

Nemaha County District Schools Fine Examples of Modern Methods

INTERIOR OF WASHINGTON SCHOOL, NEMAHA COUNTY, SHOWING SINGLES SEATS, SYSTEM OF HEATING, VENTILATING, ETC.

PLAYGROUNDS OF THE ROSEFIELD SCHOOL, NEMAHA COUNTY—TEACHER AND CHILDREN INTERRUPTED IN THEIR PLAY.



GEORGE D. CARRINGTON, JR., County Superintendent of Nemaha County.

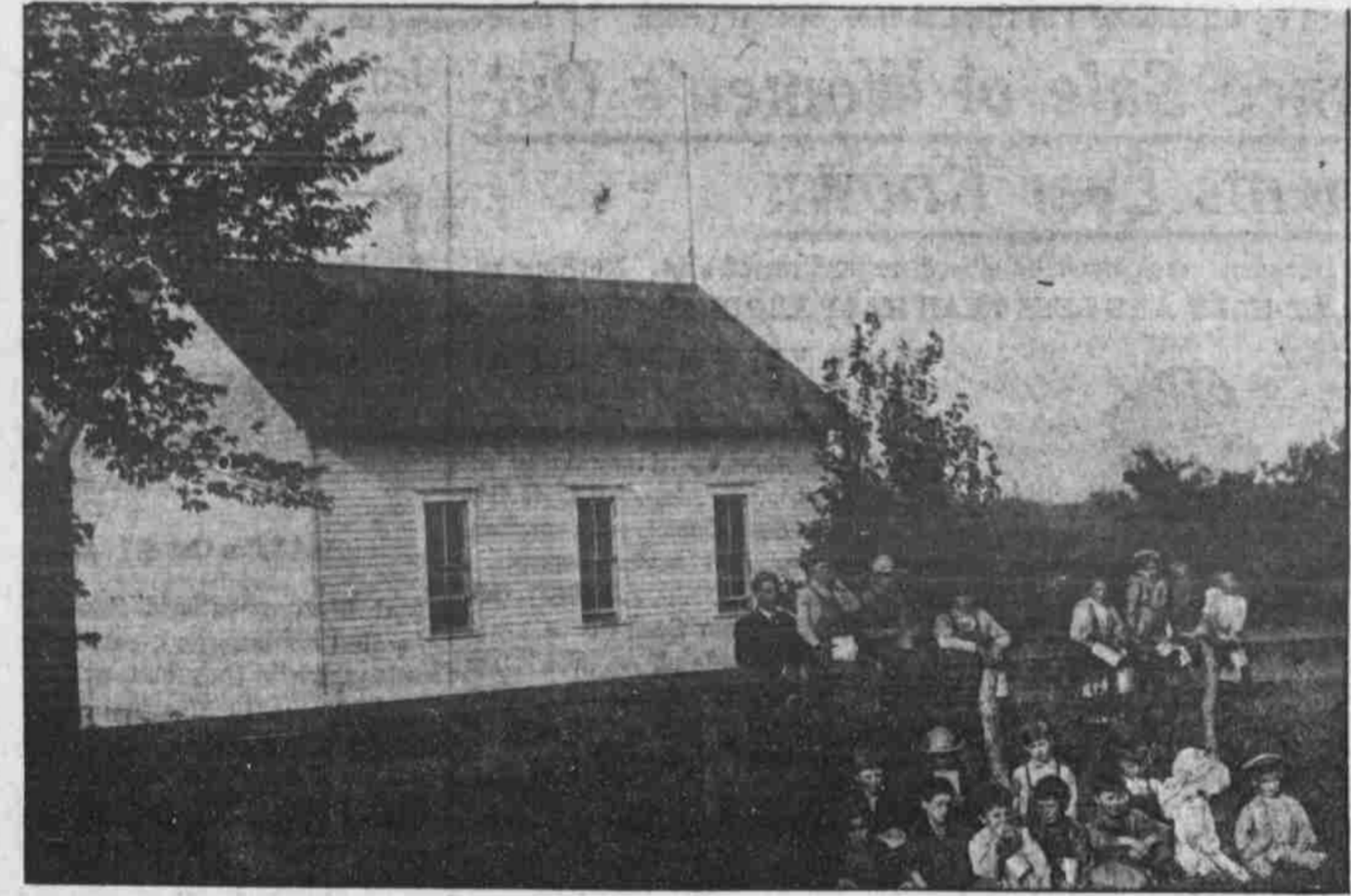
UBURN, Neb., Jan. 16.—(Special Correspondence to The Bee.)—A good general always endeavors to keep in close touch with every ramification of his army, that unity and uniformity of concerted effort may be had. In peaceful pursuits and business life it is the man thoroughly familiar with every detail of his business who succeeds. In things educational the same rule holds true. It is the practical application of this rule, that in four years, has brought Nemaha county to the forefront in things educational. Since the dawn of territorial history Nemaha county (the "State of Nemaha") has been a factor in things political in the state of Nebraska, but only of late years has this division of our great commonwealth made a great noise educationally. And this brings us again to the rule, first quoted—and, what is of more interest, to the man who applied the rule and made it a success.

Comes a New Superintendent.
Four years ago George D. Carrington, Jr., a native of historic Brownville, was elected superintendent of public instruction in Nemaha county. He is a school man all over and no sooner does he think out something which will benefit the schools than he begins to execute the plan. Soon after he assumed the duties of his office in January, 1904, things began to happen. There has been something moving educationally in Nemaha county ever since. He constantly held the idea of county system of rural schools, or any other system for that matter, is dependent for its success upon correct supervision. And that this supervision should be a personal matter with the superintendent. So he went from district to district, visited the directors and the teachers, "camped" in the school room until the teacher and pupils forgot the presence of a "visitor" and unconsciously reverted to their natural every day routine. Then came out the note book and the superintendent was busy, quietly but earnestly, studying the educational status of each district, taking notes thereon, and devising some plan for its betterment. Then came the suggestions, talks with the school directors, instructions to the teachers, advice to patrons and pupils and in regard to this point Superintendent Carrington says:

"The county superintendent is the elected educational agent for and of the people of his county. It is his business to learn what the schools need and then let the people know of that need. The people need to be informed regarding many things educational. If, after they have been informed as to better things for their children's education, they then refuse to provide them the superintendent is in a measure relieved of that responsibility. But as a general thing the people are glad to learn of the better ways and means and provide freely and liberally if they see the need. It is ever the superintendent's duty to educate and let the public opinion into ways which are for the children's betterment and to keep abreast before children, teachers and public the highest ideal of citizenship.

In speak of the work of the county superintendent he said: "There are twenty-four hours of work a day for a county superintendent if he will get busy; on the other hand, I know of no county office in which there is the opportunity for negligence. If a superintendent be lazy and indolent he may draw his salary and do absolutely nothing—this has at times been done and for that reason the office of county superintendent is sometimes looked upon by the public as an unnecessary and useless office."

New Deal in School Economy.
It is one thing to commend or adopt a rule, but quite another to put into practical working commission. But Superintendent Carrington has that fearless impulse which prompts quick action in time of necessity, so the second month of his first term chronicles his first original stroke and the one act woke every teacher in the county; set more dust flying in every educational center than has been moved at one time in years; created a run on the broom market and almost caused



CLIFTON SCHOOL, NEMAHA COUNTY—ARTHUR GILBERT, TEACHER, AND SOME OF HIS PUPILS.

a small riot in one of the little towns of the county. And all this because of a little common dirt getting out of its natural place. It chanced when the superintendent visited a certain school, which consisted of three rooms, he found that if the old rule of "cleanliness is next to godliness" was true, the school in question was indeed far from the divine nature. He saw the condition and in the endeavor to raise both the sanitary and spiritual standard, acted true to the rule which he had adopted, and with his characteristic promptness and energy. He left the building, saw the director from whom he was granted permission to dismiss the school for the day. The smaller children were sent home, the superintendent donned a pair of overalls, enlisted the large boys and girls and with mops and scrub brushes, brooms and dusters, removed the accumulation of sahes, mud, dust, "last year's" decorations, and odd specimens of flora and fungus which had been deposited in the rooms during the passing months. It was a strenuous task, but by 6 p. m. each room was sweet and clean and a precedent had been set which resounded from one end of the county to the other. The state superintendent got wind of it and embodied the "precedent" in a circular and the story crept into some of the national educational journals. That night Superintendent Carrington drew home twelve notes through a sheet and rain, little thinking he had that day done anything out of the ordinary or that any one outside of the school district interested would ever hear anything about it.

Since then a ceaseless and relentless warfare has been waged against dirt—a campaign in behalf of proper sanitation, repairs, supplies, new and properly constructed outbuildings, new school houses and comfortable furniture, until there is scarcely a school house in the county among the eight coming directly under the county supervision that is not in first-class repair and all conditions provided for a good school.

Magazine to Develop Interest.
In spite of the desire there can be no constant and close supervision of rural schools under the present system by personal visitation. Therefore to accomplish the thing next best to personal supervision Mr. Carrington publishes a county magazine—the Nemaha County Teacher—in which appears suggestions to the teachers and patrons, "write-ups" of the schools, and the best kind of articles on education in general. The magazine has a state-wide reputation and extracts from it are published by eastern educational journals.

In addition Mr. Carrington has devised a system of monthly reports, which, by their concise information, places him at once in possession of every desired detail pertaining to the welfare of each school in the county. This system has been adopted by many county superintendents in the state. These reports are compiled and published in the county papers; thus all the people who read are informed regarding the school conditions, and each school district's pride will not permit its educational conditions to be in the back rank. If any school is not properly supplied and conducted, letters go immediately to the director and teacher, and if necessary a personal visit is made to the district by the superintendent and things are set right.

Song of Nemaha.
To develop a school spirit and local pride as well as patriotism a county song was composed at the suggestion of Mr. Carrington, both words and music were composed by local talent, the song published and sent to all the schools. All the children sing it and it is today the favorite

song of the county. The following is the poem:

"NEMAHA"
As the wheat fields softly rustle,
And the corn shakes leaves of green,
And the meadows nod their grasses
To the river in between;
What is that they whisper,
As the breeze soft kisses all?
'Tis the name of their fair mother,
The sweet princess, Nemaha.

As the purple evenings fall,
Ah, yes all, united to praise thee,
Serene princess, Nemaha.

Chorus:
Oh, sweet Nemaha, the fairest
Of thy sisters in the state;
Midst the jewels of the counties,
If fields and hills and woods and sky
Do forever sing thy praises,
How much more should we extol thee
Throughout all the coming days.

Something Doing for Children.
It has been Superintendent Carrington's policy to raise the qualifications of the teachers, both for practical teaching work and intellectually. To this end teachers' associations are held and reading circle work required. Talented speakers are employed to give addresses at educational rallies held in the various towns. The Sing 'mid Hawthorn's leafy shade,
And the bluffs—long shadows casting—
The squirrel scolds in the elm tree,
Where he has his rough nest made,
And the bright birds of the morning
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program on a stated day at the chauntauque of each year is devoted to an exercise for all the eighth grade graduates of the county, they being admitted free and given seats of honor on the rostrum during the especially provided program.



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Bulletins of Service.
In addition to circulars and the Nemaha County Teacher, Mr. Carrington issues bulletins, splendidly printed and illustrated, along certain lines of school improvement. Two of special note may be mentioned. First, one on the "Proper Heating and Ventilating of School Rooms" is a valuable treatise on a common evil, and explains the means of overcoming the same. The results of this bulletin are apparent everywhere in the county. The latest is on "Art and Schoolroom Decoration," illustrated by half-tone reproductions of the masterpieces. Its spirit may be caught from an introductory paragraph: "With the physical environment improved we are ready to inaugurate a movement toward the cultivating of the finer qualities in the children's natures—a movement which must result in refining and beautifying."

Here are a few significant clippings from one of the late issues of the Nemaha County Teacher:
I cannot think of any circumstances where I would permit one child to correct the reading of any other work of another. A child from 7 to 10 cannot do much individual study. He must be taught. He must be given such work as he can do; he thus learns by doing.
The personality of a teacher is reflected in two ways: first, in the way he divides his time; secondly, in the way he divides his energy. The "Cans and the 'Cans'" should be "canned" at least.
To be ambitious to succeed; to work hard and do one's best every day; to lead little children in ways of truth and duty; to be unselfish and to give a full dose of business injected into him.

Consolidation of Rural Schools.
One of the latest movements which Superintendent Carrington is promoting is that of consolidation of the rural school districts and the free transportation of the children. Several meetings have already been held. Superintendent O. J. Kern of Illinois has been here and there is a lively interest among the farmers who have boys and girls ready for the high school. Parents want their children at home and gladly embrace an opportunity of providing high school privileges for their children in the county. Superintendent Carrington is recommending that the school money be spent in a more economical and better way. One of his reports shows that some twenty-five rural schools having from six to eight months of school are paying more per child for education than the city of Auburn is paying per child for nine months of modern education. Several of these districts are paying as high as \$60 per child year on a basis of average daily attendance, against the cost in the city of Auburn of \$21 per capita. One district is paying \$58 per capita for an eight months' school, with poor equipment at that. The next year will see wonderful strides along this line in Nemaha county. The people are being shown that they may have better educational advantages for their money.

Nemaha county stands, in many respects, as a model in its progress educationally. Her school patrons are progressive and are ever willing to do their quota in furthering a worthy cause. The teachers are able, energetic and professional. The highest ideal is ever kept before the children and they are taught to take great pride in their beautiful county and keep the name "Nemaha" to the fore. Many departures in any line cannot be separated from the man or men who make them, therefore we have in this story the adoption and administration of a rule which may in like manner be repeated in any county by whomsoever will.

Progressive Events in the Field of Electricity

Trackless Trolley a Success.
THE trackless trolley, brought out in Germany in 1901, experimented with in France two years later, is now growing in popularity in Germany, France and Italy. In the opening hours of the present century, says the *Technical World Magazine*, a German electrical house established a short trackless trolley system near the town of Hieslitz, the line measuring less than five miles in length and serving as a medium for transporting manufactured products from the factory to the railroad. Necessary demanded transportation of this nature on account of the objection by the municipality to the laying of tracks on the roadway.

Success in a minor degree was attained, the scheme proving not only feasible but economical. The wagons employed were heavily built vehicles with an electric motor harnessed to each rear wheel, the necessary current being taken from an overhead trolley wire by an improved trolley pole carried on the top of the wagon cover. A steering mechanism completed the pioneer trackless trolley.

One of the early German lines, designated the Neunahr-Abweller-Walporzheim system, has a line three and one-half miles long and is used chiefly for passenger traffic, but has cars for freight transportation. It was built at a cost of \$32,000, as compared with an estimated cost of \$80,000 for a trolley track over the same course. Much of the cost was occasioned by the steep grades encountered. In a test run in which the car covered 150 miles, 102 passengers were carried for \$17.50.

Power in a Lightning Flash.
At a recent lecture Dr. Charles F. Steinmetz, the genius of the General Electric company, told of the power which goes to waste in every thunderstorm.
It is not possible to use any instruments for the purpose of figuring the forces of lightning, yet there are many other ways of calculating similar to every mathematician. Dr. Steinmetz has figured the amount of light given by a single flash is enough to illuminate an area two miles square. The bolt itself would be visible several miles further off, but the remotest part of the region mentioned would have as much light as would be given by a candle—quite enough to read by. To produce such a light it would be necessary to expend 12,000 horse-power for a second.

The figures appear very large, but the time is short. The flash might be for only 1-1000 part of a second, but the impression on the eye would continue for a tenth of a second anyway. Figured down to the exact hour, this amount of force would mean only about four horse-power.

According to the professor, lightning flashes usually occur within thunder clouds and only rarely from one ordinary cloud to another or from a cloud to the ground. They seem to follow the rapid condensation of vapor in the air and to be caused by that phenomenon. The kind of electricity formed in a thunder cloud is not like that which is produced by electrical machinery. Lightning is static electricity, the same kind as is produced by rubbing amber with silk. When a body like a brass globe is charged with static electricity the charge stays on the surface of it. The quantity of a full charge is limited by the area over which it can spread.

Dr. Steinmetz says that when a large number of vapor particles unite to form a raindrop their electrical charges are cancelled, but there is not as much surface on a big drop as on the many particles which went into it. Consequently there is more electricity than the drop can hold. It must hunt up other accommodations, either in some cloud or on the earth. Flashes in the clouds are often several miles long. These flashes are composed of a chain of small flashes. The remedy of one over-charged cloud by a discharge into another increases that cloud and a number of discharges are needed to even things up.

Lightning discharges from one cloud to another or to the earth differ greatly in force. Some lightning bolts are very heavy and splinter trees into toothpicks, destroy buildings and fuse rock. Others are more mild and do little or no damage.

Lightning Locomotives for Tunnels.
The Great Northern railroad has recently placed orders with the General Electric company for four 100-ton electric locomotives to be used in handling its trains through the Cascade tunnel. This tunnel is bored through the Cascade mountains east of Seattle. The tunnel is three miles in length and on a 2 per cent grade. It is to obviate the nuisance and danger from high temperatures and locomotive gases that the electric service is being installed.

The installation is attracting the universal attention of engineers, because it is the first to employ three-phase motors for railway service in this country, and, although a number of three-phase railways have been installed in Europe, the Great Northern locomotives are much larger and more powerful than any in use on the European roads.

Each locomotive will be equipped with four motors, rated at 25 horse-power, or a total of 100 horse-power. The driving wheels are sixty inches in diameter. Current will be supplied to the locomotives through the Cascade tunnel. Each locomotive will be capable of hauling a 1,000-ton train at a speed of fifteen miles per hour on a 2 per cent grade. The motors will be used as generators on down grades, assisting the air brake system of holding the train and making additional current for the line.

The flexibility and cleanliness of electric power makes it ideal for tunnel work and the railroads of the country are rapidly installing electrical equipment wherever underground conditions make steam locomotives a dangerous nuisance.

Value of Electrical Industries.
The immense value and importance of the electrical business in the United States are shown by a statistical summary in the January number of the *Western Electrician*. Electrical and auxiliary manufactures for 1907 are given at \$11,520,000, this being a slight decrease from the totals for 1906, but an increase of about 30 per cent over 1902. The decline for 1907 had been anticipated and seems to have been chiefly in the line of new construction.

Grouping the figures, the *Western Electrician* finds that wire and cables manufacture for the year amount to \$5,635,000; dynamos and motors, \$1,000,000; telephone apparatus, \$3,500,000; lamps of all kinds, \$3,135,000; cars, trucks, and railway supplies, \$45,700,000; prime movers, \$27,750,000.

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