, as follows:

JAMES HARLAN was Secretary of the Interior in the second administration of Abraham Lincoln.

W. W. BELKNAP was Secretary of War in Gen. Grant's administration.

SAMUEL J. KIRKWOOD was Secretary of the Department of the Interior, under Presidents Garfield and Arthur.

GEORGE W. MCCRARY was Secretary of War under President Hayes.

FRANK HATTON was Postmaster-General during part of President Arthur's administration.

JAMES WILSON is now Secretary of the Department of Agriculture, under the administration of President McKinley.

SUCCESSION OF UNITED STATES SENATORS.

Iowa has been represented in the United States Senate by the following citizens:

Geo. W. Jones, of Dubuque.....	1848 to 1859
Augustus C. Dodge, of Burlington.....	1848 to 1855
James Harlan, of Mt. Pleasant.....	1855 to 1865
James W. Grimes, of Burlington.....	1858 to 1870
Samuel J. Kirkwood, of Iowa City.....	1866 to 1867
James Harlan, of Mt. Pleasant.....	1867 to 1873
Jas. B. Howell, Keokuk, Jan. 20 to Mch. 4, 1871 (To fill vacancy caused by death of James W. Grimes.)	
Geo. G. Wright, of Des Moines.....	1871 to 1877
William B. Allison, of Dubuque.....	1873 to the present time.
Samuel J. Kirkwood, of Iowa City.....	1877 to 1881
James W. McDill, of Afton.....	1881 to 1883 (Appointed by the Governor, Mch. 8, 1881, to fill vacancy by resignation of Samuel J. Kirkwood.)
James F. Wilson, of Fairfield.....	1883 to 1895
John H. Gear, Burlington, 1895 to pres. time.	

THE HISTORY

—OF—

Pocahontas County, Iowa,

IN THREE PERIODS.

PERIODS.

I—1856-1869—Period of Early Settlement by Pioneers.

II—1870-1882—Period of Organization and Railway Construction.

III—1883-1898—Period of Growth and Development.

—INCLUDING AN ACCOUNT OF—

The Previous Establishment of the County, Its Survey,

—AND THE STORY OF—

POCAHONTAS,

The Indian Princess of Virginia.

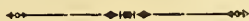


THE OLD CAPITOL AT IOWA CITY.

It was occupied by the General Assembly of Iowa from Dec. 6, 1841, to March 5, 1857. It is now the Central Building of the State University.

HISTORY OF POCAHONTAS COUNTY, PIONEER PERIOD, 1856-69.

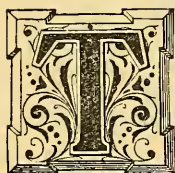
“Behold the new Eden! At last man has found it.”



I.

THE COUNTY ESTABLISHED AND STORY OF POCAHONTAS, AFTER WHOM IT WAS NAMED.

“My native country, thee
Land of the noble free,
Thy name I love.”



THE county of Pocahontas was established and received its present name by an act of the third General Assembly of the state of Iowa, that convened at Iowa City, December 3, 1850. This act was entitled, “An act to establish new counties and to define their boundaries,” and it was approved January 15, 1851.

Section 29 of this act reads as follows: “That the following shall be the boundaries of a new county which shall be called Pocahontas, to wit: Beginning at the northwest corner of township 93 north, range 30 west; thence west on the line dividing town-

ships 93 and 94, to the northwest corner of township 93, range 34; thence south on the line between ranges 34 and 35 to the southwest corner of township 90, north, range 34 west; thence east on the line between townships 89 and 90 to the southwest corner of township 90, range 30; thence north to the place of beginning.”

This act established and defined the boundaries of fifty new counties in northern and western Iowa, as follows:

Union, Adair, Adams, Cass, Montgomery, Mills, Pottawattamie, Bremer, Butler, Grundy, Hardin, Franklin, Wright, Risley (1853 united to Webster, 1857 became Hamilton), Yell (Jan. 22, 1853, Webster), Guthrie, Audubon, Carroll, Fox (Jan. 22, 1853, Calhoun), Greene, Sac, Crawford, Shelby, Harrison, Monona, Ida, Waukaw (1853

Woodbury), Humbolt (1853, extinct, 1857, Humboldt), Pocahontas, Buena Vista, Cherokee, Plymouth, Chickasaw, Floyd, Cerro Gordo, Hancock, Kossuth, Palo Alto, Clay, O'Brien, Sioux, Howard, Mitchell, Worth, Winnebago, Bancroft, Emmet, Dickinson, Osceola, Buncombe (1862, Lyon).

When the county of Dubuque was established by the territorial legislature of Michigan, at Detroit, it included the territory contained in Pocahontas county, as appears from the following act, approved September 6, 1834:

An act to lay off and organize counties west of the Mississippi river.

Sec. 1. Be it enacted by the Legislative Council of the Territory of Michigan, That all that district of country which was attached to the Territory of Michigan, by the act of congress, entitled "An Act to Attach the Territory of the United States West of the Mississippi River, and North of the State of Missouri to the Territory of Michigan," approved June 28, 1834, and to which the Indian title has been extinguished, which is situated to the north of a line to be drawn due west from the lower end of Rock Island to the Missouri river, shall constitute a county, and be called Dubuque. The said county shall constitute a township, which shall be called Julien. The seat of justice shall be established at the village of Dubuque until the same shall be changed by the Judges of the county court of said county.*

The territory thus included in the boundaries of Dubuque county, contained all of the northern half of the present state of Iowa, all of the state of Minnesota west of the Mississippi river and all the territory of the states of Dakota, east of the Missouri river, being the largest territory ever included in the boundaries of one county.

In 1837, the lower tier of townships, of what is now Pocahontas county, namely: Lizard, Bellville, Colfax and Cedar, formed a part of Buchanan county, and the remainder, a part of Fayette.

*See page 58.

When the county was established in 1851, it was first temporarily attached to Polk county, for revenue, election and judicial purposes. On January 22, 1853, it was similarly attached to Boone county and on July 1, 1855, to Webster county.

Pocahontas county was organized by an order of the County Judge of Webster county, who issued an order February 19, 1859, directing an election to be held on the 15th day of March following, when a full Board of county officers was elected.

It is of interest to note that Pocahontas is one of those counties of Iowa that has a name of Indian origin. The names of local tribes of Indians have been preserved in the names of Iowa, Sac, Sioux, Winnebago and Pottawattamie counties; and of southern tribes in the names of Cherokee and Chickasaw counties.

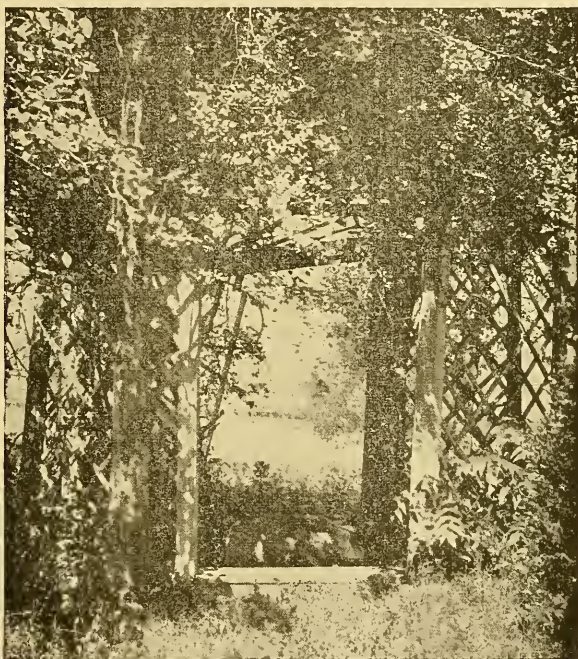
The names of the most noted chiefs of local tribes have been preserved in the names of the following counties of Iowa: Appanoose and Black Hawk, (both of whom were powerful chiefs of the Sac and Fox tribe), Keokuk, (a Sac, sometimes called "The watchful fox," or "He who has been everywhere"), Wapello, (a Fox, "The playing fox"), Mahaska, (a chief of the Iowas, "White Cloud"), Poweshiek, (a Sac, "The roused bear" or "The shedding bear") and Winnesheik, (a Winnebago, "Yellow Thunder" or "Coming Thunder.")

It is also worthy of note that Pocahontas is one of three counties in Iowa that have been named after noted women, the other two being Bremer and Louisa. Bremer county was named in honor of Frederika Bremer, the Swedish traveler and author. Louisa county was named in honor of Louisa Massey, a young lady of Dubuque, who, a few months before the passage of the act of the territorial legislature of Michigan at Belmont, in 1836, creating the county,

had shot a ruffian named Smith, who had threatened the life of her brother and was believed to be making an opportunity to execute the threat, he having previously participated in the murder of an other brother. She was a heroine, and among the early pioneers, heroes and heroines were highly respected and honored whenever an opportunity was presented. The pio-

and who in the writings of John Smith and his contemporaries, was called "King" and "Emperor of Virginia."

The name "Pocahontas" signifies "a rivulet between two hills," and she was so named because she was a peacemaker between two peoples. She was born about 1595, and by her friendly offices toward the colonists, saved them on several occasions from



The Grave of Powhatan, "Emperor of Virginia," 1608-19,
on the Jamestown river.*

neer law-makers of Iowa were not unmindful of the claims of women for recognition.

This county was named in honor of Pocahontas, the Virginia Indian princess. She was the daughter of Powhatan, the recognized leader of thirty subordinate chiefs of the powerful Powhatans of the James river valley,

the consequences of her father's hostility.

POCAHONTAS SAVES JOHN SMITH.

The most noted instance of this kind is said to have occurred in 1607, at a place on York river, in what is now Gloucester county, Virginia. John Smith, captain, knight and explorer, in pushing his canoe through

*This and the three following plates, illustrating this chapter, are inserted through the courtesy of G. P. Putnam's Sons, N. Y., from "Colonial Homesteads" by Marion Harland, per favor of the Interior, Chicago.

the tortuous creeks of the Chickahominy swamp, fell into an ambush of three hundred Indians. After a desperate defense he was taken prisoner by O-pe-can-chan-ough, the brother of Powhatan, whom he succeeded in 1618, and who carried out the great massacre of the colonists, on Good Friday, 1622. By him he was carried before Powhatan to be tried for killing two of the Indians. At the time of the trial a long consultation was held and then two great stones were brought before Powhatan, when as many as could, laid hands on Smith, dragged him to the stones, placed his head thereon, and, being ready with their clubs to beat out his brains, Pocahontas, "the King's dearest daughter," her entreaties having failed, hastened to his rescue by embracing his head and laying her own head upon his to save him from death. Her father was moved by this unusual act of intercession on the part of Pocahontas, and permitted Smith to live, "to make him hatchets and her bells, beads and copper." About six weeks later, he sent him under escort to Jamestown.

"How could the stern old king deny,
The angel pleading in her eye?
How mock the sweet, imploring grace
That breathed in beauty from her face,
And to her kneeling action gave
A power to soothe and still subdue."
—SIMMS.

The circumstances that led to the capture of Smith were as follows: On December 10, 1607, Captain John Smith, of whom it was said, "The Spaniard never more greedily desired gold than he victual," with nine other men in the barge, left Jamestown to obtain some maize from the Indians and to explore the upper waters of the Chickahominy. At Apocant, he and two of his companions, Jehu Robinson and Thomas Emery, in a canoe, passed twenty miles further up the river, where a brother of Powhatan with about 300 Indians happened to

be on a hunting expedition. The Indians killed his two companions while asleep in their tent, surprised and captured Smith while seeking food.

It will be remembered that the English colony at Jamestown was established June 22, 1607, by the arrival of one hundred and five persons, of whom sixty-seven had died from sickness and starvation by the 8th of January following. Never were Englishmen left in a foreign country in such misery as these first colonists of Virginia. Their food consisted of barley sodden with water, and their drink, the water from the James river, which at flood was very salt and at low tide, full of slime and filth that proved the destruction of many of them.

The country they had settled in was sparsely populated by numerous tribes of Indians, who owned as their paramount chief, Powhatan, who then lived at We-ro-woc-o-mo-co, a village on the Pamunky river, about twelve miles by land from Jamestown.

Powhatan, who in 1608, by King James I, was crowned "Powhatan I, Emperor of Virginia," as a matter of courtesy, had twenty sons and ten daughters. Whether by beauty and sprightliness, or by force of her dauntless spirit, Pocahontas had a hold upon his savage nature that no other creature ever gained. During his captivity of some six weeks which afforded many opportunities of familiar discourse with those who kept him, the knightly soldier, Captain Smith, made her his friend. The influence upon her character and career of this period and the subsequent intimacy to which it led can hardly be exaggerated. She had inherited with her father's imperiousness, the intellect that made him emperor, while his brothers were but kings. Captain Smith, who had been assigned the duty of pleasing the fancy of the savage maiden, was a soldier, traveler,

dramatist, historian and diplomatist. Pocahontas drew from him the earliest aspirations that led to her conversion to christianity. Referring to the period he himself remarked, "What can a man with faith in relig-

child, intelligent beyond her years, and meeting him at the most impressionable period of her life, fashioned her ideas of his people. Under her providential tutor her mind, heart and ambitions assumed a new com-



POCAHONTAS, the Indian Princess of Virginia, as she appeared in London in 1616.

ion do more agreeable to God than to seek to convert these poor savages to Christ and humanity."

He was the model, without fear and without reproach, upon which the

plexion.

When Powhatan offered him a principality if he would cast in his fortunes with the tribe, his unselfish reply was made in the form of a request

for a safe conduct to Jamestown. This favor he acknowledges was secured through the successful intercession of Pocahontas with her father.

On September 10, 1608, soon after his return to Jamestown, the presidency of the colony was forced upon him. Under his administration Jamestown became a village of nearly five hundred inhabitants, and a church was erected for public worship.

When starvation was staring the colonists in the face, Pocahontas, who was then "a well featured young girl, fleet of foot, black-eyed and brown-skinned," frequently visited Jamestown with her "wild train" following her in single file, each bearing gifts of corn and game. As a King's daughter, she wore a white heron's feather in her hair and bands of coral on her wrists and ankles. Her slender, graceful form was wrapped in a robe of doe skin, lined and edged with the down of pigeons. A queen in miniature, once in every four or five days she and her "wild train" laden with food, visited the colony until the peril from famine had passed.

In 1609, President Smith and eighteen companions, having visited Powhatan at his special request, Pocahontas, on a dark night and traveling alone through the woods to where they were encamped, gave them warning of an intended immediate attack by the Indians. She was not yet fourteen years of age, but showed herself a woman in depth of devotion to her friends, brave even to recklessness, and holding her own life as nothing by comparison with her loyalty. The attack was made as she had predicted and the catastrophe planned by the cunning chieftain was prevented only by the coolness and courage of Captain Smith.

A few months after this visit to Powhatan, Captain Smith was seriously injured while on the river and on October 4, 1609, was obliged to return

to his home in England for surgical aid.

As soon as the savages had learned that Captain Smith had left the colony they decided to make war upon it.

POCAHONTAS A CAPTIVE.

Though humbled as a slave,
To more than queenly sway, she grew.

In the meantime, the secret mission by night of Pocahontas had been discovered to her father, and he wreaked his wrath upon her until existence with him became unendurable and she sought an asylum of refuge in the wigwam of Japazaws, a chief of the Potomac tribe, an old acquaintance of Captain Smith and friendly to the English.

Captain Samuel Argall, a privateersman, being sent up the Potomac for corn and learning that a daughter of Powhatan was the guest of the Indian's squaw, by the gift of a burnished copper kettle succeeded in getting Pocahontas to visit his vessel. When she stepped aboard the vessel, the captain told her before her friends she must go with him and make peace between Powhatan and the colonists before she should see her father. Thus she became a prisoner and was held by the colonists for the purpose of exacting a ransom from her father and as a means of maintaining peace with the Indians.

She was now (1612) nearly eighteen years old, had soft, wistful eyes, delicately arched brows, a mouth at once proud and tender, and slender hands and feet. She was not tall, but erect, and carried herself, as a daughter of a king, with a sort of imperious grace that rebuked familiarity.

When the message had been sent to Powhatan that his daughter, Pocahontas, whom he loved so dearly, must be ransomed by the return of all white prisoners and stolen property it troubled him greatly, but three months passed before he sent any reply or took

any notice of the humiliating intelligence.

He then returned seven white prisoners, each with an unserviceable musket, and sent word that when his daughter was delivered he would make satisfaction for all injuries done, give 500 bushels of corn and forever be a friend of the colonists.

This reply displeased him and nothing more was heard from him for a long time afterward. With a pride equal to his own, Pocahontas brooded over this public insult offered her by his silence and seeming indifference. But if she was branded as an outcast from her father's heart and tribe the people of Jamestown received her



CAPTAIN JOHN SMITH.

To these advances the colonists made answer that his daughter would be well used, but that they could not believe that the rest of their arms that had been captured were either lost or stolen from him, and therefore until he sent them they would keep his daughter:

with affectionate hospitality. "The long repressed craving for refinement and knowledge of the great, beautiful world—the echo from which had first thrilled her untaught soul during the golden month passed in her forest-home by the superb stranger with the kind eyes and winning smile—was

now to be gratified." *

In a subsequent conference with her brothers she remarked: "If my father had loved me he would not value me less than old swords, guns and axes; wherefore, I will still dwell with the Englishmen who love me."

POCAHONTAS WEDS JOHN ROLFE, AS
"LADY REBECCA."

The separation was now complete, and believing Captain Smith was dead, she fell in love with John Rolfe, "an honest gentleman of good behavior, fairly educated, a staunch churchman possessing a missionary spirit, a well-to-do widower and a protegee of Sir Thomas Dale." Renouncing the idolatry of her own people and accepting the christian religion, she presented herself for baptism at the font in the church built at Jamestown, by Lord De la Ware, and was christened "Rebecca." Under this name Pocahontas was wedded to John Rolfe, about April 1, 1613. The tower still stands in which hung the two bells that rang joyfully as bride and groom passed out through the narrow archway.

This marriage cemented a lasting peace between the two nations. Powhatan, true to his purpose of holding no personal communication with the colonists, never visited his daughter after its occurrence, but he frequently sent friendly messages to his "daughter and unknown sonne" and inquired "how they lived, loved and liked."

Varina, the home of Pocahontas after her marriage, on the plantation of her husband, was located on the bank of the James river, near Dutch Gap, a few miles below Richmond; but the particular site of the cabin in which she learned to keep house after the manner of the English, and where her only child, Thomas Rolfe, was

*Some "Colonial Houses," by Marion Harland.—G. P. Putnam's Sons, N. Y.

born is unknown. The banks of the beautiful river from Jamestown to Henricus are now gratefully consecrated to her dear memory.

June 12, 1616, in the fourth year after marriage, she, her husband and her little son, crossing the Atlantic ocean, landed in Plymouth, England, and there she became the object of admiring interest in fashionable circles. Before she reached London, Captain Smith petitioned Queen Anne on her behalf, and it is in this petition of June, 1616, that the account of his deliverance by the Indian girl, first appears.

After a pleasant sojourn of about seven months in England, during which time she was well received both by the court and by the people, she became affected with that dread disease, rapid consumption, no doubt due to the effect of a northern winter upon her semi-tropical constitution. Preparations were hastened for her return to Virginia, but she died at Gravesend the day before the one set for their departure, and, according to the popular tradition, "sitting in an easy chair, by an open window, her eyes fixed wistfully upon the western ocean." She was only twenty-two years of age and was buried in the cemetery belonging to the church of St. George, London, according to tradition, or at Gravesend, about thirty miles from London on the Thames, where she died, as is stated by her biographer, John R. Musick. The latter says, "She was buried in the chancel of the church at Gravesend, March 21, 1617, but that afterwards the church was destroyed by fire, and today the exact spot of her grave is unknown." The tradition that she was buried in the northwest corner of St. George's churchyard, London, has been reported successively from age to age through Thomas Turner, the venerable sexton in 1881, and his predecessors, William Nettingham and his father, John Net-

tingham. The former was sexton twenty years and the latter clerk of the parish fifty-two years.

Come to the bridal chamber, Death,
Come to the mother, when she feels
For the first time, her first born's breath;
Come when the blessed seals
That close the pestilence are broke,
And crowded cities wall the stroke.
Come in consumption's ghastly form,
The earthquake's shock, the ocean's storm,
Come when the heart beats high and warm,
And thou art terrible.

—HALLECK.

Other names by which she was known were "Amonate," "Mattoax" and "The Nonparella (having no equal) of Virginia." She was also called the "Rose of England" and the "Totem (emblem) of Virginia."

She was a landscape of mild earth,
Where all was harmony calm and quiet,
Luxuriant, budding.—BYRON.

The brief and pathetic career of Pocahontas, (Bright Stream between two Hills) has appealed to the heart of every generation since her story became known. Her services to Virginia had been as great as those to Captain John Smith. She had been the instrument under God to preserve the colony from destruction. Generous, brave and gentle, she was doomed to disappointment and died of a broken heart.

Hon. William Wirt Henry, whose Life and Letters of Patrick Henry rank him as one of the foremost writers of our country, has paid the following beautiful tribute to "Our Lady of the James:"

"Our Lady of the James," Pocahontas, born the daughter of a savage King, was endowed with all the graces which became an Indian princess; she was the first of her people to embrace christianity and to unite in marriage with the English race; like a guardian angel she watched over and preserved the infant colony which has developed into a great people, among whom her own descendants have ever been conspicuous for true nobility; her name

will be honored while this great people occupy the land upon which she so signally aided in establishing them."

"There is no story more dear to the heart of the American than that of Pocahontas. It has been narrated so frequently it has become a nursery legend, yet in all history none more dramatic and touching can be found. It has moved hearts since it was first told to civilized ears. Each succeeding generation reads anew the tender tale, narrated, perhaps, by some new author, who in song or story makes of Smith and the twelve-year-old child who rescued him, the incarnation of his own fancy. It has been told in romance, sung to the sweet notes of the harp, performed on the stage and gravely narrated by the historian, yet wherever heard, however told, it loses nothing; the story itself is the same, and never fails to move the heart of the listener."*

"Rest in peace thou who knew
So little of peace on earth."

THE DESCENDANTS OF POCAHONTAS.

Pocahontas was a princess, whom it was a great presumption on the part of Rolfe, who had no royal blood in his veins, to marry. According to the theory of the time this alliance was one of unusual importance, especially for two reasons. First, their marriage formed a bond of peace and friendship between the two races, and second, if Virginia should descend to Pocahontas, as it might at the death of her father, Powhatan, the government of the kingdom would be vested in Rolfe's posterity.

Thomas Rolfe, the only son of Pocahontas, after the death of his mother was left at Plymouth, England, in charge of Sir Lewis Stukley, at the latter's request. Stukley was his uncle and he was brought up in London. When a young man he went to Virginia and as Lieutenant Rolfe,

*Pocahontas, by John R. Musick, 112.—Funk & Wagnell, N. Y.

commanded Fort James on the Chickahominy. He married a young lady of England and became a gentleman of note and fortune in Virginia, and some of the most respectable families in the state are descended from him.

Among the conspicuous founders of the planter families that came over to Virginia during the second half of the seventeenth century, was one, a very liberal-minded and energetic man, who had married the granddaughter of Pocahontas; his son, devoting himself to planting and trading on the James river, found the bulk of his income in an immense traffic with his relatives, the Indians, who flocked as one man to his support. From this marriage many existing families in Virginia are directly descended, and they are proud of their Indian blood.

John Rolfe, the husband of the Princess, was of Norman descent, with William the Conqueror, in England, and a graduate of Oxford. The fragments of his writings that have been preserved attest both his scholarship and benevolence. He was the first American historian and deserves mention as such, though his history was short, being confined to a brief description of the colony at Jamestown, and dedicated to the King of England. His fame rests on the fact that he was the first planter of tobacco in Virginia, and the first to demonstrate its value as a vast source of wealth to future planters.

In one of his letters Rolfe declared that his main motive in marrying the Princess was to promote her religious instruction; whatever his motives may have been, his marriage was a success. His wife's descendants are either so numerous or are held in such high honor as to have given rise to the saying outside the state, "Every family in Virginia is descended from Pocahontas." As a matter of fact the genuine descendants were few but the

claimants were many.

From this first alliance of the white and red races sprang the Randolphs, Blands, Blairs and Bollings. The ancestor of the Randolphs went to England with William the Conqueror. William Randolph, of Turkey Island, as he was familiarly called, emigrated to the colony in 1675 and from him all the Randolphs of Virginia descended. John Randolph was a direct descendant of Pocahontas, being the sixth in descent from her, through Jane Rolfe, her granddaughter, and was even boastful of his relationship with the imperial house of Powhatan, whose grave has been preserved on the bank of the James river, a few miles below Richmond. It is curious to note that the blood of Powhatan should thus mingle with that of his old enemies. Dead for many a day and asleep in his grave, the savage old emperor still spoke in the voice of his great descendant, the orator of the Roanoke, who died June 24, 1833.

Peyton Randolph, the first president of congress, and Edmund Randolph, Washington's attorney-general, were also direct descendants, while Thomas Jefferson and Chief Justice John Marshall were related by marriage. Rev. Hugh Blair, the head of the Blair's and sometimes called "the commissary," because he had been sent to Virginia in that capacity, by the bishop of London, was a direct descendant of Pocahontas. He established William and Mary college, the first in the colony, and his nephew, John Blair, signed the constitution of the United States with Washington and Madison. The Blands and Bollings were prominent as planters, colonial officers and patriots in the war of the revolution.

Like the vase in which roses

Have once been distilled,

You may break, you may shatter

The vase if you will,

But the scent of the roses

Yet hangs round it still.

—MOORE.

WHO SUGGESTED "POCAHONTAS?" to have the name of "Pocahontas," the Indian Princess of Virginia, remembered. Mr. Casady stated in reply that his request would be complied with.

The circumstances that led to the use of the name of "Pocahontas" for this county, were as follows:

Phineas M. Casady, member of the senate of Iowa, session of 1850-51, from Senator Howell was an old man at



Tower of the Old Church at Jamestown, Virginia, in which Pocahontas was married in 1613.

Polk county, being a member of the senate committee on New Counties, that time and was called "Uncle John" by the other members of the senate. He had served as a member of the House of Burgesses in the legislature of Virginia and four years as a member of the House of Representatives of Iowa in the second and third Gen-

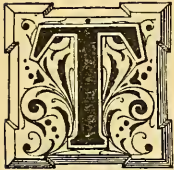
eral Assemblies. He was elected senator for the county of Jefferson, on the first Monday in August, 1848, and was then serving his second term in the senate. When inquiry was made of Senator Casady as to who suggested the name of Pocahontas, with the added remark that there seemed no reason for the use of that name in Iowa, and he stated that "Uncle John Howell" had requested it, no further objections were made. Senator Casady is still a resident of Des Moines, and kindly furnished the information given above.



II.

BATTLE OF THE INDIANS AT PILOT CREEK—THEIR GRAVES, MOUNDS AND RELICS.

“Oh pardon me, thou bleeding piece of earth,
That I am meek and gentle with these butchers.”



THE territory included in Pocahontas county was once the happy hunting ground of the Indians. Large game such as the deer, elk and buffalo, found luxuriant pasturage upon the open prairie and a grateful shelter from the wintry blast in the groves of timber skirting the streams. The latter were alive with fish, and the country, twice each year—in the spring and again in the fall—swarmed with almost every kind of bird and water-fowl that is good for food.

In 1673, when Marquette and Joliet explored the country along the Mississippi river, this section was supposed to be under the undisputed possession of the confederated Sac and Fox tribes. Later, other tribes of Indians from the north and west came to this favored land and found a home, so that at the time the white man came, at the beginning of this century, he found in the northwest part of this state a branch of the noted and cruel Sioux, whose hunting grounds consisted nominally of all that portion of the state that lies west of the Little Sioux river, traversing Dickinson, Clay, Buena Vista, Ida and Monona counties.

THE SIOUX AND WINNEBAGOES.*

The Sioux were powerful, warlike and aggressive; and their frequent encroachments upon the territories of other tribes, became the occasion of complaints to the United States government that led to the treaty of August 19, 1825, (see page 50) when a boundary line between the Sioux, on the north and various other tribes, on the south, was established, extending from the mouth of the Upper Iowa river, in the northeast part of the state, to the second fork of the Des Moines river, now in Humboldt county, (south of Dakota City) and thence to the lower fork of the Big Sioux river, near Sioux City. By a reference to the map it will be perceived that this line, traced by Clarke and Cass, crossed the south central part of Pocahontas county.

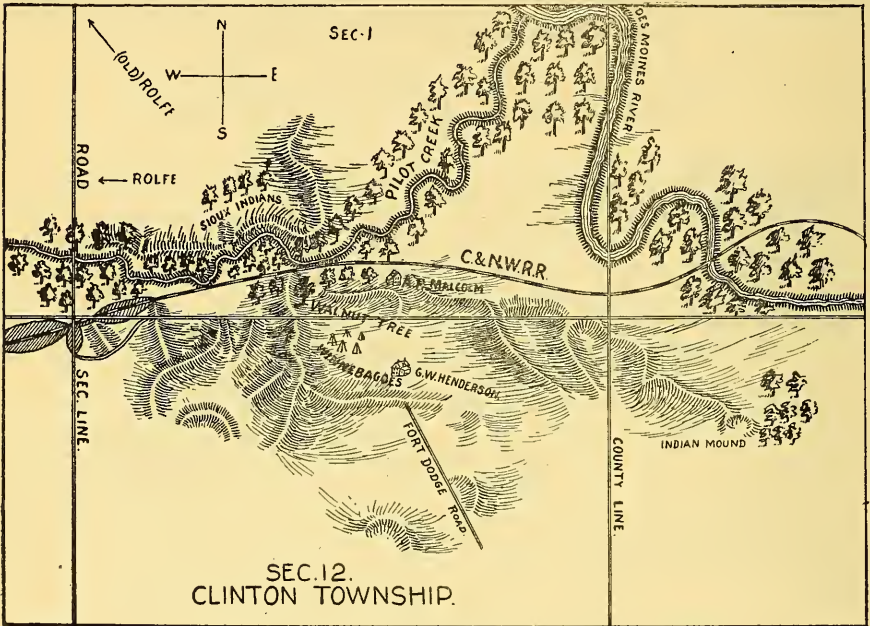
The meeting at Prairie du Chien, Wisconsin, at which this conciliatory measure was adopted, was a magnificent gathering, there being present about 30,000 braves representing Iowas, Sacs and Foxes, Winnebagoes, Menominees and the Sioux. It is said that before the convention adjourned,

*The most part under this head is a contribution from the pen of W. C. Ralston, Esq., Pocahontas, to the Rolfe Revellle, March 5, 1896; Bruce & Thornton, proprietors.

“Old Keokuk,” who was at the head of the confederated tribes as against the Sioux, was very much opposed to the signing of the agreement.

July 12, 1830, the above line not being always easily recognized, the Sioux on the north and the Sacs, and Foxes on the south of it ceded to the United States a strip of land twenty miles in width, on each side of

tion in Wisconsin, were given the territory included in this strip of “Neutral Ground.” Against the appeals and remonstrances of the squaws and old men of their tribe, the Winnebagoes moved to their new possessions and continued to occupy them until the year 1846, when they moved north of St. Peter’s river, Minnesota, where they were given more territory



INDIAN BATTLE FIELD AT PILOT CREEK,

Showing the camp of the Winnebagoes, Pilot Creek, down which the Sioux came; the walnut tree in which a Sioux scout shot a Winnebago; the home of A. H. Malcolm and the Indian mound at the right.

this line, making a tract forty miles in width from the Mississippi to the Des Moines, and this was called “Neutral Ground,” on which all the tribes interested were to be allowed to hunt and fish unmolested.

Two years later, September 15, 1832, which was just after the conclusion of the Black Hawk war, the Winnebago Indians, in exchange for their reserva-

and greater privileges.

By this arrangement there was left a large tract of country extending westward from the east fork of the Des Moines to the Little Sioux river, that was unoccupied by any tribe of Indians, and, by an unwritten law that was in force between the two tribes, it meant a trial of strength if any of the Sioux found any of the

Winnebagoes upon this territory. The Sioux were constantly at war with the Winnebagoes over troubles growing out of this arrangement and because, the latter originally belonging to the confederacy of the Sioux, had now become allied to their rivals the Sacs and Foxes, and were also friendly to the whites. Many trials of strength did old trappers witness in this section, especially during the winter season, the victory being usually won by the party having the most warriors.

After the government established the military post at Fort Dodge, (1850-1853) and the removal of the Winnebagoes to Minnesota, hostilities practically ceased upon this neutral ground except in the spring of the year, when the Winnebagoes were accustomed to go down the west branch of the Des Moines river, (as the United States Supreme Court has noted in a case recently brought before it) for the purpose of hunting and trapping, and then the Sioux again met them and renewed their old feuds with all the vigor for which they were noted. The usual result of these contests was that the weaker party would be severely defeated, robbed of furs and game, and sustain the loss of many a warrior, whose remains would be found by the soldiers or trappers, who passed the place where the conflict occurred.

The plan of the government in setting apart the strip, forty miles in width, as neutral ground, on which no tribe of Indians should make a permanent residence, but all had the privilege of hunting and fishing, instead of proving a happy means of preventing the disputes and hostilities that were ever occurring, seems to have had the contrary effect. Early writers note, that nearly all of the conflicts arising among the Indians on the soil of Iowa, either occurred on this territory or grew out of some act

committed by the Indians while hunting, trapping or fishing upon it. For hunting and fishing, this strip of neutral ground was, perhaps, unequalled in any other part of the United States. All the wild game, then known to sportsmen or Indians, was found within its borders. Deer, elk and buffalo roamed over the prairies, while pigeons, quail and chickens found a home in the luxuriant grass. The streams were alive with fish of all kinds, while on the banks and in the many beautiful lakes that lay within this strip were found beaver, mink, muskrat and otter in great numbers, as well as geese, brants, cranes, ducks, etc. No other territory of the same size was equal to this strip of neutral ground as the native home of game; and in no particular part of it was the game so abundant as in the vicinity of the east and west branches of the Des Moines river.

THE BATTLE AT PILOT CREEK. *

"Hark! hear the sound of battle near!
The shout, the groan, the charging cheer,
The mutual volley, sharp and clear,
The shock of steel, the shriek of fear,
In one mad chorus blend!"

Nearly a quarter of a century ago, (1853 or 1854) when Fort Dodge was a military post occupied by government troops, and before any white man had settled in the territory included in Pocahontas county, a battle was

*The account, under this head, of the last Indian fight in Pocahontas county, was written by William D. McEwen, Esq., and appeared first in the Pocahontas Times, of date, (Old) Rolfe, May 18, 1876. Mr. McEwen was then editor and proprietor of this paper, and obtained his knowledge of the facts stated, during the years of 1858 and 1859, from the late Major William W. Williams, sutler of the fort at Fort Dodge, when the U. S. troops were there and the fight occurred. The latter visited the scene of the conflict a few days after its occurrence, and described the location so minutely that the former was enabled to locate it without any difficulty.

fought between a band of Winnebago and Sioux Indians that, for bloodthirsty determination, has seldom been surpassed in the unwritten legends of these savage tribes. It was in the spring of the year, and the place where this sanguinary conflict occurred was on the south side of Pilot creek, on section one, Clinton township; near the bridge on the old Fort Dodge road and on the farm of A. H. Malcolm. Directly west of the bridge and a little distance up the stream, lies a plateau or piece of tableland with bluffs on the south. At that time a strip of timber skirted the stream, that increased in density until it reached the foot of the bluff and then terminated abruptly.

Here there had encamped a band of about thirty Winnebago Indians, from the vicinity of Mankato, Minn., who had been engaged in a hunting and trapping expedition along the Des Moines river. They had been successful in their expedition, and encamped at this place to feast and prepare their furs for market. They were within one day's journey of the trading post at Fort Dodge, were on friendly terms with the whites, from whom they apprehended no danger, and believing that their enemies, the Sioux, were not in the vicinity, they relaxed their usual vigilance.

Eighteen Sioux warriors, under their chief, Cou-sta-wa, or Big Tree, had been hunting on the Little Sioux river, in the neighborhood of where now stands the flourishing town of Sioux Rapids, and learning that a band of Winnebagoes were on the Des Moines river, determined to cross the country, take them by surprise and adorn their belts with the scalps of their foes. The chief of the band, as his name indicates, was a large, powerful warrior, and had been the leader in many a bloody fight. Having been once wounded by the bullet of a white man, he ever afterwards cherished for

him the most intense hatred, and never allowed an opportunity to pass without wreaking vengeance on him and his friends, the Winnebagoes. Ink-pa-du-ta, the bloodthirsty savage, who with his band massacred the white settlers at Spirit Lake, in 1857, was one of Cou-sta-wa's warriors and acquired his intense hatred of the whites from him. He, too, was active in urging the attack upon the Winnebagoes.

They crossed the country from the Sioux river by way of Swan Lake, until they struck the head waters of Pilot creek; then, following the course of the stream unobserved, they discovered the location of their foes. Guided, doubtless, by the smoke of the campfires, they stealthily approached within two miles. Here they concealed themselves in what is known as "Harvey's Grove," and sent out two of their warriors to ascertain the number and exact position of the Winnebagoes. The night was well advanced before their scouts returned. Their report must have been favorable as a satisfactory grunt from Cou-sta-wa announced that the attack would be made that very night.

The water in the creek was high, and Cou-sta-wa, with savage sagacity, divided his warriors; six of them led by Ink-pa-du-ta, crossed Pilot creek and approached the foe from the north, while he with the other warriors, descended on the south side to cut off their retreat. He evidently thought that the Winnebagoes, taken by surprise, would flee at the first attack and make for the trading post. In this he was correct, but the result was not as he had anticipated. The ground had been well examined and the attack well planned. The moon, though far in the wane, shone brightly, pointing out to the wary Sioux the exact position of the sleeping Winnebagoes. The night was far advanced when the Sioux crept up to within

thirty yards of their sleeping foes. Here they paused, awaiting the signal of their chief. Just at this moment one of the Winnebago warriors arose and quickly gave the alarm to his tribe. The Sioux, finding themselves discovered, commenced firing. The Winnebagoes, taken by surprise, and not knowing the number of their foes, thought only of safety, and commenced retreating along the edge of the bluff. Here they were met by Cou-sta-wa and his warriors. Finding their retreat cut off, they commenced fighting with the desperation of despair. Cou-sta-wa, seeing the confusion, and knowing full well that one-half of the Winnebagoes must have fallen at the first fire, rushed with his warriors upon those that remained. It now became a hand to hand fight.

"Long, keen and dubious was the strife,
While all the warriors bled."

At length one, two, three of the bravest of the Winnebago warriors met their death at the hands of Cou-sta-wa, when a shot from one of the wounded Winnebagoes laid him low. With a terrific and hideous yell the Sioux warrior fell to rise no more. The Sioux seeing their chief fall, now commenced falling back, carrying their dead, for the Sioux will die sooner than leave any of their dead in the hands of their foes. Ten of the Winnebagoes were killed or died of their wounds, while only four of them escaped without being wounded.

How many of the Sioux were killed was never known. But four Indian graves were found by some of the early settlers in 1857, on the bank of Pilot creek, covered with bark and in a good state of preservation; these were no doubt the resting places of the warriors killed in this fight. The skeletons of three more were discovered by W. S. Fegles, when trapping at Swan Lake in the winter of 1858. He informed the writer that the skull bone of one was very large and nearly

an inch in thickness; that the shank bones were three inches longer than his and all that remained of the skeleton showed that it had belonged to an Indian of colossal stature. May we not, therefore, justly conclude that it was none other than the skeleton of the Sioux chief, Cou-sta-wa?

INDIANS ALONG THE DES MOINES RIVER.

"Among red men, the surest way
To honor, is the foe to slay;
Him they call supremely great,
Who can most martial deeds relate."

After the battle on Pilot creek the Indians who were engaged in it again returned to their reservations, the Sioux going to Dakota and the Winnebagoes to Minnesota. In the years that followed, until April, 1880, bands of the Winnebagoes would occasionally return along the west branch of the Des Moines river as far south as the mouth of Pilot creek.

"In the month of November, 1879,* about forty Pottawattamie Indians camped along the Des Moines river, near the northeast part of the county, and while engaged in hunting and trapping, investigated many of the larders in that neighborhood. 'Lo, the poor Indian' is a good investigator of the pantry of the white man."

Again in April, 1880, about fifty Winnebagoes and Pottawattamies temporarily encamped near the bridge over the Des Moines river, a short distance above the mouth of Pilot creek and near Old Rolfe, that until four years previous had been the county seat. J. J. Bruce, the correspondent of the *Pocahontas Times*,† wrote as follows in regard to them:

"Our Winnebago and Pottawattamie Indians have moved down the river. Henry M. Rice, the chief of the band, is a very intelligent fellow. Several of the men are intelligent, use good language and dress in civilized

*J. J. Bruce in *Pocahontas Times*, Dec. 11, 1879.

†*Times*, of April 15 and 22, 1880.

style. We should judge that a number of them have white man's blood in their veins.

They have in their number a Winnebago warrior who was over this ground in 1854, and points out the battlefield between the Sioux and Winnebagoes on Pilot creek, in 1854, and gives the scenes enacted under some of the trees in those early days, pointing out the tree where some warrior lost his scalp.

The battle referred to above, was described by W. D. McEwen in 1876, in an article that appeared in *The Pocahontas Times* and it was considered by some as a canard; but in this case it seems that 'truth is stranger than fiction.'"

On this occasion the Winnebago warrior and some of his friends visited at the Des Moines river bridge, met W. D. McEwen, Robert Struthers and others to whom he related many incidents of the battle. Mr. McEwen was at this time treasurer of the county, and, though he appointed a day for him to go with the old Indian to view the battlefield and get his description of the conflict as he remembered it, unexpected business matters prevented him from keeping the engagement. Among other things the old Indian related on this occasion, was that he believed he could yet point out the spot along the river a short distance from the outlet of Pilot creek, where the Winnebagoes had buried three of their fallen braves.

At this time, Ora P. Malcolm, then in his teens, but now deputy treasurer of the county, accompanied by his younger brother Fred Malcolm and his cousin Ralph Horton, went to their camp along the west branch of the Des Moines river. They met about fifty Indians, old and young, and found they had been there about a week. They met the old Winnebago warrior, who told them that many years before he had participated in

the battle of the Sioux and Winnebagoes, on the south side of Pilot creek.

A few days later this old warrior, accompanied by several other Indians, came down the river and passed up Pilot creek. As they passed the home of his father, A. H. Malcolm, Ora and the two other boys being together again, followed the Indians to see them hunting and trapping. When they had proceeded a short distance, the old warrior took them to a place on the south side of the creek and about thirty rods west of his father's residence, where he showed them the stump of a large black walnut tree. "Into the top of this tree," he said, "a Winnebago had climbed to take a survey of the country and learn if any enemies were near. While he was up in the tree a Sioux scout, under cover of the smaller timber, stealthily drew near and shot him."

This old warrior had a desire to take a last look at the place where his father and one brother were killed, before he should be numbered with the silent dead, and to show to those who came after him the place where the last trial of strength occurred between his people and their ancient enemies, the Sioux.

At the time of this visit in 1880, which was more than twenty-five years after the battle, the large stump of the old walnut tree was easily recognized, and around it there had grown several shoots that were already large enough to bear nuts. When the attention of the old settlers was directed to it, it was found that this particular tree had been felled by Orlando, son of David Slosson, in the winter of 1858-9, that it had been drawn to the sawmill erected near Old Rolfe by John M. Stockdale and had there been sawed into building material, by W. H. Hait.

In 1880, the Chicago and Northwest-ern railway had not yet passed through

this section and when it came, a couple of years later, it crossed the place where this black walnut stood and also the original site of Mr. Malcolm's residence.

The battle between the Sioux and Winnebagoes at Pilot creek, was the last contest that occurred between the Indians on the soil of Iowa. It has been suggested that at some time in the near future the romantic spot where this battle was fought should be marked with some appropriate monument, that future generations might know the exact place where the Winnebagoes, friends of the whites, resisted the last cruel onset of the Sioux, under their chiefs Cou-sta-wa (Big Tree) and Ink-pa-du-ta.

INDIAN GRAVES AND RELICS.

Two of the Indian graves of which mention has already been made, were found by Orlando, son of David Slosson, in 1857, on the bank of Pilot creek, near the present site of Rolfe. Other graves were found about the same time on the plateau of the southwest quarter of section one, Clinton township, now included in the farm of John E. Schnug. In 1858, W. S. Fegles found three skeletons at Swan Lake, the largest of which was believed to be that of the Sioux chief, Cou-sta-wa, or Big Tree. In 1860, when the workmen were making the excavation for the court house at Old Rolfe, on the southwest quarter of section 26, Des Moines township, they uncovered the remains of ten bodies, ranging in size from a child to a giant. Their bones were placed in a box and reinterred in the southwest corner of the foundation. The first court house of Pocahontas county was thus erected over the last resting place of several of the primitive red men of the forests and plains, and it was the general belief at the time that those who were buried at this place were Winnebago warriors.

Very few resting places of the dead among the Sioux, who came from the northwest and at least for two centuries occupied this section of country, have been found by the white man; a circumstance, no doubt due to the peculiar method practiced by them in disposing of their dead. The Sioux, instead of burying the bodies of the dead in the ground, often placed them upon elevated scaffolds or rude platforms made of timber. The dead were thus elevated to prevent their bodies from being devoured by wolves and other rapacious animals. They were not so scrupulous in regard to depredations that might be committed upon them by birds of prey.

The mode of burial in vogue among the tribes of the Algonquin family, to which the Pottawattamies and Musquakies (Sac and Fox) belonged, was quite different. They buried their dead under the ground. Stones and even logs were often placed in heaps over the graves of their dead to give them better protection.

The Winnebagoes, parent stock of the Iowas, were the van-guard of the Sioux, when they began to occupy the valley of the Mississippi. The Winnebagoes originally made use of the scaffold, but later adopted interment, except when the ground was frozen. The place selected for interment was usually the summit of a knoll, and the grave was arranged so that the head and feet of the body would extend east and west respectively. Sometimes they buried the dead in a sitting posture, and in this case, the body faced the west, while the head and chest would extend above the natural surface of the ground. If the one buried was a male, some tobacco and a pipe were usually deposited in the grave; and if he was a warrior a war-club or some other weapon was added.

John B. Jolliffe, a resident of section

two, Powhatan township, about the year 1866, among some rocks on a little knoll a short distance west of his home, found a pair of very beautiful Indian bracelets. They were made of a material that was of a slate color and as hard as flint. They were very artistically carved on the outside and both were exactly alike. The carved work represented, in raised form, many of the animals with which the Indians were familiar, such as the fox, coyote, beaver and otter. These interesting relics were lost at the time of the prairie fire that consumed his buildings, in the latter part of September, 1873.

About the year 1876, A. H. Malcolm, while removing some boulders from the knoll south of his residence on section one, Clinton township, found underneath a large rock, nearly a peck of flinty specimens that were supposed to be Indian arrow heads in an unfinished condition. They were oblong pieces of flint rock, roughly chipped to a blunt point at one end while the other was rounded. They were three to four inches long, half an inch thick and about one and one-half inches wide. Some, who examined these relics, expressed the opinion they were not arrow heads, but some blades made by those who lived in the "stone age" and knew nothing of the working of metals. Since no tools or implements, except those of stone, have been found among their relics, the mound-builders are supposed to have lived in that age.

INDIAN MOUNDS.

"The Indian passed away, and lo!
What is left behind to show
That he drew Ulysses' bow?
He often earned immortal fame;
But what perpetuates his name?
On the knolls of prairies green
Only the Indian mound is seen."

On the right hand of the cut illustrating the battle field at Pilot creek, page 126, there will be seen an Indian mound. This mound is situated on

the summit of a high bluff on the west bank of the west branch of the Des Moines river that is skirted on the east with a body of tall, heavy timber. It is located on the farm of O. F. Avery, one-half mile east of the homes of A. H. Malcolm and Senator Geo. W. Henderson. It is in Humboldt county, a few steps from the county line.

This mound was circular in form, about twenty feet in diameter at the base and five feet high. It rests on a natural elevation sloping gradually to a summit, that overlooks the valley of the Des Moines river northward for many miles.

In 1883, Ora P. Malcolm, his brother Fred and their cousin Geo. W. Horton, having a desire to know what was in the mound, made an excavation by digging down through the center of the top of it. They found the skeletons of three human bodies which they supposed to be the remains of Indians. They expected to find some relics of value, but in this they were disappointed. When their curiosity had been sufficiently satisfied they returned the bones that had been exhumed, and, covering them, left them as they had found them.

The old court house site, where ten bodies were found, is one of the highest knolls in Des Moines township; and it was the removal of three mounds upon its summit that revealed the bodies buried there.

For the account of other mounds and their story the reader is referred to page 16.

INDIANS ALONG THE LIZARD.

In the latter part of December, 1855, when M. T. Collins, of Lizard township, his mother and sister were living in their log cabin on section 18, Jackson township, which was just across the line in Webster county, three Indians armed with guns, surprised and frightened them by coming to their door and begging for

food. They came to their home about four o'clock in the afternoon and were the first Indians they had ever seen. When Mrs. Collins gave them some food they seemed to be very contented and happy. They sat down by the fire, smoked their pipes and after a little while returned to their camp, which they had pitched in the grove along Lizard creek, south of the Lizard Catholic church. There were about thirteen men who were accompanied by their wives and children, in this band, and they had several tents. They remained at this place, hunting and trapping, until about the first of April following, when they moved northward to Mulholland's grove. About the first of May, (1856) they disappeared as quietly as they had come.

These were a band of Sioux Indians that had come from the southwest, the vicinity of Twin Lakes. Ti-tonka To-ma-to, a large old man, was their chief and he had a son who was also very tall and active. They had a number of ponies and said that their favorite hunting ground was along the Lizard and especially at Lizard lake.

During the period of their encampment at this place one or more of the squaws would come every day to the home of Mr. Collins and beg for something to eat. On one occasion when Mr. Collins was cutting wood, a young Indian girl came to his home and, beckoning for the axe by motions of her hands, he handed it to her and she showed him how she could cut wood, using the axe in a left-handed way.

THE SIOUX.

The tribes of the Sioux nation, that occupied Pocahontas county just previous to the time of its settlement, consisted of bands of the Sissetons, whose acknowledged chief was Red Thunder, Yanktons and half-breeds from Missouri. Pre-

vious to the establishment of the fort at Fort Dodge, they had several villages and encampments along the Des Moines river in the vicinity of Fort Dodge and along Lizard creek. They were great thieves, constantly roving about in squads, watching trappers who ventured along the Des Moines river and emigrants who attempted to settle in that district.

In 1848, when Mr. Marsh, a government surveyor of Dubuque, was running the correction line from the Mississippi to the Missouri rivers, he progressed in his work without molestation, until he and his company crossed the Des Moines in what is now Webster county. On the west bank of the river he was met by a party of Sioux, under the lead of a chief named Si-dom-i-na-do-ta, who told him that this section of country still belonged to them, that he should proceed no further, and ordered him to "pue-a-chee" that is "be off" or "clear out." After they left him, Mr. Marsh and his party concluded to proceed with their work. But before they had advanced a mile from the river, they were surrounded at a point near the head of a large ravine (south of the south-line of section 30, township 89, range 28), about 3 miles southwest of Ft. Dodge, by a large force of Indians, who robbed them of everything. They took their horses, destroyed their wagons and surveying instruments, pulled up their stakes, leveled their mounds and forced them to return to the east side of the river to find their way home as best they could. It was this outrage and similar ones, committed by the Sioux Indians on families who had ventured up the Des Moines and located claims north of the Raccoon fork, in the fall of 1849, that induced the government to establish the military post and station troops at Fort Dodge.

When the government troops arrived, August 23, 1850, the Sioux re-

treated westward from the vicinity of the Des Moines river, and committed no further outrages on the whites in its vicinity, while they remained there. When, in July, 1853, the troops at Fort Dodge were transferred to Fort Ridgely, Minnesota, they again became impudent and annoying, and Major William Williams, who remained at the fort, was empowered to keep them in check. It will be remembered that the terrible tragedies enacted at Spirit Lake in 1857, and at New Ulm and Mankato in 1862, were perpetrated by bands of the Sioux.

INDIANS IN LINCOLN TOWNSHIP.

About the month of August, 1873, a band of about sixty Indians crossed this county, traveling eastward along the line that runs one mile north of the south line of Dover, Grant and Lincoln townships; of whom the following account has been furnished by C. M. Saylor, of the last named township:

"They made this journey in true Indian style, which was a single file that extended nearly a mile in length, several rods usually intervening between each member of the procession. About a dozen members of the band were mounted on ponies that were heavily loaded with luggage. Their tepee or tent poles, tied loosely together at one end with a thong, were hung over the backs of the ponies in front of the riders, while their loose ends were left to drag on the ground. On these poles, at a short distance from the rear of the pony, cross-pieces were fastened that served as a framework for carrying their tenting, cooking utensils, trapping outfit and other necessary equipage. Some of their papooses or babies, had been put in baskets and strapped on these poles that extended from the ponies to the ground. One or two of the squaws, sitting on the bundles that rested on the poles, were also enjoying the same kind of transportation: They were

supposed to be journeying either to a reservation or to one of their favorite camping grounds along the Des Moines river. While passing through Lincoln township they called for provisions at the homes of Mr. Saylor and John Dooley."

INDIANS IN BELLVILLE TOWNSHIP.

Mrs. Wm. Brownlee, of Pomeroy, thinks she never, in all her life, received any compliment that gave her more real pleasure than one bestowed by a band of Indians that camped on their farm, on section 18, Bellville township, in the spring of the year during the seventies, to hunt and trap among the ponds in that vicinity. Knowing that the Indians were treacherous and blood-thirsty when on the war-path, she did not appreciate the idea of having them for her nearest neighbors. When, however, they pitched their tents so near them, in the interest of peace and good-will, she and her husband decided to give them about all they might call for. When the squaws, true to their custom, called, day after day, for "more food," she gave them all the available bread and butter in the home, and frequently, by special request, some roosters, indulging the hope it would be their last call. The Indians must have enjoyed her hospitality more than ordinary, for when the two weeks' hunt was ended, the chief of the band came with the squaws when they made their last call, for the purpose of expressing their appreciation of the favors received and bid farewell to their benefactors. On this occasion, when they were ready to depart, Mr. and Mrs. Brownlee standing near each other in the front yard of their home, the Indians thanked them heartily and bowed graciously, after which the chief, addressing Mr. Brownlee but pointing to his wife, with all his native earnestness and gesticulation, exclaimed: "Good s-q-u-a-w! Good s-q-u-a-w!"

THE POTTAWATTAMIES.

A band of Pottawattamies, under their old chief, Johnnie Green, used to frequent the Lizard in the hunting and trapping season for many years. They were known as the "Johnnie Green tribe," or "Prairie band of Pottawattamies." Their reservation was in eastern Kansas, but during the sixties they became ultimately associated with the Musquakies (Sacs and Foxes), and located near them in the country along the Iowa river. They were peaceable in disposition and always carried with them a written passport. A few of their number, usually the squaws, would make it a practice to go from house to house in the settlement begging clothing and provisions. They usually numbered from twenty-five to fifty persons, including men, women and children, and they roamed considerably throughout the north part of the state, traveling some on foot, others on horseback, and camping at different places as they proceeded.

The Collins' grove, on section 13, Lizard township, was one of their favorite places of encampment, and they occupied it every one or two years during the sixties and seventies and for the last time, about the year 1883. The old chief, Johnnie Green, was about seventy years of age when he made his last visits, about the years 1873 and 1874. The name of the young chief who succeeded him, is not remembered.

Two other favorite stopping places for the Indians in those days were the large grove on the east side of Lizard lake, in Lake township, and a grove south of Dakota City, near the forks of the Des Moines river, where for many years there lived an early settler by the name of Miller. The groves of timber at Sac City, at this early period were also visited by bands of Indians who came from southern Nebraska.

The Winnebagoes and Pottawattamies were originally from the districts west and south of Lake Michigan. In 1836, the latter were settled by the government in southwestern Iowa including what is now Pottawattamie county. By the treaty of June 5, 1846, they sold all their lands in Iowa, and in 1847 and '48 were removed to Kansas Territory, where most of them remained, but some returned to Iowa, and during the sixties occupied the country in the vicinity of Iowa and Tama counties, together with the Musquakie (Sac and Fox) tribe. At the present time there are 390 Musquakies and about forty Pottawattamies, Winnebagoes and others occupying their own lands in Tama county.

The Pottawattamies and Winnebagoes never molested the early settlers; but when some venturesome trader, in exchange for their furs, gave them whiskey, under its influence they, as well as pale faces in a similar condition, sometimes became quarrelsome.

"On his head his eagle feathers,
Round his waist his belt of wampum,
In his hand his bow of ash-wood,
Strung with sinews of the reindeer."

The roving bands of Indians who visited these sections for many years during the period of early settlement, usually spent about three months of the fall or spring of the year catching mink and muskrats for their flesh and fur. They could trap and spear muskrats to better advantage than the whites because, while the latter utilized only the fur, the Indians ate the flesh of the rat and mink with great zest, and furs cured by them brought a better price in the market.

The Indian, upon his small footed pony, was an interesting object to the stranger. The ponies were gentle creatures, docile as dogs and had beautiful feet. The Indians made their own saddles and always of rawhide. They dressed comfortably, many showing a decided preference

for the red blanket for underwear. Mothers, while on the journey, would strap their babies to a board, and then carry them in whatever way was most convenient, sometimes by swinging them over their shoulder. The men, when trading, endeavored to make "shrewd bargains;" before leaving town, they usually spent all they received for furs, and the tobacco and whiskey dealer was pretty sure to get his share. The men and women composing these bands of Indian trappers, whilst they were oddly dressed, were ordinarily a lot of hearty, healthy and fine looking people. They were remnants of the once powerful tribes that were in possession of all the country from the Lakes to the Missouri, at the end of the war of independence. They presented, however, but a faint resemblance of their former greatness and renown, or of their warlike and noble bearing.



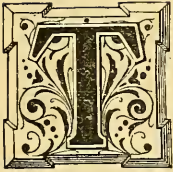
III.

THE SURVEY OF POCAHONTAS COUNTY.

"What lovely prospect meets the view:
The rolling prairies, like a sea,
In vast and wild sublimity,
There lie with an unbroken sod,
Untilled but by the hand of God:
He sows the seeds of grass and flowers,
He moistens them with vernal showers!"

—LEONARD BROWN.

THE GOVERNMENT SURVEY.



THE government survey of Pocahontas county was made during the years of 1853, 1854 and 1855, by two parties of surveyors who followed each other in their work. The first party located the boundary lines of the several townships, which are six miles square, by driving into the ground an oak stake and raising a mound of earth around it, at the corners of each township and of each section on these boundary lines. The earth for the mound around the stake would usually be taken at a distance of eight links east or south from the corner stake, and the exact location of the pit thus formed would be noted in the field notes of the surveyor. The second party surveyed the townships severally, dividing them into sections, each one mile square, and driving a stake at the distance of every half mile as well as at the corners of each section.

Comparatively few, if any of the original stakes are now found at the corners of the sections. Prairie fires

destroyed many of them, while others have decayed with the lapse of time or have been covered by the grades on the highways. The county surveyor of Pocahontas county, (H. W Bissell) about the year 1890, began to mark the corners of the sections where the stakes used to stand, with a rock nearly buried. These markers are more durable and many of them may now be seen, even upon the grades, in the center of highways where the roads cross each other.

The first survey, or that of the township lines, was made by John W. Ellis, deputy surveyor, who was assisted in the survey of the three south tiers of townships, numbers 90, 91 and 92, by John Corrick and James A. Holstein, chainmen; Charles Bell, axeman or marker, and W. M. Helms, flagman; and in the north tier of townships, number 93 by Charles Bell and Charles Moran, chainmen; Barnet Dodd, axeman, and William Dodd, flagman. These men surveyed the boundaries of the several townships of Pocahontas county, under a contract of date June 14, 1853.

EXHIBIT

Of the Government Survey of Pocahontas County, showing Number and Range of Townships, alphabetically arranged.

TOWNSHIP.		MOUND MAKERS.				
Name.	T R	Date of Survey.	Deputy Surveyor.	Chainmen.	Axeman.	Flagman.
Bellville	90 32	1854, July 25—Aug. 1.	Geo. Berry.	James Ridgeway. Asa F. Sellers.	Andrew J. Sears.	Cyrus Clay Carpenter.
Cedar	90 34	1855, June 25—July 3.	Joshua T. Nowlin.	Alexander Willson, William P. Hall.	T. Vanbuskirk.	James W. Milley. (Compassman.)
Center	92 32	1854, Oct. 9-15.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Clinton	92 31	1854, Oct. 30—Nov. 7.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Colfax	90 33	1854, Sept. 12-22.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Des Moines.....	93 31	1854, Oct. 9 —	Andrew Leach.	Jeremiah Huff, Joseph Richey.	John W. Deeman.	Wm. R. Wooldridge.
Dover.....	91 34	1855, July 5-11.	Francis Bell.	Josiah Scott, Alex. Melnyre.	Alfred Bebe.	Harvey Norris.
Grant.....	91 33	1854, Sept. 23-29.	Joshua T. Nowlin.	Alex. Willson, Wm. P. Hall.	Thornton Vanbuskirk.	James W. Miller. (Compassman.)
Lake.....	91 31	1854, Oct. 23-30.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Lincoln.....	91 32	1854, Oct. 16-21.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Lizard.....	90 31	1854, Aug. 3-10.	Geo. Berry.	James Ridgeway, Asa F. Sellers.	Andrew J. Sears.	Cyrus Clay Carpenter.
Marsball.....	92 34	1855, Oct. 16-21.	Wm. W. Smith.	Isaac A. Cory, Wm. S. Wesley.	Edward M. Stiffey.	Isaac Welch.
Powhatan.....	93 32	1854, Oct. 1-6.	Jesse T. Janett.	Ephraim Hartman, Elisha Lackey.	Not given.	Not given.
Sherman.....	92 33	1851, Oct. 2-7.	Robt. O. C. Anderson.	A. L. Palmer, C. C. Stevens.	Wm. H. Brakey.	Mason Crouch.
Swan Lake.....	93 34	1855, Sept. 16-20.	Adam Sherrill.	A. P. Hull, Charles C. Perry.	Daniel Dicus.	Isaac Welsh.
Washington.....	93 33	1854, Oct. 7-12.	Jesse T. Janett.	Ephraim Hartman, Elisha Lackey.	Not given.	Not given.

The variation of the compass, in Pocahontas county at the time of this government survey, was noted as ranging from $11^{\circ} 15'$ to $11^{\circ} 35'$ east on the north and south lines, and $10^{\circ} 20'$ to $11^{\circ} 15'$ east on the south and west lines.

These government surveys were made by deputy surveyors, under the appointment and direction of Warner Lewis, surveyor general of Iowa and Wisconsin, whose office at that time was at Dubuque, Iowa.

The following general notes made by the surveyors at the conclusion of their work, on the main features or characteristics of the townships surveyed, are already of historic interest and no doubt throw some light on the early impressions that affected, to some extent, the settlement of this section of the country.

They classed a great part of the land as "second rate, full of irreclaimable marshes, although producing grass, canes, rushes, flags, brakes and pea vines, abundantly." They were careful to note the fact there was no timber in many of the townships, and the presence of timber must have been regarded as an absolute necessity in order to render these lands inhabitable; for the surveyor of Des Moines township, which had more timber than perhaps any other township in the county, writes: "There is sufficient timber in this township to warrant but a few settlers, at least for some time to come."

PLAN OF THE GOVERNMENT SURVEY.

The method of the United States government in the survey of these western lands is an admirable one and has for its basis the invariable direction of the true meridians of longitude. All bearings taken from these meridians are called true, to distinguish them from magnetic bearings; and in their direction they are as invariable as is the meridian from which they are measured.

The same is true of the parallels of latitude, from which distances are measured north and south. Since all distances and bearings are measured from two lines that are at right angles to each other, the one a true meridian of longitude and the other a true parallel of latitude, the system is rectangular.

All lands in Iowa by townships are numbered eastward and westward from the 5th principal meridian which, extending due north from the mouth of the Arkansas river, passes through the eastern part of Iowa twelve miles west of Dubuque. This meridian, which is the 14th west from Washington, gives the range of the townships east and west; and from it the east tier of townships of Pocahontas county is numbered 31, the second 32, the third 33 and the west tier 34.

All the townships in Iowa are numbered northward from a base line, a true parallel that, extending due east and west, crosses the 5th principal meridian forty-eight miles north of the mouth of the Arkansas river. This is the 35th parallel of north latitude and forms the north boundary line of Georgia, Alabama and Mississippi. Counting from this base line, the south tier of townships of Pocahontas county is numbered 90, the second 91, the third 92 and the north tier 93.

The boundary lines on the north and south sides of a township are called township lines, and the rows or tiers of townships running east and west on these lines, which are parallel to the base line, are called townships. The boundary lines on the east and west sides of a township are called range lines, and the tiers of townships running north and south along these lines, which are parallel to the principal meridian, are called ranges. The boundary lines of a section are called section lines, and all interior corners, necessary for the division of a section, were left by the government surveyors to

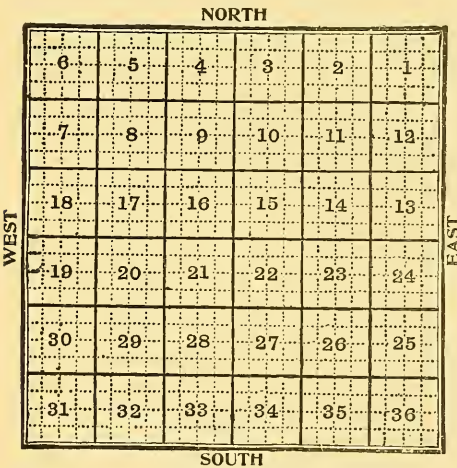
be located by local or county surveyors.

Since the meridians of longitude converge toward each other as we pass northward from the equator, it follows that the north line of a township would naturally be a little shorter than the south line. Pocahontas county is located between the 42d and 43d parallels and in this latitude the convergence is about forty-three feet to each township. This convergence is remedied by an occasional correction line, one of which may be seen upon the map of Iowa extending east and west six miles south of Pocahontas county. The correction is made in the tier of townships south of this line. While the distances on the north side of this line are all six miles, those on the south side of it are all less than six miles by the amount of the convergence for the distance the township lines have been run. All the other townships are intended to be six miles square.

Each township is divided by parallel lines into thirty-six equal parts, called sections. Each section is one mile square and contains 640 acres. The section is divided into quarter-sections of 160 acres each and the latter into quarters of forty acres each. The sections are always numbered from 1 to 36 in regular order, commencing with the one at the northeast corner of the township and proceeding west, then east and so on, until the southeast corner is reached, as may be seen in the accompanying plat.

It is of interest to note that the government survey of public lands in Iowa was begun in the autumn of 1836, by A. Bent & Son, from Michigan, who received their commission as U. S. deputies, from the office of the Surveyor General at Cincinnati, Ohio. Their first contract was for the survey of Scott county, of which Davenport is the county seat, and it was completed in the spring of 1837.

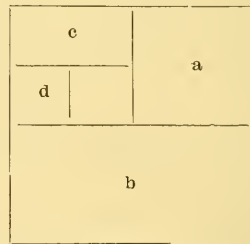
The survey of lands in northwest



PLAT OF A TOWNSHIP—T. 90, R. 34.

The numbers "T. 90, R. 34" are those of Cedar township and show that it is township number 90 and range 34 west from the 5th principal meridian.

The different divisions of a Section are described as follows:



- a—N. E. $\frac{1}{4}$ —Northeast Quarter.
- b—S. $\frac{1}{2}$ —South Half.
- c—N. $\frac{1}{2}$ N. W. $\frac{1}{4}$ —North Half of the North-West Quarter.
- d—S. W. $\frac{1}{4}$ N. W. $\frac{1}{4}$ —South-west Quarter of the North-West Quarter.

Section 16 of every township in Iowa was set apart by the government for the support of the public schools, and they are called "school lands."

Iowa, including all the territory north of Des Moines, was not commenced until the fall of 1848, when Marsh and his company undertook to run the correction line from the Mississippi, near Dubuque, to the Missouri, near Sioux City, and were driven back by

the Sioux, when they crossed the Des Moines river in Webster county. This work was resumed at a later date and when, in the settlement of Woodbury county, a town was located on this line, it was very significantly named Correctionville.

IV.

TOPOGRAPHY OF THE COUNTY.

“Cease all this parlance about hills and dales.”—Duo.

LOCATION AND SURFACE FEATURES. *



POCAHONTAS County lies just east of the summit of the ridge or watershed—extending from Dickinson to Audubon counties—that divides the waters of the Mississippi and Missouri rivers. This summit is near Marathon, Buena Vista county, and some of the streams of Buena Vista find their way to the Missouri, while others empty into the Father of Waters. The drainage of Pocahontas county is wholly into the Mississippi and is effected, to a greater extent, by Lizard creek and its branches than by any other stream. The remaining surface is drained by Cedar creek, an upper branch of the Raccoon river, that has its source in Rush lake, a few miles northwest of Laurens, and by the West Branch of the Des Moines river and its tributaries, Beaver and Pilot creeks.

Pocahontas, like a large proportion of the counties in Iowa, is perfectly square in outline and contains sixteen congressional townships, making it twenty-four miles across from north to south and from east to west. It contains an area of 576 square miles, or 368,640 acres. Technically described it embraces townships 90, 91, 92 and 93 north, of ranges 31, 32, 33 and 34, west of the 5th principal meridian.

Pocahontas county is situated in the northwest part of the state, being two tiers of counties south of its northern and three tiers east of its western boundary. It is bounded on the north by Palo Alto county, on the west by Buena Vista, on the south by Calhoun and on the east by Webster and Humboldt counties. Its elevation is about 1400 feet above the level of the sea and its surface has a gradual slope to the south and east. The average slope of the county is a trifle less than four feet to the mile, which is about the same as that of the state from Spirit Lake to Keokuk.

The only bodies of natural timber in the county are, a strip ranging from a quarter to a half mile in width along the Des Moines river in the northeast, a similar skirting, though less in size, on the east side of Lizard lake and along Lizard creek in the southeast, at Swan Lake in the northwest, a little along Cedar creek where it crosses the line into Calhoun, and at Sunk Grove, an island of some eighty acres in a slough in the northwest part of Cedar township. During the sixties, this island was covered with a heavy growth of fine, large timber consisting of maple, elm, basswood,

*The greater part under this head was written by L. C. Thornton, county surveyor, 1884-5 and 1888-9, for the Revellie, Jan. 30, 1896.

cottonwood, oak, hackberry, box-elder and other woods. The early settlers traveled many miles to levy tribute on this unusual supply of good timber, and it was not long before unsightly stumps were all that were left to tell of the beautiful grove that existed here previous to the year 1870. At the present time there is a fine body of young timber, or second growth, at this place. These bodies of natural timber, affording material for fuel and the construction of buildings, as well as a grateful protection to stock both in summer and winter, became the most attractive places to the early pioneer.

Pocahontas county is almost an uninterrupted prairie that extends also into all the adjoining counties. Its beautiful prairie surface is gently undulating and is slightly broken only in the northeast by the Des Moines river, in the southeast by Lizard and in the southwest by Cedar creek. All of Northwestern Iowa is noted for its beauty, and fertility, and in these respects Pocahontas is unsurpassed by any of the neighboring counties. Other parts of this northwestern section are more rolling and their elevated portions, in the earlier days, were prized because they were tillable, but these elevated and valuable portions were interspersed with unappreciated and impassable sloughs and other waste places. In Pocahontas county these extremes are not found. The entire surface of the county is that of an elevated plain with a gentle slope to the southeast and having no waste land except the channels of the river and creeks—and these are essential to its occupancy and fertility.

As its elevation is so high it is altogether probable the surface of Pocahontas county has not changed materially since its transition from the bottom of a lake-bed to the elevation of a blooming prairie. Since that time no floods have swept over it and

no convulsions have marred the contour of its surface. In washing out their channels the streams have somewhat cut the crust, but on the whole it is safe to say the general lay of the land is the same as when it rose above the waters.

In the northwest part of the county are Swan and Muskrat lakes, shallow bodies of water with mud bottoms. The main body of the former, extending north and south, is about a mile long and a half-mile wide. It has a small, curved arm on the west, resembling the neck and bill of a swan and from this circumstance received its name. Muskrat lake which is about the same size, but extending east and west is but a few rods east of the former and is connected with it by a creek, a link of the Cedar. Clear lake, in the west central part of the county, lying partly in Dover and partly in Marshall townships, is shaped like the letter L, the stem pointing west and the arm north. It is probably two miles long by half a mile wide and is drained by the little or west branch of the Cedar. During the long continued drought of 1894, these lakes, except a part of the last, became dry and, during the season of 1895, good crops of grain were produced in the beds of all of them. Lizard lake in Lake township, extending northeast and southwest, is about one mile long by half a mile wide and has an outlet through which it empties into the north branch of Lizard creek.

In the days of early settlement there were in this county sloughs without number and some of the principal ones were named Devil's Island, Purgatory, Muskrat and Sixteen-Mile Slough. These were great places for muskrats and ducks, and gave rise to the familiar proverbs that "a flat-boat should be included in a farmer's list of apparatus necessary for cropping here" and that "a man

became web-footed after living in Pocahontas county a year."

But a great change has taken place. Where once there was nothing but muskrat houses and duck ponds, there are now finely cultivated fields. Great expanses that once seemed to be worthless swamps, save that they yielded a thousand muskrats each year, are now the most productive portions and yield annually many thousands of bushels of corn. A few years ago the high and dry lands brought two and three times as much as the low, flat pieces, but now this also is changed. There is now little or no waste land in the county.

There has been no upheaval, the land has not "risen above the waters," but the ditching machine, that great enemy of the duck and muskrat, has been abroad in the land, considerable tiling has been done and the tangle of the grasses has been broken by the plow. Through these means the surface water has been removed and the surplus moisture allowed to evaporate. These instrumentalities have contributed greatly to make Pocahontas county what it is today—one of the healthiest, most beautiful and productive in the state.

THE SOIL.

"Other skies may be fair,
Other lands be brilliant with beauty,
Or rich with their treasures
Of rock-hidden gold.
But hearts that are true
To affection and duty,
Best ever and dearest
Will 'Pocahontas County' hold."
—A. L. F.

The soil of this county is a rich, dark loam, that varies in thickness from two to eight feet. It is an undisturbed drift soil underlaid with a deep subsoil of porous clay mixed slightly with gravel, and possesses a uniform richness and fertility throughout the county. It differs somewhat from similar soils in other parts of the state, in that it contains a slightly

greater proportion of sand and less clay, a circumstance that imparts physical properties to it that are very beneficial in agriculture, giving it a warmth and mellowness that is favorable not only to the growth of crops but their maturity in this locality, as early as upon the more clayey soils, two hundred miles further south. It has also the additional advantage of becoming sufficiently dry for cultivation sooner after the frosts of early spring have ceased, or the showers of summer have ended, than those that contain a greater proportion of clay. It is a soil that is easily subdued, may be cultivated in the most convenient manner with the latest improved machinery and is well calculated to withstand the extremes of drought or excessive rainfall.

In these characteristics of the soil is found the secret of the uniform productiveness of this locality under all conditions of the weather, and of the superiority of Northwest Iowa over some other parts of the state. The wonderful power of this soil to withstand the injury arising from either excessive drought or moisture, has been demonstrated year by year, ever since the first settlers turned the first furrows in this section.

During a series of seasons in the eighties, when the crops in many other localities were seriously damaged by unusual rainfall, the farmers of Northwestern Iowa moved steadily forward, gathering abundant harvests. This ability to withstand excessive moisture is no doubt due to the fact that the subsoil of this region is rarely an impenetrable clayey hardpan near the surface, acting as a bowl to hold the water in great quantities, but is sufficiently porous to allow an excessive rainfall to percolate to an indefinite depth and leave the surface available for cultivation.

In 1886 and during the period from 1894 to 1895, there was afforded a strik-

ing illustration of the remarkable capacity of this section to resist the general blighting effects of drought. In February, 1895, when the famine prevailed in Central Nebraska and the unusual drought was more or less severely felt in all parts of this and the neighboring states, two carloads of grain and provisions were freely donated by the citizens of Pocahontas county and sent to the sufferers of Custer county, Nebraska. This incident will always be a reminder not only of the generosity of the people but of the bountiful harvests gathered here at a time of general scarcity elsewhere. In this particular instance the local showers that visited this section in the summer of 1894, contributed greatly to insure the crops of that year. It remains however, to observe there never has been a failure of crops, on account of drought, in Pocahontas county. The secret of this ability to endure long droughts is also found to a great extent in the subsoil of this locality, the porous nature of which enables it to receive and retain moisture to a great depth, so that while the surface cultivation acts as a sort of mulch, the roots of growing crops strike deeper in search of needed moisture.

It is to these singularly propitious qualities of the soil, together with a healthful and invigorating climate and an abundant supply of good water, that the unrivaled prosperity and enrichment of the people of Pocahontas county are due.

The country west of the Mississippi can afford no parallel to the prosperity of Northwestern Iowa. The surplus of one year has not been consumed in making good the losses of the preceding one, but a surplus has been produced every year. It is for this reason that farmers and stockraisers of this section have been growing rich and that that they should do so is not strange. It is the natural result of

putting these beautiful prairies under that judicious care and cultivation they merit. Such a teeming, trusty soil rapidly develops beautiful rural homes, builds cities, towns and railroads, and flings wealth into every willing hand that touches it.

LIMESTONE BEDS, CLINTON TOWNSHIP.

An interesting exposure of stratified rocks is found in the limestone beds of Clinton township, near the eastern border of the county. In Northwestern Iowa there are but two other similar exposures of stratified rocks and they are found, one in the southwest corner of Plymouth county, consisting of Woodbury sandstones and shales, and belonging to the cretaceous (chalk or reptilian) age; and the other is in Lyon county, in the extreme northwest corner of the state, consisting of Sioux Quartzite, a brownish red granite, and belonging to the azoic* age.

The stratified rocks in the southeast part of Clinton township, have been referred by State Geologist Charles A White, to the Kinderhook beds, constituting the lowest formation of the sub-carboniferous group that is found immediately underneath the coal-bearing strata. These Kinderhook beds in Iowa are about 175 feet in thickness and consist of alternate layers of sandstone and limestone, the latter partly magnesian. The exposures in Clinton township are confined to a small space upon the gentle slope of the prairie valley, yet considerable quantities of rock have been quarried here for lime and building purposes.

The rock at this place has a slight westward dip and consists of thin layers of limestone that is slightly oolitic (granular) but chiefly sub-crystalline in texture and contains numer-

*The age preceding organic life, and therefore containing no fossils or organic remains. All granite formations, including the boulders of the prairies, belong to this age.

ous small fossil remains. The fossils are those of marine animals and belong chiefly to the orthid (straight, rather thin) and spirifer (spiral) families of brachiopoda (arm and foot), species of mollusks (soft) or bivalves, of which the clam and oyster are familiar illustrations.

The first exposure of stratified rocks due north of Pocahontas county, is found at New Ulm, in the valley of the Minnesota river, Minn., and it consists of a single exposure of the azoic age, having the same formation as the Sioux Quartzite found in the extreme northwestern corner of Iowa.

If a square that shall represent one hundred miles east and west, and the same distance north and south be placed on the north line of Iowa, so that it shall extend southward between the 29th and 30th ranges of townships from Kossuth to Greene counties, thence westward from Grand Junction to Onawa and thence to the north line of the state so as to include the east ranges of townships in Plymouth, Sioux and Lyon counties, it will represent 10,000 square miles, embracing more than 12 counties, in the most elevated portion of Iowa on which there are no exposures of stratified rocks to be found except the quarry, on section 25, Clinton township, Pocahontas county.*

This locality is interesting because it is the most northern and western point in Iowa at which the strata of this or any other sub-carboniferous formation is found. It is also the most western point at which any paleozoic (ancient life) strata has been observed within the limits of the state. In the section of country south of Pocahontas county, all the rock strata exposed within the limits of this state belong to the Lower, Middle and Upper coal measures, all of which have a slight southwesterly dip. This dip carries the Upper coal

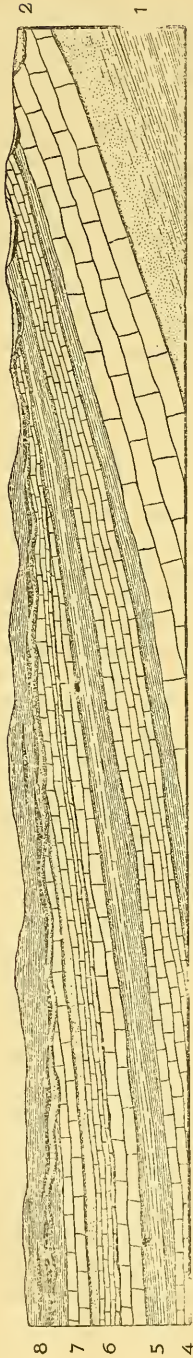
measure formation of Iowa beneath the cretaceous (chalk) strata of Nebraska and they are not seen in that direction until they come to the surface again near Salt Lake, a thousand miles distant. The most northern exposures of these rocks, extending from Harrison through Guthrie and Greene to Webster county, indicate that the coal-bearing formations of Missouri and Southern Iowa have ended by thinning out somewhere beneath the drift of this broad, stoneless area.

OTHER ROCK-BEDS IN IOWA.

It will be of interest to note that the oldest stratified rocks in Iowa are the Sioux Quartzite or brownish red granite, found in the extreme northwest corner of the state. These belong to the Azoic or Algonkian age, the age preceding the existence of either plant or animal life.

The next oldest rocks are found in the northeast part of the state, in the territory extending from Dubuque county to the north line of the state and westward to Winneshiek county. These belong to the Lower Silurian age, so called after the Silures, the ancient Celtic inhabitants of that part of Wales where they were first found. It is also called the age of invertebrates (destitute of a backbone) because during this period animal life began to exist in the seas under the forms known as articulates, (with a segmented body like a worm,) radiates (having a radiate structure like a flower) and mollusks. The Potsdam sandstone, a soft, friable formation found in the channel of the Upper Iowa river for a distance of twenty miles from its mouth, in Allamakee county, is the oldest rock in this section, and it is supposed to rest on the Sioux Quartzite. Overlying this formation are the lower magnesian limestones, buff colored dolomites, in the bluffs that border the valley of the Upper Iowa, and the St. Peter's sandstone, a gritty, light colored rock, gen-

*Geology of Iowa, 1870—page 208.



3

Generalized Section showing the relations of the Geological Formations along the Mississippi, from the north line of Iowa to the mouth of the Ohio.

- 1—UPPER CAMBRIAN, co-ordinate with, but in Iowa not a part of the lower Silurian age, represented by the Potsdam or St. Croix sandstone along the Mississippi and Upper Iowa rivers in Allamakee county.
- 2—SILURIAN AGE, Onondaga or Lower Magnesian limestone capping the bluffs and valley sides of the same rivers in the same locality. Over it are found the St. Peter's sandstone which at McGregor is called the pictured rock, the Trenton limestone of Winnebuck county, the Galena limestone of Dubuque county, the Maquoketa shales along the Little Maquoketa river and the Niagara or upper magnesian limestone found at Farley, Anamosa and Le Claire.
- 3—DEVONIAN AGE, the Wapsipinicon series, including the Independence shales of Buchanan county and shales of Fayette county.
- 4—Cedar valley limestone, exposed at Waverly, Rockford (shale), the Old Capitol quarry near Iowa City, and in Muscatine county, and containing fossils of mollusks and corals.
- 5—CARBONIFEROUS AGE, Kinderhook shales and limestone beds at Burlington and in Pocahontas county.
- 6—Augusta limestone in bluffs of Des Moines and Louisa counties, including Burlington and Keokuk beds, with their crinoid (lily-like, starfish) fossils.
- 7—St. Louis limestone that usually forms the floor of the coal-bearing strata.
- 8—Coal measures, in which the veins or beds of coal are found; formed under, and therefore before the Nishnabotna sandstones of Guthrie and Montgomery counties, the sandstones and shales of Woodbury county, (all of which are shore deposits), the Niobrara or chalk beds along the Big Sioux river, the gypsum beds of Webster county and the surface drift that covers the entire state.

erally, but having shades of red and yellow at McGregor that give rise to the local name of "Pictured Rocks." The Galena limestone in which the lead is found and that forms the high bluffs along the river at Dubuque and northward, also represent this age. The Upper or later Silurian period includes the exposures in the area extending from Scott county northwestward through Fayette. The Niagara limestone found at Farley and other places in Dubuque county, at Le Claire, Scott county, and as far west as Anamosa, belong to this period. This formation affords the best and greatest amount of building rock in the state and the quarries at Anamosa are remarkable for the uniformity and precision of the strata.

Southwest of this area there is a belt 50 miles in width and 200 miles in length, extending from Davenport to Muscatine on the Mississippi in a northwesterly direction to Mitchell and Worth counties on the north line of the state, where the rocks that are exposed belong to the next age, that of fishes, called Devonian. During this age the waters of the sea began to be inhabited, by the reef-building corals, turtles, sharks and scale fishes, and in the marshes and upon the islands there appeared seaweeds, ferns, ground pines and conifers. The limestone found at Rockford, Waverly, the Old Capitol quarry near Iowa City and at other places in the district just named, are referred to the Hamilton period of this era. The oil wells of Western Canada are traced to the limestone beds formed during this era in that section. During this Devonian age when the strata of the rocks last named formed the surface of the earth's crust in this section, the continent of North America was to a great extent a vast sea with a very limited amount of dry land. In place of the Rocky and Allegheny

mountains, there were only islands, reefs and shallow waters marking their future site, for none of the coal-bearing strata and other rocks now found upon their slopes 13,000 feet above the sea had yet been formed.

The age of Fishes was followed by that of the coal plants, called Carboniferous. This age has been divided into three periods of time, each representing a distinct formation of rocks known as those of the lower, middle and upper coal measures. It was commenced with a preparatory marine period called the sub-carboniferous or lower coal measure that had its consummation in a long era of extensive continents, covered with forests and marsh vegetation, and subject at long intervals to inundations of fresh or marine waters. This sub-carboniferous period in Iowa extends from Lee and Louisa counties in the southeast part of the state, through Washington to Franklin and thence west to the eastern part of Pocahontas county. The rocks that occur in this belt at Burlington, where the beds are 147 feet in thickness, along the Iowa river in Tama, Marshall, Hardin and Franklin counties and along the Des Moines in Humboldt and Pocahontas counties, have been referred to the Kinderhook beds of that period. The rock is a light brown or buff-colored limestone, and usually contains small fossil remains.

The carboniferous or coal measures proper are found in the country south of the region just named, along the Des Moines and Raccoon rivers; while the upper coal measures are found in the southwestern part of the state, from Wayne to Madison and thence to Harrison county. It will thus be perceived that the rocks formed during the carboniferous age, occupying the central and southern part of the state, are the surface rocks of the greater part of Iowa, and indicate the geological age of this section of country.

It is by their organic remains or animal and vegetable fossils that the stratified rock-beds are distinguished and the strata of the different districts are classified.

Iowa is near the center of the great interior region between the Allegheny and Rocky mountains. This vast expanse of country unbroken by mountains and untouched by the sea, has been termed a great basin. Everywhere are evidences of the comparatively recent elevation of the surface that has lain for ages near the level of the sea. The deposition of each later formation carried the old shore line farther and farther southward until at the close of the carboniferous the land surface had been extended to the central portion of what is now the state of Arkansas. The Gulf of Mexico and the five great lakes of the lake region are now the diminutive remnants of that vast body of water that once covered the central part of North America.

At the commencement of the carboniferous era, a vast sea of shallow water spread out over what was soon to be the heart of a great continent. A long period of quiet existed while the great beds of limestone, formed for the most part from organic remains, were laid in sheets. Subsequently, over the marshes and dry slopes there grew rank forests of lepidodendrons—trees of great size, having scaly or sectional bark with leaf scars—conifers and other varieties, and their luxuriant growth continued until the creeping centuries had accumulated vegetable debris (rubbish) sufficient for beds of coal. Trees and shrubs grew rapidly, shed their leaves and fruit and then dying formed the accumulations of vegetable remains. While great stumps stood in the swamps the debris of the growing vegetation and also the drift borne by the waters accumulated around them, and occasional logs floated over the

lakes to sink and become buried in the accumulating vegetable deposits. This luxuriant vegetation grew under the influence of fresh or lake water and formed coal only where there were marshes and the deposits of vegetable debris afterward became covered by deposits of sand, clay or other rock material, the result of a submergence that let in the saline, or seawater with its period of abundance of aquatic, (water), or marine life. It was during this more recent period that the gypsum beds upon the tops of the bluffs and hills in the vicinity of Fort Dodge, and other stratified rocks overlying the coal-beds, were formed. It will be perceived that the luxuriant forests and vegetation that once existed throughout this section of country and furnished the material for the coalbeds, were all destroyed, for all existing forests are found above the drift deposit, a material of still later formation than the gypsum beds and many feet in depth.

THE DRIFT AND BOULDERS.

The term Drift, includes the clay, sand, gravel and boulders that constitute the covering, in unstratified form, of the rock formations throughout Iowa. Its depth or thickness ranges from a few to several hundred feet and its greatest depth is found along the watershed or divide, near the summit of which Pocahontas county is located. Whilst it is found to be from 50 to 100 feet in other parts of the state, along this ridge its depth ranges from 150 to 250 feet, so that wells rarely reach the stratified rocks underneath it.

The drift is composed of more or less finely pulverized formations that existed in other forms prior to its present location and arrangement. A large part of it was doubtless derived from the rock formations that underlie it, many of which in Iowa are soft and easily pulverized, but a considerable part, including all the boul-

ders, came from some northern locality.

The clay of the drift has a brown or buff tint and is commonly called joint clay, because it breaks into angular lumps when dry or exposed to the air. It is always more or less impure and its yellowish color is due to the presence of peroxide of iron, which becomes red when burned, as in brick or tile. The proportion of lime in it is so great that the water of all our wells and springs, though healthful, cool and excellent for man and beast, yet holds so much carbonate of lime in solution that it is too hard for washing purposes until the carbonate has been precipitated with borax, potash or sal-soda.

Sand and gravel constitute a very small proportion of the drift in Iowa, and the former as regards its fineness is very variable. The gravel however, wherever it is found, is a characteristic constituent and was derived from rocks that are either silicious (flint-like) or granitic (composed of quartz, feldspar and mica), and no doubt a large part of it existed as gravel, before the glacial epoch.

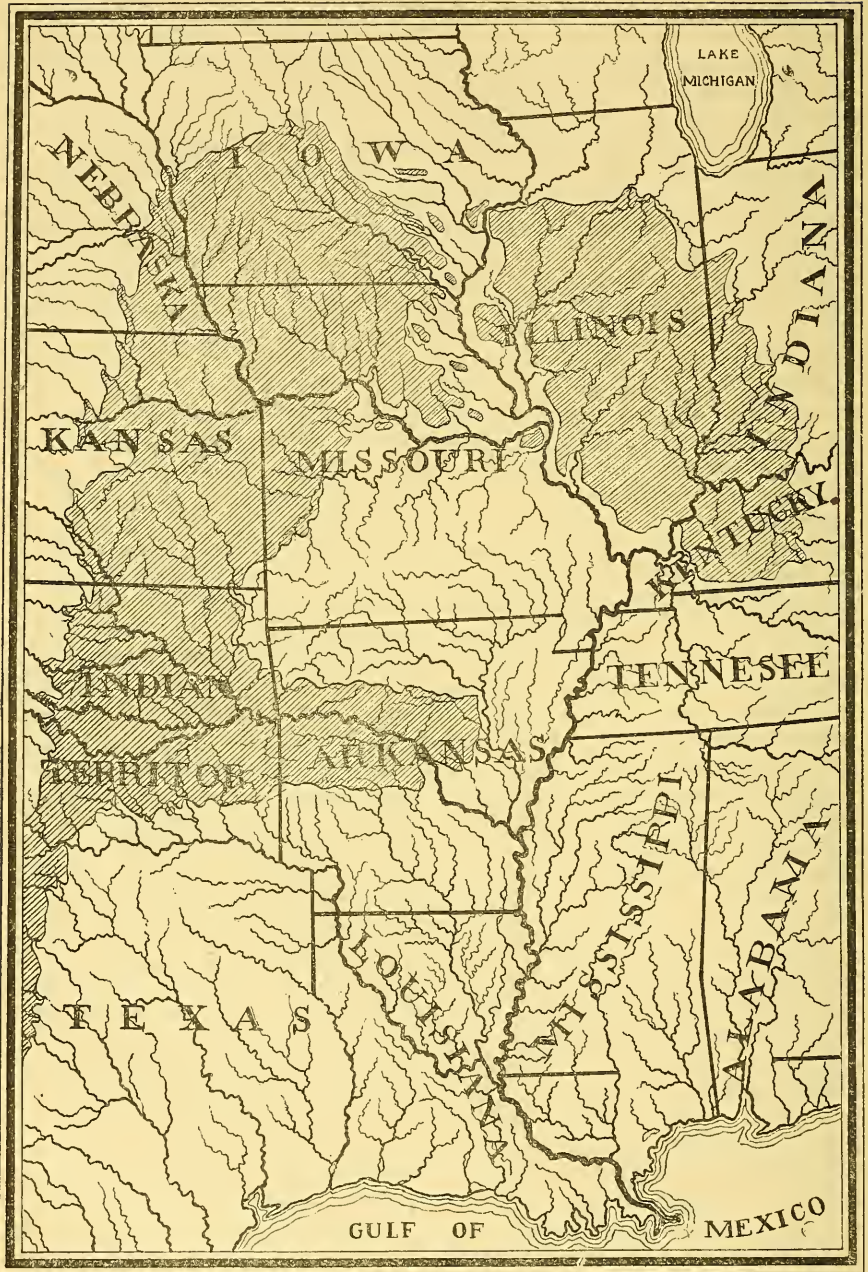
The drift in Iowa was evidently formed at two different periods. The earlier drift mantles all the surface of the state except the extreme north-eastern corner of it, while the later drift is represented by a lobe that extends one-third the way across the state, where it enters from the north, and as far south as Des Moines.

Upon the surface of the drift, in many localities in Pocahontas county, there were originally numerous boulders or rounded stones and they ranged in weight from fifty pounds to one or more tons. Nearly all of these surface rocks, commonly called "nigger heads," have now been removed from their home on the prairies and utilized in the erection of the first and some of the most substantial walls in this section; in a few years they will

be seen only in this humble position of usefulness in the walls of buildings, but there they will remain to attract the attention of future generations to their wonderful and interesting story.

Two very large boulders may still be seen in Pocahontas county; one on the east side of section 9, Dover township, known as "Hunters' Rock," and the other on the northwest corner of section 33, Bellville township, called "Lone Rock." The former is about seven feet in height above the ground and twelve feet in diameter. It is located on the edge of a slough, about twenty rods west from the road running along the east line of the section, and many a wild duck has been brought to the ground by the hunter stationed upon or behind this rock. Lone Rock, in Bellville township, is located but a few rods south of the highway and it was originally egg-shaped, resting on its larger end. It was about forty feet in diameter at the surface of the ground, and the exposed portion though now reduced to fifteen was about twenty-five feet in height. This rock, in the early days, in the absence of groves and buildings, was an attractive object to the passing emigrant, and when the first settlers came to this county, about ten years later, they found the inscription, "1848," painted on the south side of it, or more correctly, cut with a red stone chisel or hammer. By its towering height, it became a conspicuous landmark, guiding the lonely traveler on his way, and in its grateful shade the weary pilgrim sat down and refreshed himself.

Another large boulder, 20 feet high and 30 feet in diameter at the surface of the ground, might have been seen in the early days on the west side of the SW. $\frac{1}{4}$ of Sec. 33, (Harrold farm) Lincoln township, six miles north of Lone Rock; but only the base of it now remains. The fact was noticed by the early settlers that the ground



SKETCH MAP OF THE INTERIOR COAL REGION OF THE MISSISSIPPI VALLEY.

Throughout the shaded portions, the surface rock formations belong to the Carboniferous or coal-bearing strata.—From the Iowa Geological Survey, through the courtesy of Samuel Calvin, State Geologist.

around these large boulders was removed to the depth of about two feet on the south and east sides. The cause of these depressions was not very clear, but most persons attributing them to the standing or burrowing of the wild animals that frequented them as places of shelter, called them "buffalo wallows."

The boulders, found chiefly in the later drift, constitute a very conspicuous and characteristic feature of it although they form but a very small proportion of its bulk. In Northwestern Iowa there are two varieties of them, some being composed of granite (quartz, feldspar and mica) and others of quartzite. Those of granite formation are by far the most numerous and some of them are prodigious in size.

Pilot Rock, a huge granite boulder along the Little Sioux river in Cherokee county, was so high and afforded the Indians a survey of the surrounding country so extensive that they called it the "Big Stone" and the river near it Stone river. They left upon it the only inscriptions that tell of their occupancy of this territory. A similar boulder, $2\frac{1}{2}$ miles distant from Waterloo, 28 feet high, 30 feet long and 20 feet wide, after the removal of the earth around it, but originally projecting only eight feet above the ground, has become famous because in 1890, this giant monolith after resting undisturbed for countless years and buried by the deposits of ages, was converted into building stone and then transformed into a large and beautiful stone church in the city of Waterloo—the First Presbyterian. In its rough state it was estimated to have weighed more than 2500 tons.

These boulders generally have a somewhat rounded form but seldom present any appearance of having been waterworn, as the pebbles do. Their rounded forms seem to be due

to the concretionary character of the mass of which it was originally a part.

Rocks have been formed chiefly in two distinct ways; first, by being solidified from the molten state by cooling, and second, by being spread out in layers or strata, through the agency of water. The primary rocks, or those of the Azoic age, were formed in the way first mentioned, if we accept the supposition that the entire mass of our earth was, in the first period of its life, in a molten state. This primary formation is called granite and it is generally believed to be the oldest variety or type of rock open to our observation. In all parts of the earth wherever the base of the aqueous (formed by water) or stratified rocks has been upheaved to the surface, that base has been found to rest upon granite. This igneous (formed by fire) type of rock forms the base of the stratified rocks everywhere, and at one period the surface of the earth was entirely composed of it. Granite is the oldest and most durable of all rock formations; it is a close, compact body composed of fragments of other stony matter so firmly cemented together by heat that the whole forms one solid mass without any indication of pores, fissures or layers.

THE GLACIAL PERIOD.

It is the general belief that the boulders and all the later surface drift, in which they are chiefly found in Iowa, were accumulated and transported here through the agency of ice, during the glacial period that occurred subsequent to the carboniferous age; and that the earlier and later sheets of drift indicate two distinct eras of the glacial period. Glaciers are accumulations or streams of ice 200 to 5,000 or more feet deep, fed by the snows and frozen mist of regions above the limits of perpetual snow, and they descend 4,500 to 7,500 feet below the snow line before the heat of summer

melts them, their movement being somewhat similar to that of cold pitch. It is believed that during the earlier era, as indicated by the earlier sheet of drift, the glacier covered the greater part of North America, extending approximately as far southward in the Mississippi Valley as the line of the Ohio and Missouri rivers; that the later glacier, as indicated by the later sheet of drift, extended as far south in Central Iowa as Des Moines and that both glaciers gradually receded northward, the later one within the limits of the frigid zone, where it is now producing phenomena similar to those seen in the drift of Iowa.*

Each era of the glacial period must have been one of elevation of the northern part of this continent, accompanied with a very low temperature, and the period was followed by one of unquestioned depression, resulting in a higher temperature that caused the disappearance of the ice in immense floods along the valleys. The former was the period of the gathering and transportation of the earth and boulders, and the latter the period of their deposition and distribution by the inland waters.

The rocks, large and small, in the bottom and sides of a glacier, make it a tool of vast power, as well as magnitude, for scratching, plowing and planing the earth and rocks over which it moves. The grinding of the rocks against one another and those of the bottom against those underneath it produces very fine powder which forms the deposit called boulder clay or drift.

The most convincing proof of the northern origin of the boulders is found in the fact they can be traced northward to their original ledges. The brownish red quartzite boulders, occasionally found throughout Northwestern Iowa, have been traced to

their native ledges, the quartzite exposures in the extreme northwestern corner of Iowa and the southwestern part of Minnesota. This quartzite boulder is not found north of these exposures of the Sioux quartzite ledges mentioned, nor further east, even in Iowa, than a line nearly due south from New Ulm, Minnesota, their most eastern exposure. The buff-colored magnesian boulders of the southeastern part of the state have been traced northward to their original ledges in Northeastern Iowa and Southeastern Minnesota. And the granite boulders, found throughout all parts of the state but most plentifully in its northern half, have been traced to the granite cliffs in the region of country north and west of Lake Superior.

The drift in which the boulders are found, contains other materials which indicate that a great part of it has also come from another section. The earlier or lower part of the drift is a bed of clay that usually contains no marine fossils but only drifted logs and other accumulations of vegetable material. In the later drift fossils are occasionally found, but, like the boulders, instead of representing the period when the drift was formed, they invariably belong to the eras of the older rock formations.

Rare substances, such as lumps of copper, impure coal, pieces of wood and other traces of vegetation found near the surface of the earlier drift have either been transported to this section and therefore are strangers in it as certainly as the granite boulders; or, as is stated by McGee in regard to the latter, "The remains of ancient trees, logs and stems of coniferous woods are so widely distributed as to prove that the older drift sheet was covered with soil and clothed with forests before the later ice invasion commenced."*

* Dana.

* Iowa Geological Survey, 1892, p. 141.

A mass of copper found in Lucas county, south of Des Moines, must have traveled 460 miles southward, if it came, as is most probable, from Keewenaw Point, south of Lake Superior, the nearest known district of native copper.

WOOD IN WELLS.

In sinking a well a few years ago on the SE $\frac{1}{4}$ of Sec. 22, Lincoln township, then occupied by Charles Kezer, at a depth of 96 feet, the workmen, who were using a 24-inch auger, struck the decayed trunk of a very large tree, pieces of which, six inches in length, were brought to the surface. The large size of the tree was indicated by the fact the auger was embedded its full width in the tree. The workmen were able to distinguish the bark from the body of the tree and the latter resembled cedar wood. A few pebbles were found underneath the log. The clay in which it was embedded began within six feet of the surface and extended as far as they continued to bore, 110 feet.

Similar logs have been struck by the well-diggers in Sherman, Cedar and other townships of this county. Some pieces of wood found at a depth of 60 feet in a well on the farm of John Bartosh, Center township, are before us as we write; they are very light and most of them look like cedar. The wood thus found in the drift is not petrified nor converted into coal, but is merely mineralized so that it is but slightly combustible. We cannot suppose that these trees grew in this section while the drift was accumulating any more than they now grow in the glacial region of Greenland unless it were during the period between the earlier and later drift. The forests whence this wood came were no doubt northward, but their exact location probably can never be known.

Geologists unite in calling the era when the drift of Pocahontas county and throughout Iowa was formed the

Glacial period, under the idea that ice either in the form of icebergs or glaciers, which is more probable, transported the earth, pebbles and boulders of the drift. Glaciers, like those of the Alps, are known to have transported these materials long as well as short distances and to make scratches upon the rocks beneath them precisely like those found at Burlington, Council Bluffs and other places in Iowa.

The trees over a continent of great forests were rooted up or broken off with the first movement of the ice and either partly ground up or carried and deposited with the drift, sometimes in beds of vegetable material, at other times as scattered logs, limbs and roots.

The subsequent melting of the glaciers resulted in a long period of immense floods while the waters were subsiding, and their boundaries finally became limited to the great lakes in the north and the Gulf of Mexico in the south. After the subsidence of the flood many lakes along the rivers disappeared and the rivers dwindled to about one-tenth their former size.

"The valley in Clinton township, that commences near the place where Pilot creek enters the Des Moines river and, extending southward, first as a deep ravine, to the Van Alstine farm on sections 24 and 25, then broadens out into the stone quarry flat, has been a section of considerable interest to those whose attention has been attracted to it. Here the ledges of limestone seem to have been upheaved by some mighty force that has broken and seamed the original layers in all directions, as if by an explosion while the rock was heated; and the stones when struck with a hammer, give that sonorous sound peculiar to rocks and bricks that have been subjected to a great heat. It is worthy of notice that the Des Moines river makes a sharp bend eastward, north

of this locality, after meandering southward about seven miles, and Lizard creek, at a point nine miles further south, makes a similar sudden turn southward. Throughout this intervening elevated or apparently upheaved district, which includes a portion of the western part of Humboldt county, good drainage can be had by drilling into the rock until a fissure has been found. The largest slough in the eastern part of Pocahontas county on sections 28 and 29, Clinton township, has thus been drained subterraneously."³*

Whilst the condition of the surface of Pocahontas county before the Glacial epoch cannot be fully known, yet at the close of that period, both it and the state of Iowa consisted comparatively of a uniformly level plain, unmarked by any strong features and without any completed system of surface drainage. After the recedence of the glaciers and the subsidence of the floods incident thereto, numerous shallow depressions were left upon the surface filled with water, thus forming lakes, ponds, swamps and sloughs. The slough, found midway between the swamp and the upland prairie, was a characteristic feature of this region. Most of the lakes and sloughs are found in the localities in which the streams have their sources, particularly the elevated slopes along the watershed, where they have remained because no accumulation of water beyond has sent currents across them to cut channels for their outlet.

FLOWING WELLS AND FOUNTAINS.

Flowing fountains in the channels of the streams are not unusual, but upon the prairies they are rarely found. In Pocahontas county the following ones have been noted:

In a body of native timber north of the home of the late Philip Russell, on Sec. 2, Lizard township, near the

*J. J. Bruce.

west branch of Lizard creek, there is a flowing fountain at which the water rises four feet above the ground and flows continually with a constant stream. This fountain was discovered in 1886 by John M. Russell, while prospecting for coal and he supplied it with a metallic tube with the result just stated.

The strongest spring reported in the county is located along Pilot creek, two miles east of Rolfe, where Geo. Heald in 1882 erected his cheese factory. There are in fact two constantly flowing springs only eight feet apart at this place; one is a strong spring of clear, pure, cool water and the other comes from a mineral bed, the sediment from which gives the ground a yellowish red color as it flows.

On the farm of Charles A. Hawley, NW $\frac{1}{4}$ Sec. 14, Marshall township, there is a flowing well located in the pasture about forty rods due south of the house. Sinking a well to the depth of fifty-five feet at this place, the water immediately rose to the surface and flowed from the mouth of the well. It was supplied with a windmill to elevate the water into a tank, but the overflow has continued, when the pump is not working, during the longest droughts.

On the Stafford farm, on the SW $\frac{1}{4}$ Sec. 33, Cedar township, two miles southwest of Fonda, there is a flowing well that was sunk a few rods from the west bank of Cedar creek, in 1886, by David B. McKillips, the former owner of the property. This well was sunk with a large auger to the depth of sixteen feet and then with a three-inch auger to the depth of thirty-eight feet, when water rose to the surface. A small tube was inserted in the lower part of it, and for a number of years the water was made to flow into a trough by means of this tube. In 1895, a six-inch iron tube was forced to the bottom of the well, and the upper part of the well being filled

around it, the water now rises and flows constantly into a tank two feet above the ground.

Since the removal of the surface water by the drainage of the sloughs, especially since the long continued drought of 1894, when the lakes of this county for the first time in their history became dry, most of the springs on the prairies together with the streams fed by them, have disappeared and many shallow surface wells that rendered efficient service for many years, have been rendered useless. To supply the increased demand for good drinking water for man and beast, those engaged in the sinking of wells have found it necessary during recent years to change from the bored to the drilled well, ranging from 75 to 200 feet deep, in order to obtain a greater and more permanent supply of water.

LOAM OR SURFACE SOIL.

The fine, dark-colored loam or sur-

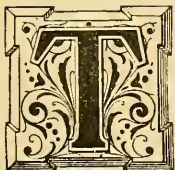
face soil of the drift in Pocahontas county, is a vegetable mold formed principally from organic matter that has decayed without submergence in water. It contains unoxidized carbonate of lime and peroxide of iron; and its materials are so thoroughly pulverized and commingled that it absorbs the water of a freshet like a sponge and holds it for a midsummer drought. It is soft, warm, rich in organic matter and easily cultivated. It yields to the plow like "cheese to the knife" and is capable of producing crops of cereals for many successive years without showing signs of exhaustion. It yields agricultural and horticultural products in a region in which the pioneer hesitated to settle because of the absence of timber, but which is now marked by its large herds of cattle, fruitful vineyards, abundant crops, capacious barns and commodious farm-houses.

V.

FIRST SETTLEMENTS IN THE COUNTY.

"Westward, the Star of Empire takes its way,"
Thus sang a poet once in early day,
But had he had the happiness to lodge
At the Wahkonsa tavern, in Fort Dodge,
As kept in fifty-five, by William Hodge,
His visions of the west would then expand
To vast proportions.—JOHN HAIRE.

THE LIZARD SETTLEMENT.



THE first settlements in Pocahontas county were made in the southeast part of it and in the year 1855. Previous to that date many had passed westward through

this section to the regions beyond, and numbers of roving trappers and hunters had here very profitably pursued their vocation, but no one had made an actual or permanent settlement. The establishment of the military post in 1850, and of the United

States land office, November 5, 1855, together with its location due west of Dubuque and north of Des Moines, made Fort Dodge a place of unusual prominence and importance at that time, and new settlements radiated from this place, as a common center, in all directions.

In February, 1855, James Hickey, accompanied by Hugh Collins, passed up Lizard creek from Fort Dodge and selected claims, the former on the NW $\frac{1}{4}$ Sec. 12, Lizard township, Pocahontas county, and the latter a claim on the section adjoining this one on the east, which was across the line in Jackson township, then Humboldt but now Webster county. The latter also at this time selected a claim for his brother Michael Collins, on SE $\frac{1}{4}$ Sec. 13, a half mile southeast of Hickey's in Pocahontas county. Michael Collins, accompanied by his wife and three children, arrived August 9, 1854, and located on the claim his brother had selected for him.

James Hickey built a little cabin on his claim but did not put a roof upon it, nor occupy it to any extent, but lived with the other settlers for whom he worked. After a few months, or when his corn had been husked, he returned to Fort Dodge and worked for a man by the name of Mahoney until the spring of 1856, when he met Charles Kelley and sold to him his interest in his claim and cabin which were estimated to be worth \$300. He had about ten acres of ground broken and planted in corn. This piece of breaking, the first in the county, was commenced by Hugh Collins, his neighbor and friend in Jackson township, with whom he lodged most of the time. His little crop of sod corn, also the first raised in the county, was thrown into his vacant, unfinished cabin and the wolves ate or destroyed a great part of it. He was about twenty-five years of age and in the month of July, re-

turning to Pennsylvania where his wife remained, he came back to his claim with the family of Michael Collins, in the following month. When he sold his claim he located in the vicinity of St. Paul, Minnesota.

On the arrival of Michael Collins and family, his brother Hugh assisted him to build a log cabin. Moving into it as soon as it was completed, the family of Michael Collins became the first resident family of Pocahontas county. He continued to reside in the county for many years, and when in 1860, the office of county supervisor was established in Iowa, he had the honor of being chosen, at the ensuing election, a member of the first Board in this county for the year 1861, and Treasurer of the county for two terms following that date, 1862-65.

Michael Collins was a native of Clare county, Ireland, where he married Bridget Spellacy, who still survives him, he having died at Clare, Webster county, September 3, 1898, at the age of 77 years. His family consisted of three sons, Patrick and James, both of whom died young in Ireland, Bridget, who cared for him after his retirement from business, and M. T., who resides on the SE $\frac{1}{4}$ Sec. 12, Lizard township. The latter at the age of twelve years, coming with his father to the Lizard settlement in 1855, is one of the first settlers in the county and he was a member of the Board of County Supervisors six years, 1887-1892. His wife, Miss Fannie Haire, of Fort Dodge, was one of the first teachers in the settlement, teaching the school in the Calligan district from January to May, 1865, in the log building built by Dennis Connors in 1857 on the SW $\frac{1}{4}$ Sec. 1. She had twelve pupils and they are all living at present, namely—Henry, Charles and Anna Kelley; Edward, Thomas, Mary, Ellen and Maggie Calligan; Patrick and Edward Forey; John and James Mulholland. Their son, W. J. Collins, whose

portrait appears in the Lizard group, is now practicing law at Clare and editor of the Clare Examiner.

Michael Broderick, a young man of nineteen years and brother-in-law of John Calligan, it is affirmed, was also a resident of this county in 1855. He laid claim to the NE $\frac{1}{4}$ Sec. 2, Lizard township, and held it until 1858, when he sold it to Patrick Calligan, and a year later went to Linn county where he married and followed railroading for several years. He is now a prosperous farmer in Harrison county. He served as clerk in the Lizard precinct at the time the first election was held, March 15, 1859, and carried the returns and first poll books of Lizard precinct to the cabin of David Slosson, then elected as the first county Judge, (at Old Rolfe) in Des Moines settlement.

The pre-emption claims of James Hickey, of Michael Collins and of his younger brother, Hugh Collins, were all located by them before the U. S. land office was opened at Fort Dodge, and hence no fees or price was yet paid for the land. They and Michael Broderick were the only settlers in that locality during the year 1855, and all of them had come from the same place in Pennsylvania. To Hugh Collins belongs the distinction of having been the first settler in Jackson township, Webster county, and of turning the first furrow in Pocahontas county.

We see the cabin of the lonely pioneer,
Upon the prairie as the sun is sinking;
The clapboard roof leaking at the rear,
The walls scarce holding their rough
chinking.

During the year 1856, a considerable number of families located in the southeast part of the county, among whom were the following: Charles Kelley, John Calligan and his brother Patrick, Roger Collins, John Hugh, Walter Ford, Philip and John Russell, Dennis Connors, Henry (Frederic and William, 1857,) Brockschink, who arrived in the spring; James Donahoe,

Michael Walsh, Patrick and his brother Owen McCabe, who came in the fall of the year.

Charles Kelley had spent the previous winter south of Fort Dodge. He bought the claim of James Hickey on Sec. 12, Lizard township, completed his unfinished cabin and moving into it occupied it until 1865, when he built a log house that he continued to occupy as long as he lived, (1890) and which his wife and several members of the family still occupy.

The cabin of Hickey, occupied by Charles Kelley, commencing with the first election, held March 15, 1859, became the polling place for the Lizard precinct for several years, and the proposed site on his farm lacked but one vote of becoming the county seat at the time it was decided to erect the first court house at Old Rolfe.

Mr. Kelley was a native of Ireland, and coming to America in 1842, located first in Canada, then in Ohio, where on March 30, 1855, he married Rhoda Gall, who survives him and has lived on their pre-emption claim nearly forty-three years. They began to occupy their claim on the NW $\frac{1}{4}$ Sec. 12, May 26, 1856, and on September 17th following it was entered for record at the U. S. land office in Fort Dodge, when they paid \$1.25 an acre for it. They raised a family of nine children, and at the time of his decease, at the age of 73 years, they were the owners of 800 acres of land, all of which, except 80 acres, is in the possession of the family at present. Charles Joseph Kelley, their second son, born May 6, 1858, was the first boy born in Lizard township and his portrait appears in the township group. He graduated at the Rush Medical Institute, Chicago, in 1892, and since that date has been engaged in the practice of medicine at Burlington, Iowa.

John Calligan and family, consisting of wife and three children, arrived at Fort Dodge May 13, 1856, and located

on the SE $\frac{1}{4}$ Sec. 2, Lizard township, adjoining on the south the claim on which Michael Broderick, his brother-in-law, had squatted the previous year. Both of these claims, which were on Sec. 2, were entered and paid for in cash at \$1.25 an acre on July 3, 1856, which is the earliest date on which any lands in Pocahontas county were entered or sold. There is one other entry on this same date and it is that of Michael Collins for the SE $\frac{1}{4}$ Sec. 13. The only other entries in 1856 were by Dennis Connors, July 16th, for the SW $\frac{1}{4}$ Sec. 1; Roger Collins, Sept. 15th, for the NE $\frac{1}{4}$ Sec. 23 and Chas. Kelley, Sept. 17th, for the NW $\frac{1}{4}$ Sec. 12.

The cabin of John Calligan, built in July, was the first one erected in 1856. It was built of unhewn logs taken from the native timber on the premises and the roof was constructed of split clapboards covered with dirt and prairie sod. It had a large fireplace in the east end of it and on "Christmas Eve" some logs were rolled in and the fire kept burning all night. The burning of the Yule log on Christmas Eve was an event of considerable interest in those days since there was little or nothing in the way of variety to attract attention. He occupied this log cabin about seven years and in 1863 built a larger house of hewn logs and sawed lumber, hauling the latter from Boonsboro, the first county seat of Boone county.

During his first year Mr. Calligan raised a good crop of potatoes and sold some of them the following spring at \$2.00 a bushel. He had seventeen acres of fine looking corn that had been planted and cultivated with a hand hoe after the sod had been turned, but a severe frost on the 16th day of September completely destroyed it. He was a good hand with the flail and many a crop of wheat did he pound in the cooler weather with this rude implement for the man of mus-

cle, using a bare spot of ground for a threshing floor, before the arrival of the threshing machine. The first sack of flour bought at Fort Dodge, weighing 100 pounds, cost him \$10 and bacon 17 cents a pound. Salt was 7 cents a pound and butter was also 7 cents a pound, but the farmer could not get a pound of salt for a pound of butter, because the former had to be paid in cash while the latter was payable in trade. To appreciate this apparently anomalous statement it must be remembered that all groceries and store goods had to be hauled on wagons from the Mississippi river, a distance of nearly 200 miles, and there were but two stores in Fort Dodge, the one kept by Major Williams and the other by John Haire. There was a great demand for salt and it was a cash article while butter was neither in demand nor its price payable in cash.

There were about twenty acres of timber on the claim of Mr. Calligan and forty acres on the adjoining claim of his brother-in-law, Michael Broderick. This timber, which was along the banks of Lizard creek, was full of game, such as beaver, mink and muskrat. Mr. Calligan had never engaged in trapping, but when he found the Indians and others came long distances for that special purpose and were often very successful, he began to do so, too, and realized an annual income from this source ranging from \$100 to \$130 for several years. Many a time did Mrs. Calligan carry a sack of furs all the way to Fort Dodge, twenty miles distant, and return the same day lugging her purchases.

On one occasion in the winter of 1857, Mr. Calligan saw an otter at a distance moving in the direction of a spring. He managed to get near the spring without being observed, and when the otter arrived it showed signs of battle, until he laid it low with a whack from a club he had provided for that purpose. This otter weighed

about thirty pounds and he received \$6.00 for its fur in Fort Dodge.

Mr. and Mrs. John Calligan are still living, and reside at Gilmore City. Their daughter Maggie married first to Morris O'Conner, who died in 1885; and later to James Whelan, residing at Emmetsburg, was one of the first children born in the county, and her portrait may be seen in the Lizard group. Their son, Edward M. Calligan, taught the first public school at Fonda in the winter of 1870-71, when Cedar formed a part of Lizard township; and T. J. Calligan, another son, resident of Gilmore City, was a member of the Board of County Supervisors for three years, 1884-86.

Patrick Calligan, John's brother, was killed through an accident in the fall of 1856, and his death was the first one that occurred in the county.

Roger Collins located on the NE $\frac{1}{4}$ Sec. 23, and entering it as a pre-emption claim Sept. 15, 1856, made his last payment and received the official certificate of ownership from the government, called a patent, on Nov. 9, 1859. He improved and occupied this claim until 1871 when he sold it to Jacob Carstens, who held it until about 1890 and sold it to Henry Stickelburg, who still lives on the adjoining section, number 14.

In February, 1865, Roger Collins entered the N $\frac{1}{2}$ of the NW $\frac{1}{4}$ Sec. 24 as a homestead, and the claim lapsing he re-entered it March 1, 1870, and obtained the patent for it in September following. A short time thereafter he sold it to his cousin, Hugh Collins, who died about the year 1888, and it is now owned by his son, Michael J. Collins, of Clare. The "Collins Grove," embracing about 200 acres of natural timber in Pocahontas and Webster counties, but chiefly in the former, is still in possession of the Collins' families. At the time of his decease, Hugh Collins was the owner of 240 acres in the N $\frac{1}{2}$ of Sec. 24, Lizard

township. He was regarded as one of the most hospitable men in the Lizard settlement and became also one of the wealthiest.

Patrick Collins was a member of the first school board in 1860, when the Lizard district was organized. About the year 1865 he moved to Webster county and died there in September, 1897.

Walter Ford, now a resident of Clare, was one of the first to locate in Pocahontas county. He took an active part in all matters relating to the organization of the county and was honored by a seat with the Board of County Supervisors, 1874-1876. He is a native of Ireland, and in April, 1856, at the age of twenty-three years, came to this county and laid claim to the NE $\frac{1}{4}$ Sec. 13, Lizard township, and for two years his home was in this county, while he spent a considerable part of the time at work in Fort Dodge. During the first year his pre-emption was occupied with him by Thomas Crole, a brother-in-law, who was holding and improving an adjoining claim on the SW $\frac{1}{4}$ of the same section. During the second year it was occupied with him by Patrick McLarney, who the previous year had married Ellen, the sister of Mr. Ford. His claim was entered May 19, 1858, and the patent was issued Nov. 1, 1859. His marriage occurred in the spring of 1860, and from 1861 to 1870 he resided at Fort Dodge and was engaged first in teaming and afterward as a contractor for the building of cellars.

In 1870, he returned to the farm which, in the meantime, had been occupied by Michael O'Shea, now at Manson, and William Price, the father-in-law of James J. Bruce. He continued to reside on the farm a period of twenty-four years, or until 1894, when he removed to Clare. His wife died in 1892. Their family consisted of nine children. They still own and

occupy the original pre-emption claim and altogether nearly one thousand acres of land in Pocahontas and Humboldt counties. For eleven successive years 1883-1893, just previous to his removal from it, Mr. Ford was a justice of the peace of Lizard township. The old home is now occupied by Walter P. Ford, his eldest son, who in 1894 married Elizabeth O'Neil, of Lizard township and for a couple of years thereafter engaged in the grain and general merchandise business in Clare.

Dennis Connors entered as a pre-emption claim the SW $\frac{1}{4}$ of Sec. 1, Lizard township, July 16, 1856. The following year he built a log house upon it and it was occupied by himself, wife and child, until the spring of 1860, when they moved to Independence. His father-in-law, Dermidy, came with him, but the latter did not become an actual settler.

This log house of Dennis Connors' was located near the highway, a few rods south of the creek, and for two successive seasons it was used as a school house. The first teacher who taught school in this building was Philip Russell, a resident of the Lizard settlement and then Clerk of the District Court, and the second was Miss Fannie Haire, now Mrs. M. T. Collins, whose term extended from January to May, 1865. These were the first teachers in the Calligan district. The antique building they occupied was taken down and used for fuel a few years after the erection of the frame school house in this district in 1865.

Dennis Connors and family in 1860, moved to Independence where he died, he having sold his claim to Michael O'Connors, (no relative) who died in 1862. Mrs. O'Connors, wife of the latter, held it until the time of her decease, in 1884, since which date their son Michael O'Connors has continued to own and occupy it.

The first deed recorded in Pocahontas county is that of the bargain and sale of this property, (SW $\frac{1}{4}$ Sec. 1) made and executed May 7, 1859, by and between Mary Connors and Dennis Connors her husband, party of the first part, and Michael O'Connors, party of the second part, for \$400. This deed was acknowledged before Erastus G. Morgan, notary public, and witnessed by E. D. G. Morgan.

Whilst this deed was the first one recorded, the second and third ones on record both bear an earlier date. The second one was executed April 19, 1859, before John C. Bills, a notary public of Scott county, (who not long since was a prominent member of the democratic side of the lower house of the legislature of Iowa,) and was the transfer of 320 acres of Sec. 12, now Washington township, by Adelia B. Smith, of Scott county, to Edwin H. Lansing, of Wyoming county, N. Y., for \$1000. The third deed recorded is of still earlier date, namely, Feb. 4, 1859. It is the deed of Isaac P. Coats and Laura S. Coats, his wife, of Scott county, to Adelia B. Smith, of the same place, for eighty acres on Sec. 12, also in Washington township. It will be perceived that the last two were between investors or speculators, and only the first one was between actual settlers; it may have been for this reason it was placed first on the records.

Philip Russell was a native of Ireland, came to America in 1850 and to Webster county in 1854, where he located near Fort Dodge for two years. The Russell family consisted of himself, his mother, two sisters Catherine and Mary, and one brother, John. While residing at this place Philip came to Pocahontas county and located as his claim the W $\frac{1}{2}$ NW $\frac{1}{4}$ and W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 2, (T. 90, R. 31,) Lizard township, embracing 160 acres. In 1856, the family moved upon it and the work of improvement was begun.

His claim was entered for record May 29, 1858, and the patent for it was issued Sept. 5, 1861. In August, 1860, he married Ellen, a sister of Michael Broderick and of Mrs. John Calligan, then residing at Fort Dodge.

On April 22, 1866, he entered another claim, namely, for the E $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 10, (90-31) eighty acres, and on April 27, 1871, this entry was renewed for the NE $\frac{1}{4}$ NE $\frac{1}{4}$, 40 acres, of the same section, and the patent for this last tract was issued Sept. 25, 1872. At the time of his decease, at the old pioneer home in 1893, at the age of seventy, he was the owner of 360 acres of land on sections 2, 3 and 10, Lizard township, all of which, except 80 acres, are still in the possession of the family.

Mr. Russell was a man of unblemished integrity and was held in high esteem by all who knew him. He received a good common education and was the first one in the Lizard settlement to engage in teaching school, he teaching the first term in the log cabin erected by Dennis Connors, in the winter of 1863-4. He also taught several terms in other districts. He was a good penman and accountant, and wherever there was need for a scribe his services were in demand.

He was one of the first justices of the peace in Lizard township, and served as clerk for the township sixteen years, while his two sons, John M. and Michael J., served six years afterward, making twenty-two years that that office has been held in his family.

During the four years from 1862 to 1865, he had the honor to serve as Clerk of the District Court of Pocahontas county, the county seat at that time being in Des Moines township. The last year of service thus rendered was by appointment, first on the part of W. H. Hait, who had been elected to the office and appointed Mr. Russell a deputy to take charge of it, and later

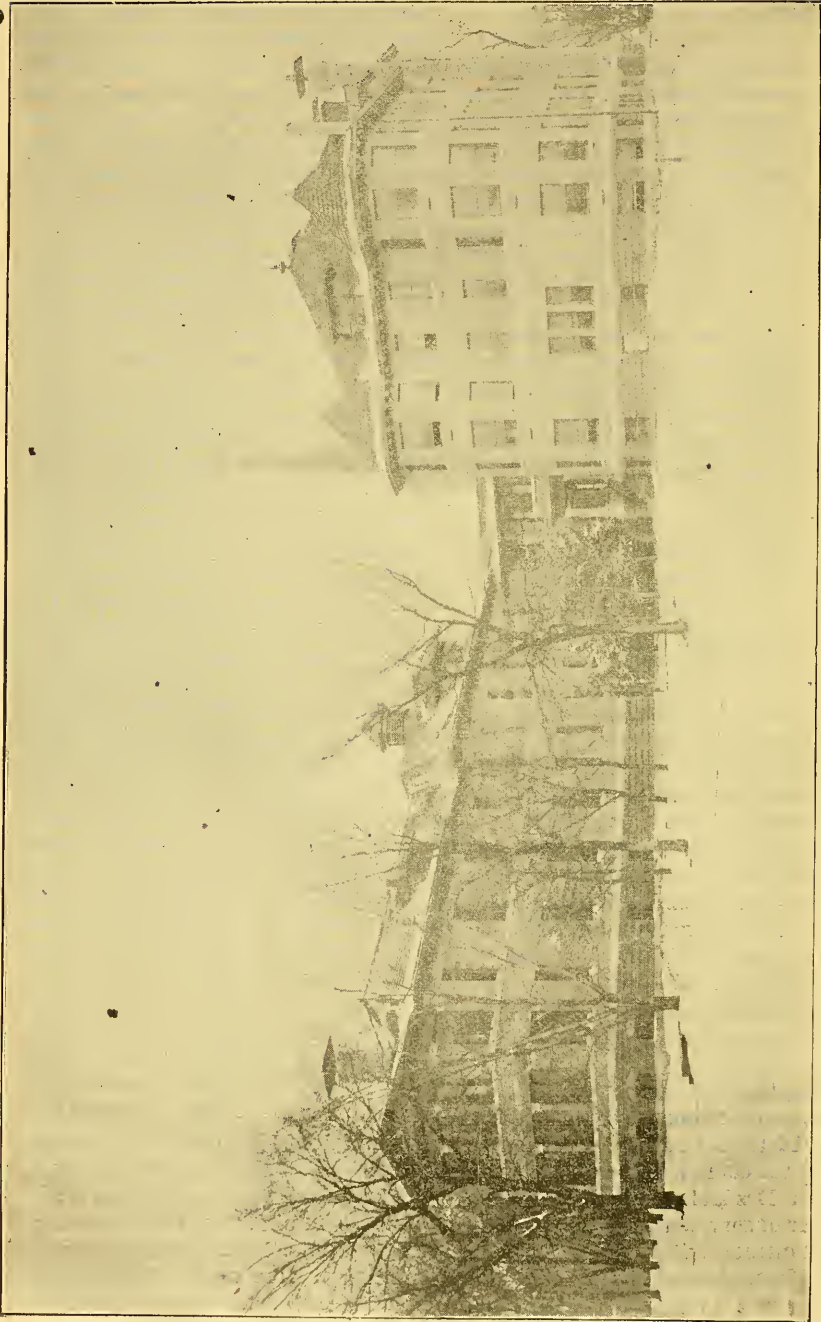
by the Board of Supervisors when in March (1865) Mr. Hait resigned the office in his favor. During the next two years 1866-67, he was a member of the Board of County Supervisors.

His wife at the age of sixty-two years survives him and occupies the old home on Sec. 2. Their family consisted of eight children, seven of whom are living, and several of them have earned well merited eminence as teachers in the public schools of the county. The family is represented in the Lizard township group by the portrait of Michael J. Russell, the sixth in the order of birth.

John W. Russell, Philip's brother, also located in Pocahontas county. He selected as a pre-emption the SE $\frac{1}{4}$ Sec. 34 (91-31), Lake township, 160 acres, making the entry June 7, 1858, and receiving the patent for it Sept. 5, 1861. He enlisted in the war of the rebellion, August 14, 1862, as a member of Co. I, 32d Iowa infantry. After his return from the war he died unmarried.

Henry Caspar Brockschink and wife, coming to Pocahontas county in the spring of 1856, laid claim to the SW $\frac{1}{4}$ Sec. 36, 91-31, 160 acres, which he entered for record July 8, 1856. This was the first entry of lands in Lake township, and it was made nearly two years before any other entry was made. The house of Mr. Brockschink was of course the first one in the township. It was built of logs from the native timber along the north branch of Lizard creek. It was 20x24 feet and about 18 feet in height. For several years this was the most northern home in the Lizard settlement.

In the fall of 1857, his two brothers Frederick and William Brockschink came and made their home with Henry and his family. In the following spring a band of Sioux Indians camped along Lizard lake about three miles northwest of this grove, and three of them visited the Brockschink home.



MEDICAL HOSPITAL OF THE STATE UNIVERSITY, IOWA CITY.—It contains seventy-five beds and a large amphitheater for clinical purposes.

Mr. Brockschink was absent at the time, but his brother Fred and George Rifenstahl, who had been hunting, returned in time to meet them on the premises. After some parleying between the two young men and the Indians, one of the latter grabbed the unloaded gun in the hand of Fred Brockschink, wrested it from him and then ran away with it.

The Brockschinks remained on this farm until the fall of 1858, when they leased it to Patrick Forey, who became famous for casting the next year the decisive vote that resulted in the erection of the first county court house in the Des Moines, instead of the Lizard, settlement. Forey and family occupied it six years, and in 1865, Dennis Mulholland bought it from Henry Brockschink for \$1500, and moving upon it that year this property has been owned and occupied by the Mulholland family since that date. The Brockschinks went first to Clay county and afterward to Webster City, where they now reside.

In the fall of 1856, Patrick McCabe arrived, accompanied by his brother Owen McCabe and James Donahoe and family. Patrick McCabe located on Sec. 24, 90-31, (Lizard township,) but did not enter his claim for record for a number of years. On Sept. 23, 1864, he entered the NE $\frac{1}{4}$ SE $\frac{1}{4}$, 40 acres of this section and renewing this application May 10, 1870, received the patent for it Sept. 10th following. Later he obtained 120 acres additional in the south half of this section, and on this farm he continued to reside as long as he lived. It is now owned and occupied by his two sons, Peter and James J. McCabe, between whom it has been divided, and his wife who still survives him, makes her home with them. His brother, Owen McCabe, remained but a short time in this county.

In the fall of 1861, when Michael

Collins, the first county supervisor from the Lizard district, was chosen county treasurer, Patrick McCabe was elected his successor on the Board of County Supervisors and was continued a member of that Board for four years, 1862 to 1865. After the county canvass of the votes cast at the general election of 1863, he was appointed to represent the Board of this county in the canvass of the vote for senator in this, the 43d district, at Sac City, and for this service received \$50.00. To appreciate this fee it must be remembered that it represented the salary of the County Judge for an entire year, at that period in the history of this county.

James Donahoe arrived in 1856 and located with a family consisting of himself and wife—Ann Garrahan—and five children, on the SE $\frac{1}{4}$ Sec. 23, 90-31, (Lizard township,) with the intention of pre-empting it, but when, after the lapse of two years, he went to the U. S. land office at Fort Dodge to enter his claim for record, he was surprised to find that the entire section on which he was living belonged to the grant made by the State of Iowa to the Dubuque and Sioux City, (now Illinois Central) Railway Company. Having erected improvements upon this land he continued to occupy and enjoy them five years longer, and in 1863 moved to Johnson township, Webster county, where he still resides, at the age of 85 years.

While living on this supposed pre-emption claim, a daughter, Rose Ann Donahoe, was born, Feb. 23, 1857, and she was the first white child born in Pocahontas county. Her portrait may be seen in the Lizard township group. In the year 1892, she became the wife of Patrick J. Crilly. They reside at Clare and have a family of five bright children—three boys and two girls.

Thomas Donahoe, James' eldest son, is cashier of the State Bank of Clare,

and Peter M. Donahoe his brother, is a resident of Sec. 36, Lizard township, where he owns a half-section of land. The latter married first Miss Ellen Condon, who, in the fall of 1860, taught the first public school in the Lizard settlement, in a log house built by Patrick Collins at the southwest corner of the SE $\frac{1}{4}$ of Sec. 13 and commonly called the "Pioneer School House." Mr. Donahoe (Peter M.) was one of the pupils that attended this first term of school in the south part of the county taught by Miss Condon, who later became his wife. After her decease in May, 1879, he was married to Annie Carey. Two of the elder children who came with James Donahoe to Pocahontas county in 1856, namely, Charles and Mary, died during the seven years' residence of the family on section 25, and his wife died in 1895.

With James Donahoe and family there came also his wife's parents, namely, Peter Garrahan and his wife Rose Reilly, both born and married in Ireland, who, coming to this country in 1846, resided ten years in Pennsylvania. Mr. Garrahan died in Pocahontas county about the year 1859, at the age of 56 years, and his wife in Webster county in 1877, at the age of 73 years.

Michael Walsh came to this county in September, 1856, and located a pre-emption claim on Sec. 14, 90-31, (Lizard township,) that he has continued to own and occupy until the present time, a period of nearly forty-three years. On June 8, 1858, he filed his claim for the NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Sec. 14, 40 acres, and received the patent for it July 10, 1861; and on April 24, 1865, he filed a homestead claim to the SE $\frac{1}{4}$, SE $\frac{1}{4}$ of the same section, 40 acres, and renewing this claim May 3, 1870, received the patent for it September 10th following.

His family began to live upon his pre-emption claim in the spring of

1857, and his daughter Mary, born April 10, 1858, was the fourth child born in this county. For a number of years she has been one of the leading teachers of Lizard township.

Mr. Walsh has not been ambitious for political honors either in the county or his own township, but has endeavored to prove himself an aggressive farmer and afford to his family, not merely their share of the comforts of life, but also the best facilities for their moral and intellectual improvement. When the first fields were enclosed in the Lizard settlement in the year 1867, Michael Walsh was among the number of those who had one enclosed, the others being Michael Collins, Charles Kelley, John Calligan and Michael Broderick. And when in 1870, two quarter sections were enclosed, Michael Walsh had the first one and Hugh Collins the other. The cost of the wire at that time was \$8.00 a hundred. Among the old settlers of the Lizard settlement he has been considered the most careful and economical as a farmer and has acquired considerable wealth by the honest toil of himself and family. He is now the owner of 160 acres and his son William J. Walsh is the owner of 240 acres, making 400 acres in possession of the family at present and all of it is located on sections 11 and 14, Lizard township.

His home was along the trail from Fort Dodge through Lizard, Lincoln and Swan Lake townships to Spencer, and for a number of years he kept an inn for the entertainment of travelers and hunters. He and his estimable wife were hospitable entertainers, and many a weary traveler "bid to stay," whiled the long evening away at this ancient hostelry, either listening to or relating some interesting incident that occurred in the early days.

1857.

During the year 1857, there arrived

the families of John Quinlan, Michael Donovan, Patrick Forey, Thomas Ellis, James Gorman, Patrick McLarney, Thomas Crole, Patrick Collins and others.

John Quinlan located his family on the S $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 24, 90-31, (Lizard township,) 80 acres, and on April 29, 1865, entered it as a homestead claim. This claim was renewed May 3, 1870, and he received the patent for it Sept. 10th following. In 1871, after fourteen years' residence on this homestead, he sold it, moved to Webster county and now resides at Clare. His homestead was owned for a while by William Condon and after his decease by his wife Margaret, and at present by their daughter, Mary Condon.

Mr. Quinlan, after the organization of the county in 1859, was the first one of the Lizard settlers to make the assessment of Lizard township. Previous to the organization of the county, all residents of the Lizard settlement were assessed and voted as a part of Webster county, to which they were temporarily attached for revenue and judicial purposes. The assessment of the Lizard settlement in 1859 was made by W. H. Hait and in 1860 by Oscar Slosson, both of whom were residents of the settlement in the northeast part of the county, the county at this date being included in one township. Later that same year, Lizard township was constituted and in 1861, John Quinlan became its first assessor and for five successive years, 1861 to 1865, he performed the functions of that office.

Patrick Forey, who in 1857 located with his family on the E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 36, 91-31 (Lake township), was a native of Galway county, Ireland, and came to the United States in 1835. In 1846 he in company with his nephew, Thomas Burke, established and during the next ten years managed a wholesale feed and provision store in St. Louis, Mo. In 1856 he came to

Webster, and the year following to Pocahontas county. His homestead contained 100 acres, and entering his claim for record June 12, 1858, he received the patent for it March 15, 1860. During the six years 1858 to 1864, he rented and lived on the SW $\frac{1}{4}$ of the same section, known as the Brockschink or Mulholland farm. He then bought and moved upon the NE $\frac{1}{4}$ Sec. 2, Lizard township, (the Michael Broderick farm) where the family remained for twenty years. On the frontier in those days there was an apparent necessity that every home should be open for the entertainment of the wayfarer, and Mr. Forey endeavored to combine the public entertainment of travelers with farming while he lived upon the Brockschink farm. In 1885 he moved to Pocahontas and for two years kept hotel in what is now known as the "Ozark Flats." In 1887 he moved to Lake township and in 1891 died there in his 81st year. His wife Eliza Quinn, daughter of James Quinn, Esq., of Kildare county, Ireland, survives him and resides in her own home at Pocahontas, at the age of 77 years.

Mr. Forey was a brilliant conversationalist and possessed that warm heart and ready wit for which the people of his native country have been noted. He was the first republican who located in the Lizard settlement and for several years was the only one in it. He was very enthusiastic in defending and advocating his political views, and at the special election held November 15, 1859, to determine whether or not the voters of Pocahontas county would approve the proposed contract of the County Judge for the erection of a court house in Des Moines township and a bridge over the Des Moines river near it, both payable in the swamp and overflowed lands of the county, he is said to have cast the decisive vote and thus became Lizard's "famous poli-

tician."

The tradition concerning this interesting incident is as follows. It was perceived by those interested, that there were just twenty-one votes in the county at that time, of which ten were in the Des Moines and eleven in the Lizard settlement. All in the Des Moines settlement were united and very earnest in their desire to have the public building and bridge provided for in the contract. But as the time of the election drew near, those in the Lizard settlement perceiving the great advantage these public improvements would be to their friends in the north part of the county and remembering that their own settlement was the oldest and therefore justly entitled to them, concluded not to approve the proposed contract, indulging the hope that by some subsequent arrangement the public building might be erected on the farm of Charles Kelley, on Sec. 12, Lizard township. Inasmuch as Mr. Forey's home was the furthest north in the Lizard settlement and also because of the fact he held different political views from the rest of them in that settlement, his vote became the subject of special interest to both parties. The Des Moines people felt their need of it and expressed their desire he would vote with them, while those in the Lizard settlement finding he was not likely to vote with them, delegated one of their number to challenge his vote and, if possible, prevent him from casting it against them.

This election was held in the home of William Jarvis, in the Des Moines precinct, and it is said that, having been thwarted in several direct attempts to vote, during the latter part of the day, moving backward inadvertently, he got close enough to the ballot-box to hand in his ballot without observation on the part of his political opponents, and thus gave the

measure voted for a majority of one vote.

In 1856, when Patrick Forey arrived in Webster county, he selected as a pre-emption claim the NW $\frac{1}{4}$ Sec. 20, Jackson township, 160 acres, and erected upon it a frame house, for which he drew the lumber from Border Plains, about twelve miles southeast of Fort Dodge. This house was located in the Lizard settlement, about one mile east of the Pocahontas county line, and while Mr. Forey occupied it, Father McCulloch, of Fort Dodge, began to celebrate mass in it once a month. This home thus became the place where the first religious services were held in the Lizard settlement.

As his title to this land was disputed, Mr. Forey abandoned it the next year and located on another claim on section 36, Lake township. After securing the patent for this claim he sold it to Charles Kelley. While he lived on the adjoining or Brockschink farm, where he kept hotel, his nearest neighbors on the north were distant twelve miles, on the east thirteen miles and on the west, at Sioux Rapids, forty miles.

At the time of the massacre of the settlers at New Ulm, Minnesota, by the Indians in 1862,* the county seat of Buena Vista county was at Sioux Rapids. When all the settlers fled from that vicinity, Messrs. Moore and Jameson, two of the public officers of Buena Vista county, carried with them the records and seals of that county until they reached the home of Patrick Forey, on the Brockschink farm. Presenting Mr. Forey with a carbine they requested him to keep these public records until they should be called for, and then passed on farther east. They did not call for them until the lapse of three weeks, when they returned and carried them back to Sioux Rapids. About the

*Page 42.

year 1860, Mr. Forey had traded for 1868. an 80 acre farm near Sioux Rapids, intending to make it his home, but afterward sold it to Wm. S. Lee, one of the Buena Vista county officers at this time. The fact that the public records were entrusted to his personal care at this time of danger, was no doubt due to the acquaintance formed through these transactions.

In 1860, Patrick Forey was drawn as one of the first jurors in the county, the others from the Lizard settlement being James Donahoe and Roger Collins.

At the first election held in Clinton township, in the fall of 1860, he was one of the judges of the election board and, being chosen at that time one of the first trustees of that township, held that office for four years. After he moved with his family to Lizard township, his son, Patrick J. Forey, served as a justice of the peace eight successive years, 1875 to 1882.

Patrick McLarney, who in 1857 married Ellen, a sister of Walter Ford, occupied the latter's claim in Lizard township in 1858. He continued in the county until about the year 1865. He was chosen secretary of the school Board of Lizard township when it was first organized in 1860, and served as clerk for the township nearly three years during the period of 1862 to 1864.

James Gorman pre-empted the $S\frac{1}{2}$ SE $\frac{1}{4}$ and $S\frac{1}{2}$ SW $\frac{1}{4}$ of Sec. 12, 90-31, (Lizard township) 160 acres, making the entry June 11, 1858, and receiving the patent for it April 10, 1860.

Patrick Collins, an elder brother of Michael, in the fall of 1857, with a family consisting of wife and three children—one son and two daughters—located on the NE $\frac{1}{4}$ SE $\frac{1}{4}$ and NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 12, 90-31 (Lizard township) eighty acres. The patent for this homestead was issued to Patrick Collins, Jr., Sept. 1, 1869, the claim having been filed June 6, 1863 and renewed July 1,

1858.

During the year 1858, a few more settlers came to the Lizard settlement among whom were Thomas Crowell, Mrs. Bridget Vahey (Sec. 13), Thomas Quinlan (Sec. 2), Thomas Prendergast (Sec. 4), and possibly a few others; but they remained only for a short time in the settlement. After this there were but very few, if any additional settlements made in the south part of the county, until after the close of the war.

EMBARRASSING EVENTS.

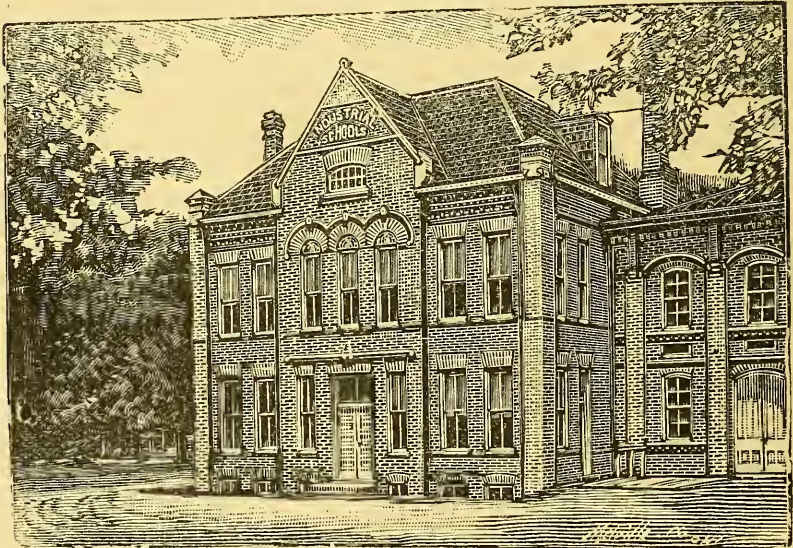
Two events had occurred that for a few years made the situation and circumstances of those who were on the frontier in this section embarrassing and tended to check further immigration. The first was the grant of a title to every alternate or odd numbered section of the vacant and unappropriated lands, for six sections in width on each side of certain lines of railway that proposed to cross the state of Iowa at that time. The act of congress making these grants to the state of Iowa, was approved May 15, 1856, and the General Assembly of Iowa accepted and appropriated these lands to the several railroads to be built across the state in an act that was approved July 14, 1856. Their title to these lands on the part of the Dubuque and Pacific (now Ill. Central) railway having been certified by the U. S. land office at Fort Dodge for the east three tiers of townships of Pochontas county, and by the land office at Sioux City for the west tier of townships, was approved by the Department of the Interior, Dec. 27, 1858. The early settlers were naturally attracted to the vicinity of the proposed routes of these railways, but these grants of the alternate sections within six miles of the proposed road, affected many of them quite seriously. Those who had located claims on these

sections under the U. S. pre-emption law of Sept. 4, 1841, at \$1.25 an acre, and had not previously filed their claims for record, now found they had no claim to their frontier home, and many in consequence abandoned them. Another result within the six-mile limit was, that from that date all the pre-emptions on the even numbered sections were limited to 80 instead of 160 acres, and the government price was increased from \$1.25 to \$2.50 an acre. The news of these changes did not circulate in the public press as they do now, and when they occurred many a settler was taken by surprise.

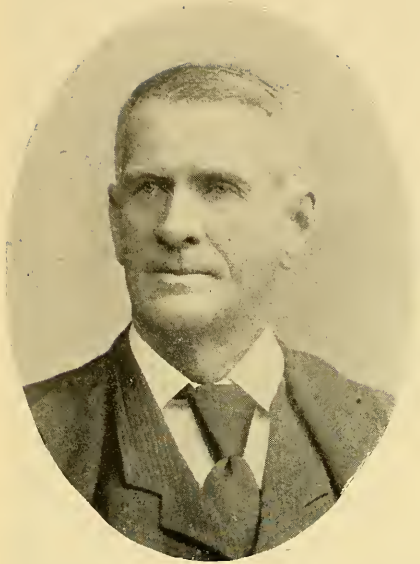
Another cause of embarrassment that checked immigration was the financial panic of 1857, when a great part of the money of the country, is-

sued by private banking institutions, became worthless. So serious was the stagnation in business throughout the country that the railway companies, notwithstanding the magnificent grants of land received from the state of Iowa, were unable to make any progress in the construction of their lines across the state until after the close of the war.

During the year 1858, nearly all of the lands in Clinton and Lake townships were disposed of by the U. S. land office at Fort Dodge, but the records show that they were purchased, not by actual settlers but by non-resident investors or speculators. These lands were beyond the six-mile limit and were available for purchase at the nominal price of \$1.25 an acre.



Center Building of Industrial School for the Deaf, Council Bluffs.



WM. H. HAIT,
TREASURER AND RECORDER, 1859-61.
TREASURER, 1866-69.



MRS. W. H. HAIT,
First Teacher, 1860.



MRS. ROBERT STRUTHERS.

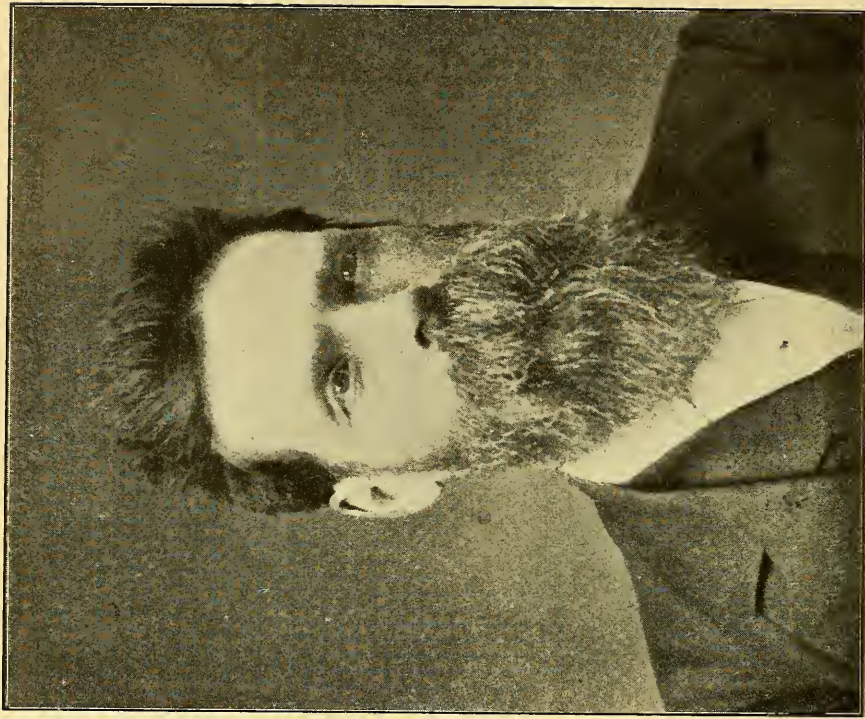


MRS. OSCAR F. AVERY.

DES MOINES TOWNSHIP.



ROBERT STRUTHERS,
SURVEYOR, 1860-69; REPRESENTATIVE, 1872-73.



WM. D. McEWEN.
(In 1874.)

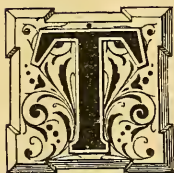
VI.

FIRST SETTLEMENTS IN THE NORTHEAST PART OF THE COUNTY.

'Tis well to sing the merited word of praise,
 Of heroes in fierce martial strife;
 But heroes, too, are they who raise
 The standard of a nobler life,
 Therefore we hail the pioneer,
 Whose strong arm helped to found a state,
 As one whose name we may revere,
 And hold in common with the great.

—A. R. FULTON.

THE DES MOINES SETTLEMENT.



THE first settlements in the north part of the county were made in what is now Des Moines township and in the year 1857.

In May of that year a party of pioneers, consisting of Robert Struthers, W. H. Hait, A. H. Malcolm and Guernsey Smith, came from Fort Dodge with an ox team and selected homes.

At this date there were no settlers in this county, except the few already named who during the previous year, had located in the Lizard settlement. Daniel W. Hunt and James Smith had each selected a pre-emption claim on section 36, in what is now Des Moines township, and had built a shanty on the line between them; and J. E. Craig had built a little cabin on another claim located on section 26. But none of these persons were occupying their claims at this time. Benjamin Evans and a trapper by the name of Weeks, both living in Humboldt county, were the nearest actual

settlers.

Concerning the three men named above who built the first two shanties in the Des Moines settlement, it may be observed that Craig did not enter his claim for record, but James Smith, who on June 11, 1858, entered for record his claim for lots 3 and 4, containing 77 acres on section 36, received the first patent issued to anyone in Des Moines township, and D. W. Hunt, who seems to have made his entry January 2, 1858, and renewed it July 2, following, for lots 5 and 6 and the N $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 36, 93-31, 141 acres, received the second patent, issued Aug. 15, 1860. These men, Messrs. James Smith and D. W. Hunt, were residents of the county only for a short time.

In selecting claims, Mr. Hait chose the southeast quarter of section 2, A. H. Malcolm the NW $\frac{1}{4}$, Guernsey Smith the NE $\frac{1}{4}$ of the same section and Robert Struthers the NE $\frac{1}{4}$ Sec. 12. Mr. Struthers during the summer secured the breaking of considerable prairie and the next year the erection of a shanty, into which he moved with

his family in December, 1858. Messrs. A. H. Malcolm and Guernsey Smith erecting their shanties, began to occupy them at once. They were somewhat familiar with this section of country, having passed through it during the months of March and April of that year, while on the way to and from Spirit Lake, where they went as members of the Relief Expedition from Fort Dodge at the time of the Indian massacre that occurred March 8-11, 1857.*

During the summer of that same year (1857) a man named Bates, located with his family on section 36. About the same time Samuel N. Harris and Edward Hammond arrived with their families, but both located for a year or two just across the line in Humboldt county.

Only two of those who located in the Des Moines settlement in May, 1857, are still residents of the county, namely, W. H. Hait and A. H. Malcolm.

"Only wild beasts, and men as wild,
Were known to this fair valley then,
But Nature in her beauty smiled,
To greet another race of men."

William H. Hait is at present the owner and occupant of 280 acres on the S½ Sec. 26, Des Moines township. He has been the owner of his present farm for forty years and a resident of the township and county for forty-two years. Only Mr. and Mrs. Michael Walsh, Mrs. Charles Kelley, Mrs. Philip Russell, Mrs. Patrick Forey and M. T. Collins, of the Lizard settlement, and A. H. Malcolm, can tell of a residence in the county so long. The first house Mr. Hait erected on this farm in 1859, was of logs from the native timber and is still in existence as a relic of the past. The large and comfortable house he now occupies was built in 1867, and the

*Through the courtesy of the editors of the Reville, Mr. Malcolm's own account of their thrilling experiences on this occasion, may be found on page 35.

lumber for it was hauled by teams from Nevada, Story county, at which place the price paid was, for shingles, \$7.00 a thousand; flooring, \$70.00 and finishing material \$90.00 a thousand feet.

Mr. Hait is a native of Ulster county, N. Y., where he remained in the home of his parents until he had attained the age of twenty-two years and, after one year spent in Wisconsin, he came to Pocahontas county. In 1868, he married Helen M. Harvey, daughter of Ora and Eliza Harvey, of Clinton township.

Miss Harvey, who at this date became his wife, had the honor to be the first school teacher in Pocahontas county and was also the first one to teach school in the first schoolhouse erected in the county. Her first term was taught in the log house of Mr. Hait, in the fall of 1860, and when the brick schoolhouse at Old Rolfe was built the year following, she taught the first term in it. Miss Harvey had inherited a high degree of culture and refinement and had received a thorough academic education before coming to the frontier. It was but a natural sequence of these special qualifications that her work was very highly appreciated both by her pupils and patrons. She died December 27, 1887, and her remains were interred at Humboldt, where they lie beside those of her parents and of her only sister, Jennie S., who became the wife of Oscar F. Avery.

In the early history of this county, Mr. Hait was a leader in thought and action, and throughout his official career proved himself strictly honest and upright, or as another has expressed it, "one of the best men who ever held public office in Pocahontas county."

At the first election, held March 15, 1859, for the organization of the county, he was elected Treasurer and Recorder of the county and performed

the duties of these two public offices during the first three years of the county's history, 1859 to 1861. During the early part of this period there lived in his home Oscar F. Avery, who on March 20, 1860, was appointed Superintendent of Public Schools, and thus became the first one to serve in that capacity in this county. On May 6, 1861, Mr. Avery having moved to his own farm just across the line in Humboldt county, Mr. Hait was appointed his successor and, as the second incumbent in the county, held the office of county superintendent until April 22, 1862, when he resigned, and Ora Harvey (father of Helen M.) was appointed his successor.

In the fall of 1864, Mr. Hait was elected Clerk of the District Court, but after appointing Philip Russell, the previous incumbent, his deputy, a few months later he resigned the office in his favor. The next fall he was again elected County Treasurer and served in that capacity during the four years, 1866 to 1869, making a period of seven years that he filled that office. At the first election, held March 15, 1859, Mr. Hait was elected township clerk, and on April 19th following, he was appointed Assessor for the township which, during that year for both of these offices, embraced the entire county. On October 12th, the same year, he qualified as a Justice of the Peace. In Des Moines township he has rendered faithful service in all of the various offices, except those of constable and road supervisor. During the period of the war, 1862 to 1864, he served as deputy provost marshal of the 6th congressional district which, extending from Black Hawk on the east and Carroll on the south, embraced thirty-three counties of Northwestern Iowa.

Mr. Hait has been one of those who believe

“We live in deeds, not years;
In thoughts, not breaths;

And he lives most who thinks most,
Feels the noblest and acts the best.”

Augustus H. Malcolm, who came to this county in 1857 with Mr. Hait and others, is now the owner and occupant of the SE $\frac{1}{4}$ Sec. 1, Clinton township. On Sept. 9, 1859, he entered his pre-emption claim for lots 8 and 9, and SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 2, 93-31, (Des Moines township) 149 acres, receiving the patent for it Nov. 1, 1860. On these same dates his neighbor and friend, Guernsey Smith, entered and received the patent for lots 5 and 7, and SW $\frac{1}{4}$ NE $\frac{1}{4}$, 149 acres, of the same section.

On September 14, 1861, Mr. Malcolm married Mary A. Townsend, whose mother lived south of Fort Dodge. On August 23d, previous, he had enlisted at Old Rolfe, and a few days after his marriage he went to the army. At the time he was mustered in at Dubuque, Sept. 20, (1861) he was appointed Corporal, and later, Sergeant of Co. A, 11th Reg. of Penn. Volunteer Cavalry, under command of Col. Samuel P. Spear, which formed a part of the 18th Corps of the Army of the Potomac, under Gen. McClellan. He continued in the military service of his country three years, or until Sept. 20, 1864, and participated in more than a dozen battles.

Mr. Malcolm took an active part in the organization of this county in 1859, and at the first election was chosen Clerk of the District Court, but did not qualify. On May 6, 1861, at the third session of the Board of County Supervisors, he was appointed Clerk of the Board and served in that capacity until September 2d, following, when he went to the army. After his return he was elected and served as Clerk of the District Court of Pocahontas county during the year 1866. He served five years as Clerk of Clinton township, and during 1869 and 1870 was a member of the Board of County Supervisors. Ora P. Malcolm, his

eldest son, is at present and for several years has been deputy Treasurer, and Fred A. Malcolm, the second, was County Surveyor during the four years, 1894 to 1897.

During his absence in the army his wife went to his friends in New York state, and after his discharge they spent one year in Ohio. Making the journey from Ohio to Old Rolfe by team in the fall of 1865, they located on their present farm on section 1, Clinton township. They have raised a family of seven children, all of whom but two, have gone forth from the parental roof to found comfortable homes of their own. Mr. Malcolm has rendered honorable and faithful service to his country, both in the time of war and peace; and he has lived to see the desolate wilderness traversed by him and others with unspeakable hardships in the spring of 1857, transformed into a beautiful Eden, with fruitful fields conveniently connected with a network of magnificent railways and dotted with numerous rapidly growing towns and cities, and thousands of comfortable homes.

"What hath he seen of change—this aged one—
As days unfolded and the years swept on?"

First the prairie schooners
On emigration's trail,
Then rough-hewn huts of settlers
Besprinkling hill and dale;
The felling and the clearing,
The stretch of smiling farms;
The tilling and the sowing,
The gathering into barns;
The schooling of the children,
The rising of church spires,
And the smoke of many fires."

Robert Struthers, who in May, 1857, selected a pre-emption claim on Sec. 12, 93-31, (Des Moines township) was a native of Glasgow, Scotland, where he was born, Dec. 26, 1829. In April, 1831, he came with his parents to Chat eau gay' (Shat-o-gay') county, in the Province of Quebec, Canada, where on March 19, 1853, he married Susan

McEwen, a sister of Wm. D. McEwen, Esq. Their home at this time was in a timber country, fifty miles southwest of Montreal. Here his mother, Ellen Watson, died when he was seven years of age, and his father, Andrew Struthers, in June, 1858; their family having consisted of four sons—Robert, who was the eldest; James, who located near West Bend, after seven years spent in Australia; Andrew, who went to Nebraska, and William, who also became a resident of Des Moines township, this county.

Robert Struthers, during the first three years after his marriage was engaged in building railroad bridges in the Province of Ontario. At this period, which was but a few years before the outbreak of the war of the rebellion, and about as many subsequent to the transition from a territorial to a state government in Iowa, the attention of those seeking new homes was directed to the rich and fertile but unoccupied prairies of this newly organized state. When the tide of emigration had reached the north central part of the state, Mr. and Mrs. Struthers decided to leave the associations of home and kindred and seek their fortunes as pioneers of this new and as they verily believed "better country." Accordingly, in January, 1857, they came to the United States and began the journey to their frontier home in the West, intending to proceed direct to Fort Dodge; but owing to the severity of the winter and unusual drifts of snow, they stopped at Aurora, Ill., until the month of April, and then leaving there his wife and one child—William E.—Mr. Struthers passed to Dubuque (the terminus of the Illinois Central) by rail, and from thence to Fort Dodge by stage, paying for the latter form of transportation at the rate of seven cents a mile for the first 100 miles and nine cents for the second 100 miles. The amount of baggage carried free