

The M. A. C. Record.

VOLUME I.

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NUMBER 18.



HON. JUSTIN S. MORRILL.

HON. JUSTIN S. MORRILL.

Senator Morrill of Vermont, celebrated his 86th birthday April 15. He is the oldest member of the U. S. Senate, both in years and in length of service. His fifth consecutive term will expire on March 4, 1897.

The daily papers, in speaking of the illustrious senator, class him as one of the ablest and most useful of leaders in our national council. He is especially spoken of as the author of the tariff bills of 1861 and 1867.

Those who are interested in the agricultural and mechanical colleges of this country are familiar with the name of the great senator in another line of work. The land grant act of Congress in 1862, which has endowed these colleges, was the work of Senator Morrill; and the agricultural and industrial interests of this country owe to him a debt of gratitude which they can never pay. This act made possible the establishment of these schools in every state in the Union, and although that in our own State was established previous to this act, the fund thus created has served to lift a great burden from the State and at the same time greatly add to the efficiency of the College.

Again, in 1890, Senator Morrill added another to his long list of good works by securing the passage of an act supplementing the land grant act by an annual money appropriation to these same colleges, beginning with fifteen thousand dollars per annum and increasing one thousand dollars each year until the amount shall be twenty-five thousand dollars per annum. This sum has still more lessened the amount appropriated by the State and has also materially aided the College in adding increased equipment and facilities for instruction.

These two acts have indeed almost entirely relieved the State of the support of the College, only a nominal sum being needed each year for building improvements, and the care of those already erected.

As these funds are perpetual, made so in the act, and by the terms of acceptance by the several states, these colleges will go on so long as our nation lives, and remain perpetual monuments to the noble, far-seeing senator; monuments more enduring than if builded of granite from the hills of the State he represents. And nothing that he has done in Congress or out of it will better preserve his name and fame to future generations than the land grant act of 1862, and the Morrill act of 1890.

Long live Senator Morrill.

MICHIGAN FORESTS OF TODAY.

ARBOR DAY ADDRESS BY A. A. CROZIER.

I happen to have been born and brought up in the back woods of western Michigan, in a place which for that part of the State was the dividing line between the hard woods and the pine. North, as far as the eye could see, was the pine, a large block of which still remained within my recollection like a great cloud upon the horizon. Southward to the opposite horizon were rolling hills of beech and maple. During my college course I taught school one winter in the northern lumber woods, where all night long could be heard the rumble of loaded tram cars carrying logs to the Little Muskegon river. If there has been one thing impressed upon my mind more than another it has been the vast supply of Michigan pine.

During the past two winters, while attending farmers' institutes, I have had an opportunity to see something of the effect that continued lumbering has had on this supply of pine. And I think some of you will be as surprised as I was when I say that in traveling nearly two thousand miles through some forty counties in the lumber regions of the State, I cannot now recall having seen in any one place as much as a single acre of standing white pine in good condition. Of course these travels were mainly along the railroads, where as along the streams, the timber is first cut away; but when one can ride through the heart of the pine country from Marquette on the west to Saginaw on the east and see an almost continuous succession of abandoned lumber fields, miles upon miles of stumps as far as the eye can see, it has some significance. We know there still remain in northern Michigan swamps filled with hemlock, cedar, and other less valuable timber, some excellent belts of hardwood, which are being fast cut away, and here and there remote from the rivers and main lines of railroad a few considerable blocks of good white pine still held by speculators or now being cut and removed by means of spurs of the railroads branching out from the main lines. But the impression which I think any one would get from traveling through the State, and which all the evidence goes to show is correct, is that the important lumbering days of Michigan are past. Considerable lumber of one kind and another is still being cut, owing to the advance in price, bringing into market timber of poorer quality and from more remote localities, but this work is now being done

more and more in a small way. The larger operators have many of them gone out of business or have shifted the scene of their operations to the forests of the Southern States or the Pacific Northwest.

Last summer an incident occurred here at the College which served to illustrate to one who does not keep posted on such matters something of the changes which have taken place in the Michigan lumber trade within the past few years. The College had occasion to build another barn and in the bill of lumber was an order for some 18 foot white pine barn boards, such as were used in building the other barns upon the grounds. The dealer examined the bill with some astonishment and said that if we really wanted such lumber he would endeavor to get it for us somewhere in the State, but that it might have to be sawed on a special order. Such lumber was not kept in stock in Lansing and had not been for several years. People had entirely given up using such expensive lumber as good white pine for building barns. And so, gathering wisdom as we went along, the barn was built with hemlock for joists, studding, and siding, and with yellow pine from Arkansas for flooring. One thing the builder insisted on was a good old fashioned two-inch white pine floor for a driveway and threshing floor. Yes, the dealer had just what was wanted, some choice six inch plank that had been on hand for several years. White pine it certainly proved to be, but full of knots, having apparently all been cut from trees not over eight or ten inches in diameter.

I have tried to get figures to show how much cleared land there is at present in the State and how much in original forests, but statistics do not appear to give just this information. The State census of 1894, not yet fully published, gives the number of acres in farms in the State at 15,296,078, or 42 per cent of the total land area. Of this amount, 10,379,515 acres, or about two-thirds, are improved, making the land actually under cultivation in the State about 28 per cent of the whole. Nothing is said of the condition of the more than half of the State's surface not in farms, but still belonging to the State or to the railroads or other large corporations or wealthy individuals. These lands, while none of them are reported as improved, have as we know, been extensively cut over for lumber, and large sections can no longer be properly classed as forests.

The distribution of the cultivated land is of course very unequal throughout the State. In the southern four tiers of counties, which include about one third of the area of the State, the amount of improved land is 67 per cent of the whole, while in the Upper Peninsula, which also comprises about one-third of the State, the land under cultivation is only 1½ per cent of the whole. The vast areas of uncultivated land denuded of timber which are found in the northern half of the State do not exist at the south. There is at the south less land which is neither farm nor forest. The condition, however, of much of the woodland in the southern part of the State deserves to be noted. Though evidently reserved in most cases for permanent forest, the treatment it had received has often been such as to unfit it for that purpose. Fire has done less damage in the south than in the north, owing mainly to the limited extent and isolated situation of the wooded sections, but live stock has here done much greater injury. In the thickly settled southern counties there is a demand for all the pasturage that can be obtained, and it is probably true that fully half of the woodland in that section of the State is habitually used for pasture, with the result that all the smaller growth gradually disappears, thus limiting the duration of a forest so treated to the life of the larger timber. In the southern counties we see then that the cultivated land has already reached two-thirds of the whole, which is about equal to that of Germany and some of the other countries of Europe. In northern Michigan the area of cultivated land is still small, but a large portion of the remaining surface has been lumbered over and is now lying idle, awaiting settlement, or possibly in some cases reforestation, but at present yielding no valuable returns to any one.

Once more the consequences of destroying Michigan forests and the necessity of in part restoring them, have been made plain through an able discussion of the matter during the Arbor Day exercises at the Agricultural college. It is time to deal with this important question through practical legislation as several other states have been doing.—*Detroit Free Press, May 3, 1896.*

The M. A. C. Record.

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The next issue of the RECORD will appear May 26, and will be the first number published by the cooperation of the students and Faculty.

Summer term announcements from the various professors should be given Mr. Crosby not later than Friday, May 22.

AT THE COLLEGE.

Corn planting began in No. 6 last Friday.

The Hesperian Society gave an informal party last Saturday evening.

One of the most beautiful spots on earth is the M. A. C. campus just now.

A meeting of the King's Daughters will be held this afternoon at Mrs. Snyder's.

J. W. Perrigo, '94 m., Detroit, called at M. A. C. last Saturday on his way to Portland.

The mechanical seniors yesterday made a complete power-plant test of Thoman's mill.

Prof. A. T. Stevens, '93, Greensboro, N. C., writes that he has just recovered from the measles.

Two new steam-pipe thermometers have been added to the steam engineering laboratory apparatus.

Prof. C. D. Smith visited Monroe last Friday to look over the Pasteurizing apparatus of Grosvenor Bros.

W. A. Hamilton, with '94, m., has been engaged by the students as athletic trainer. He began work a week ago today.

The Danté Club meets on Wednesday evening of each week in Prof. Hedrick's office, and is reading the "Inferno."

The Delta is being planted to shade trees and evergreens with a view of sometime using it as a site for buildings.

Mrs. Woodworth entertained friends at tea last Thursday evening in honor of her guest, Miss Kitty Singleton.

The fountain erected by the class of '83, which was badly dilapidated, has been so well repaired that it looks like new.

Thorn Smith, assistant in chemistry, left yesterday for the southwestern part of the state to collect fertilizers for analysis.

The price of board in the various clubs for the spring term is as follows—Sub-faculty club .255; A, \$2.45; B, \$2.20; D, \$2.34; E, \$2.00.

Members of the faculty have suggested the organization of a spelling class for students. The students think it would be a good plan to organize a class in penmanship for the faculty.

Since the last issue of the RECORD the Feronian Society has elected the following officers: President, Bertha Baker; vice president, Fay Wheeler; secretary, Ellen Vaughan; treasurer, Myrtle Pashby.

From the appearance of numerous well-filled baskets seen meandering toward the Columbian rooms last Friday evening, we suspect that the part of the Grange program furnished by the ladies was very helpful.

Through Dr. Kedzie the Alumni library has received a copy of "First Lessons in Agriculture," by F. A. Gulley, '80, of Tucson, Arizona. The book was published in 1887, while Mr. Gulley was professor of Agriculture in the Mississippi Agricultural College.

A very pleasant social affair was the informal reception given last Friday afternoon by Mesdames Vedder and Edwards to Mrs. President Snyder, at the residence of Mrs. Vedder. About sixty invitations were issued to ladies of the College and of Lansing. Mrs. Vedder's rooms were tastily decorated, especially the dining room, where light refreshments were served. In the large west window was a bank of greenhouse plants, and over the table a delicate canopy of smilax under the

center of which was a magnificent bouquet of Maréchal Niel roses.

The outlook for fruit in our orchards, with the exception of peaches, was never better, peach fruit buds were all killed in the winter. The vegetable season is a week or ten days in advance of former years. The month of fine weather has greatly improved the chances for strawberries and small fruits.

G. H. True, instructor in dairying, left for Chicago last Saturday, where he will look up Pasteurizing apparatus. He leaves Chicago today for Menominee to spend a week testing a herd of ten Holstein-Friesian cows for B. S. Carpenter. The cows are being tested for entry in the H.-F. advanced register and for the prizes offered by the H.-F. Association.

The M. I. A. directors at Ypsilanti May 2, decided to add a series of tennis games for ladies to the list of sports. The games of base ball at Field Day will be played as follows: First game, Albion vs. Olivet; second, M. A. C. vs. Normals; third, Hillsdale vs. Kalamazoo; fourth winners of first and second; fifth, winners of third and fourth. Those who play in the first two games will have to play three games to win the cup.

Dr. A. C. True, national director of experiment stations, from Washington, D. C., visited M. A. C. last week, and on Wednesday morning spoke to us in chapel. Dr. True said that although this was his first visit to M. A. C., he felt pretty well acquainted with our institution, having studied its history, worked under its former president, Dr. Willets, and met its graduates in colleges and experiment stations from Oregon to Florida. He spoke of having in the office of experiment stations, one of our men, F. H. Hall, '88, and of being so well pleased with him that he had recently called to the office another of our graduates, C. B. Smith, '94. The experiment stations scattered over our country are to agriculture what the laboratory of the expert machinist working out improvements in the bicycle is to the bicycle factory; what Pasteur and his laboratory are to medicine. He congratulated Pres. Snyder upon coming to this institution at a time when so broad a future seemed to open up to it, and closed by saying, "I trust that under your benignant sway this college may add much to a broad and well-earned reputation."

NEWS FROM GRADUATES AND STUDENTS.

Howard Knevels, with '88, is in the book and stationery business in Elkhart, Ind.

Stanley Otis, sp., '89, is a member of the police and fire commission of Lansing.

Miss June Tucker, '95, sp., is employed in works of the Detroit Casket Company.

Henry A. Haigh, '74, is an alternate delegate at large to the St. Louis convention.

Ira Sayre, Flushing, with '80, will represent the district as delegate to the St. Louis convention.

R. J. Cleland, '89, recently a resident of Lansing, is at present attorney for a Grand Rapids Credit Company.

W. L. Rossman, '89, State Analyst, attended the Detroit convention last week going from there to Toledo, Ohio.

L. C. Brooks, '92, m., principal of the Stronach schools, closes his years pork this week and will spend the summer at M. A. C.

G. M. Angier, with '89, m., was a delegate from Boston at the National Electric Light Association in New York, May 4 to 7.

R. R. Marble, '95, is supposed to be in Colorado. If this item reaches the eye of Mr. Marble we should be pleased to hear of it.

W. R. C. Smith, with '94, was one of four young men representing the *Western Electrician* at the New York Electrical Exposition.

Grant M. Morse, Portland, with '75, was elected alternate delegate to the St. Louis convention from the fifth district at the recent convention.

H. C. Skeels, sp. with '97, is working for O. C. Simonds, Chicago's famous landscape gardener, at Delavan a noted Wisconsin summer resort. He hopes this may be an opening through which he will be able to return to M. A. C. and graduate.

In answer to a call for A. L. Pond, with '97, m., at the Sprague Electrical Elevator Exhibit, New York, an officer of the company took occasion to compliment Mr. Pond and his work, and said he had just been sent to Montreal to install a plant.

As a result of seed tests made by G. H. Hicks, '92 Secretary Morton decided not to buy seeds for Congressional distribution of the Chicago firms whom he

patronized last year, but to give his orders to the Landreth Seed Co. The Secretary now has a law suit for damages on his hands.

Guy Stewart, '95, began teaching the district school out in the Charley Davis neighborhood, Monday. Mr. Stewart is an able instructor and the district fortunate enough to secure him will be well repaid in satisfactory results.—*Otsego County Herald*.

W. H. Anderson, with '96, m., writes from Ishpeming, Michigan, where he is employed as chemist by the Lake Superior Iron Company. He finds the work very pleasant and expects to continue in that line. 1704 determinations was the laboratory record for the month of February.

The most enthusiastic person of the late additions to the ranks of bicyclists, is our banker, D. C. Oakes, '74. He talks wheel in the day time, dreams about them in the night, and he has already worn out the seat of one pair of trousers. He is getting bravely over the pansy period, and will soon be a full fledged bicyclist.—*Coopersville Observer*.

THE EARLY FORESTS OF MICHIGAN.

ARBOR DAY ADDRESS BY DR. R. C. KEDZIE.

My father brought his young family to "the Michigan" in an early period of the settlement of the territory, buying his farm of the U. S. Government in 1824, and making his home on the banks of the River Raisin in 1826. It was pioneer life of the most pronounced type—not "nine miles from a lemon," but twenty-five miles from postoffice, store, mill, blacksmith, doctor—civilization. The roads were only trails through the woods, and the bridge to cross the river was a canoe, in which was ferried over, the wagon piece by piece, the grist for the family bread, and the harness, while the horses must swim. This was "going to mill" and the same process on the return trip. If the river was in flood and the mill could not be reached for a time, we sometimes made a kind of meal by planing off the corn from the ear, using a jack plane for a mill. By prolonged boiling the shavings of corn were made palatable and digestible. We had "plain living" if not the "high thinking" of Emerson.

The Log Palace.

Our rustic home was built of logs, one and one-half stories high and eighteen by twenty-two on the ground. Half a dozen trees stood so near it, and of such size that if any one of them had fallen across the house it would crush it to the ground; their sheltering arms stretched over our home, but their gigantic forms suggested titanic power when once gravitation should get in its work.

The First Night in the Palace.

The family took possession late in the afternoon of a mild October day: the palace was not completed, the ground floor was laid, except the space reserved where the mud chimney would be built, and where a fire was burning all night to scare away wild beasts. It was literally our housewarming. Spaces had been cut in the log walls for doors and windows, but these had not been put in place, blankets being hung for door curtains, and barricades of chests and boxes to keep out intruders. Just at nightfall my brothers took the Indian pony, "Old Gray," to the bottom land to feed for the night, a small bell fastened on his neck to find him more readily in the morning, and to prevent his wandering too far his forefeet were spanceled: just as this was done, the wolves began to howl close by, and boys and pony made a bee-line for the house to tarry for the night.

Kept at a distance by the fire burning in the house, the wolves howled around the house the livelong night, while the answering owls hooted from the tree tops over our heads. The terrified pony did not dare to leave the house but circled around and around it in a monotonous tramp, the thump, thump, thump, of his spanceled feet beating time to this wolf and owl duet, the tinkle of his bell serving for orchestral accompaniment. To the small and select audience who held reserved seats, the concert still seemed somehow to lack concord and harmony of sweet sounds. There was one audience that was in no hurry to see the curtain rise.

The Slaughter of the Mighty.

The massive trees that overshadowed our house were too suggestive of crushing disaster if any one of them concluded to come down to our level. Their doom was settled because the skilled axman could determine the direction of their fall, and thus avert danger from our home. One huge red oak was marked for slaughter and he was to die after nightfall. My father placed a lighted candle beyond the reach of the falling tree but in the line of its fall, to see what would be the impulse given to the air by the falling mass, by the influence on the

candle flame. The tree came crashing to the ground, and his windfall caused the candle flame to flicker for a moment and then go out in darkness to the intense delight of the kids. It was the first experiment in natural philosophy I ever saw. The next day a white oak four feet in diameter had to bite the dust, and we were invited out doors to see "how it let the-sky in."

The trees must fall though they held their sheltering arms over our house because danger lurked in their very shadow, and we must have breathing space and sunlight around our home. These forest monarchs with coronals of green and majesty of form appealed in vain to our sense of beauty.

"Woodman spare that tree" was all unsung at Kedzie's Grove. The most beautiful inanimate thing God ever made is a tree, but in our eyes it "had no form or comeliness that we should desire it." It was a rival to be downed, for it held the ground we wanted for crops. "A man was famous according as he had lifted up axes upon the thick trees." The man that could chop an acre of heavy timbered land in a week, commanded respect. The trees were an obstruction, an enemy to extirpate, not a thing of beauty or a friend to be cherished. It was woods, woods, everywhere; trackless, savage, terrifying. They seemed to smother us, and we gasped to drink in the open sky. Go out from our house in any direction and it was the unbroken forest for long distances; take the trail eastward and it was five miles to the first house, Richard Peters; go west and it was six miles to the house of Harvey Bliss; strike out north or south through the lonely woods, and it was twenty miles or more to a habitation, though an occasional Indian wigwam could be found. It was a forest sea, and when the wind swept through their sounding aisles it called to mind the sound of far-off waves—"deep, distant, murmuring ever more like the waters of the mighty ocean."

When we recall the fact that the woods were the home of treacherous beasts of prey, "more fierce than evening wolves," while the arm of man seemed so weak and puny before such sturdy foes, what wonder that we grew to hate a tree, and clap our hands over his downfall.

Forest Requiem.

Those grand old forests! I look back with remorse upon their pitiless destruction—the rich inheritance of the centuries past, wantonly wasted. Timber to build the navies of the world, lumber to adorn the palaces of kings, were of no account in those early years. The oak trees on my father's farm were ample to build an eight-rail fence around every acre of the farm, yet burned up in log heaps. Whitewood was the only tree that had a market value, because the saw logs could be floated down the river to Monroe to be sawed into lumber. But the other trees, the oaks, ash trees, black walnut, basswood, elm, hickory and cherry, had no quotable value in those early days.

If the farms of Lenawee county were again clothed with the forests of 1826, the timber would sell for more than the farms are worth today. What is true of Lenawee is also true of all the southern tiers of counties from Lake Erie to Lake Michigan—no vast sweep of richest forests across the State, with only spots, here and there, of open prairie.

The North Woods.

When we cross the range or base line of U. S. survey, and turn our gaze northward a wonderful sight meets our eyes; the pines, hemlocks and cedars, and the hardwoods of the north. I will not sing the song of the pine lest a deafening chorus should come up from every State, and from foreign shores. The pine lumber has gone everywhere to shelter, comfort and protect. During the late war I found the military hospitals on Look-out Mountain were built of pine boards from Saginaw, and the same was true all over the states scourged by civil war with its uncivil accompaniments. Michigan showed her hospitality by building hospitals in the stricken south. After the war I visited my sister in Illinois and found the buildings of the prairie state constructed of Michigan pine. The whole country has shared in the product of Michigan mills. There is no use of dwelling on this subject. "Michigan pine" comes instinctively to the lips when one talks of choice lumber in all the north and west.

But the hardwood lumber of this region stands only second to the pine. Look at the trade in hardwood lumber, and the furniture factories of Grand Rapids and other cities on our western slope. But the hardwoods themselves are disappearing so fast that a question of a future supply for those wood-devourers is being anxiously discussed at these several points. It is darkly hinted that the price of business blocks in Grand Rapids is becoming unsettled from fear of failure of this great manufacturing industry by reason of lack of raw material—the oak, maple and ash trees

that once were food for log heaps, a whole burnt offering of folly!

To Make a Forest.

Did you ever stop to consider what is involved in the making of a forest, especially the element of time in raising a forest of hardwood—the growth year by year of ring after ring of compacted wood, with the exquisitely delicate coloring of every fibre? The cottonwood grows in a decade and rots in a night, but the oak is rounded and polished by a century of sunshine and storm.

The life of a tree stretches through decades into centuries. Our forests are the free-hand gift of centuries gone by—"without money and without price," like all the gifts of God. Shall we therefore quote the fool's motto, "Cost nothing worth nothing?" Shall we waste our inheritance, and trust to the slow growth of uncounted years to make good the loss?

When a man safely passes some critical point, we say he is "out of the woods;" but when Michigan is "out of the woods," the critical point will only be reached.

The Burgundian Rule.

The forest as such yields no adequate support for a dense population—one person to a township. It was necessary that some of the woods should be cleared off to make room for civilized life; grain must replace game.

The rule of the Duke of Burgundy, now generally accepted in Europe, in regard to the safe limit of cultivated soil to forests, is "One-third for the huntsman and two-thirds for the husbandman." Or "One-third for nature, two-thirds for man." The relation of forest to field as influencing climate and production, the equalizing of temperature and the conservation of moisture are matters demanding careful study. Have we reached that limit even in the naturally forested regions lying east of the Mississippi river?

A Balance Wheel.

Forests are the balance wheel of climate. After water, there is no such equalizer of climatic extremes, of parching heat and piercing cold, the distribution of rain and conservation of water, and a bridle upon the rustling winds. Where the proper balance is maintained between forest and field, the life-sustaining capacity of a state is greater than when the whole surface is laid bare to the plow and turned up to the blistering sunbeams. Health is stronger, food is better and life is sweeter under the sheltering arms of the brave old oak.

NATURAL HISTORY SOCIETY.

REPORTED BY J. W. RIGTERINK, '97.

The Natural History Society held its last meeting for the term Friday evening. The meeting was devoted principally to observations.

It was opened by a very interesting article from Prof. Crozier on "Beech trees dying from drouth." He spoke of the effect of the decreasing rainfall in the last three years, on the yields of farm crops, particularly hay, and also on our indigenous plants. He spoke of the beech as being a tree of shallow rooting habit, adapted to comparatively low lying land, or to regions of abundant atmospheric moisture. Toward the close of last summer it became evident that many trees were dying from the effect of the drouth. These trees show no sign of returning vegetation this spring. He stated that of 88 trees counted on one occasion, 38 were practically sound, 5 were dead, and 45 were dead at the top. All of these were growing under normal forest conditions. He contrasted these with the beech trees growing on the campus, which are yet apparently as healthy today as they ever were. He claimed this to be due to the fact that their roots have found deeper and more lasting sources of fertility and moisture, and have left their tops free to expand in all directions, consequently keeping near the earth, and thus less exposed to the vicissitudes of the air. This shows that many plants living under normal conditions will die from very slight disturbances.

Mr. B. O. Longyear gave a very interesting talk on mushrooms. He spoke of the many erroneous ideas regarding this fungus. He stated that the mushroom and the toad-stool are practically the same, and the best way, perhaps, of telling the difference is by eating them. A large mushroom (Pholiota) was shown which grew on a poplar trunk from the Michigan World's Fair Forestry collection now in the Botanical laboratory. This is perhaps due to the fact that the trunk was not well seasoned. Another specimen shown was the Fairy-ring mushroom which has a tendency to grow in a circular form. This specie is found quite extensively on the campus and kills the grass wherever it grows. Another specimen was the Giant Puff-ball sent from Port

Huron. Some of these are recorded as weighing 40 pounds. Mr. Longyear stated that all puff-balls are edible until coloration takes place.

Under the head of general observations Mr. Crozier showed a mud-puppy, a sort of tad-pole about eight inches long, found in the Red Cedar river. These are quite numerous in some parts of the State, but are rather rare in the Red Cedar.

Agricultural College, May 9, 1896.

ELECTRIC LIGHT CONVENTION.

True progress demands continuous readjustment to changing circumstances, and in no field of activity is this more true than in the development of Electrical applications. Three years ago the electrical department was a revelation to the people at Jackson Park. Since that time great strides have been made and the results are presented at the Electrical Exposition now in progress at New York City.

The successful man in electrical work, whether engineer, educator, or inventor must keep in step with the improvements in his line of work, and to meet these requirements the National Electric Light Association held their annual meeting during the Exposition and in the same building.

The program of the convention was both profitable and interesting. Authorities on various subjects read and discussed papers, and these together with the object lessons taught by the Exposition could not help but fill members with ideas of the most practical kind.

The Exposition was opened with imposing ceremonies on Monday evening. Nothing was spared to make the convention of great educational value. The displays were largely of such apparatus and devices of novelty and merit as have been developed in the past three years. Among the novelties might be mentioned Moore's Ethereic Light, a light without heat, successfully exhibited; the roar of Niagara by telephone, electric motors operated from Niagara Falls plant, and Edison's Roentgen Ray Apparatus.

Entertainment of generous character and of great variety was provided for all delegates, such as free excursions to manufactories and central stations in New York and New Jersey.

These conventions are centers of knowledge, where ideas are spread, interest is kindled and best methods brought forward.

THE GREENHOUSE.

The most attractive flowers now blossoming in the greenhouse are roses, caranations, cinerarias, orchids and the amaryllis. Only a few orchids are still in blossom, but roses are plentiful.

Bedding-plants are now being transferred to cold frames to brighten up before being put in the numerous beds to take the place of the tulips that have made such a brilliant showing for a few days past.

Quite an opening has been made in the main room of the greenhouse by the removal of one of the banana trees, the fruit of which has recently been gathered. A peculiar thing about this banana plant is that the flower stem when cut in two, even by a sharp knife, does not fall apart but is held together by the fibres which run lengthwise of the stem and may be pulled out to the length of four or five inches.

Grape vines now nearly cover the interior glass surface of the grape house below the hill. These vines, which are mostly of the Hamburg variety, are well laden with young fruit. The difference in season between the north and south sides of this house is quite perceptible, the grapes on the south side being three or four times as large as those on the north side.

LOST TWO GAMES.

Last Saturday our team played two games with the Kalamazoo College team and lost both of them. The first game was played in the forenoon on the campus and resulted in a score of 18 to 16. The game belonged to M. A. C. up to the seventh, when four hits, a base on balls and two errors netted six runs for Kalamazoo. In the first half of the ninth M. A. C. tied the score, but in the last half errors gave Kalamazoo three more runs and the game.

Earned runs, M. A. C., 11, Kal., 8; 2b hits, Crosby, M. A. C., Johnson, Axtell, Kal.; 3b hits, A. C. Krentel, M. A. C.; bases stolen, M. A. C., 9, Kal., 6; bases on balls, by M. A. C., 3, by Kal., 7; struck out, by Warren 3, by Johnson 2, by Warwick 3. Batteries: M. A. C., Warren and Krentel; Kalamazoo, Warwick, Johnson and Waterbury.

The afternoon game was played in Lansing and was very close and interesting, M. A. C. was ahead up to the last half of the ninth. Score:

	R.	B.	E.
M. A. C.	3	2	0
Kalamazoo	4	0	0

Earned runs, M. A. C., 6, Kal., 8; 3b hits, Crosby, A. C. Krentel, Adams, M. A. C.; bases stolen, M. A. C., 11, Kal., 5; double play, Adams, unassisted; bases on balls, Johnson, 5; struck out, by Osborn, 3, Johnson, 12. Batteries, M. A. C., Osborn and Krentel, Kalamazoo, Johnson and Waterbury. Umpire—Hoyt.



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OR THE FATHER OF A PROSPECTIVE FARMER?

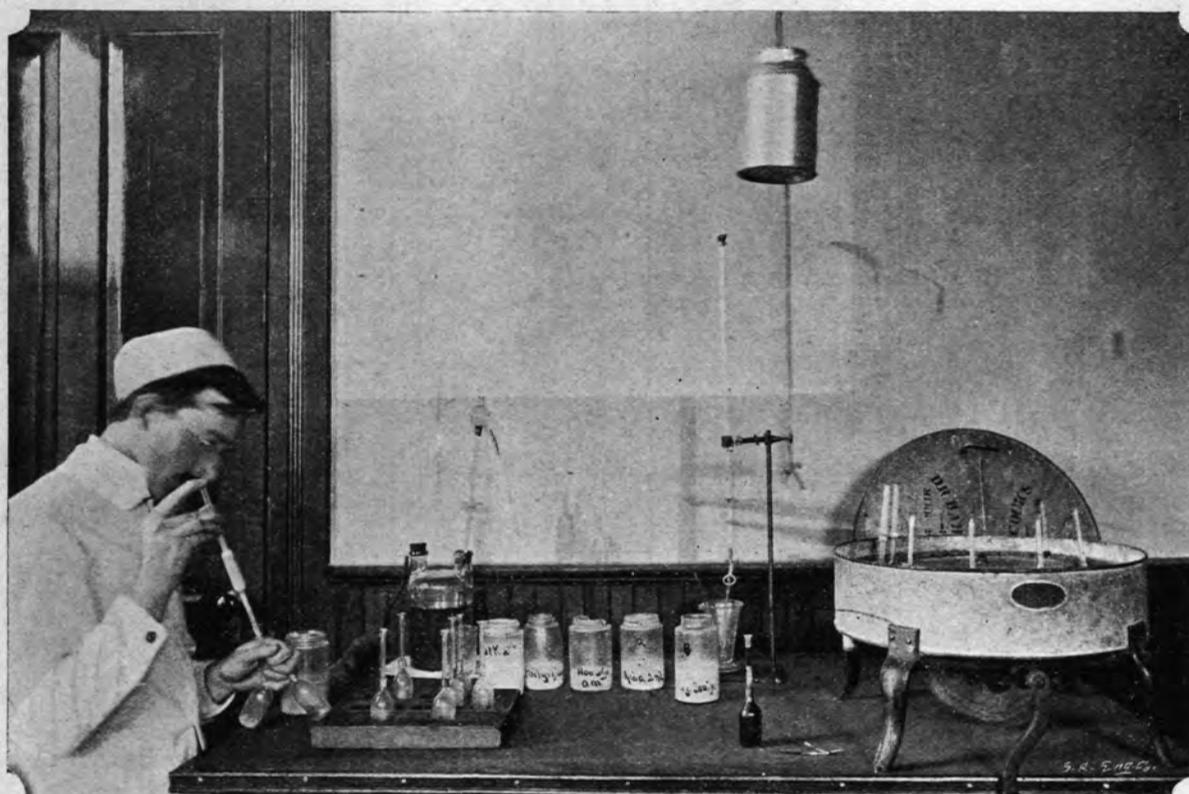
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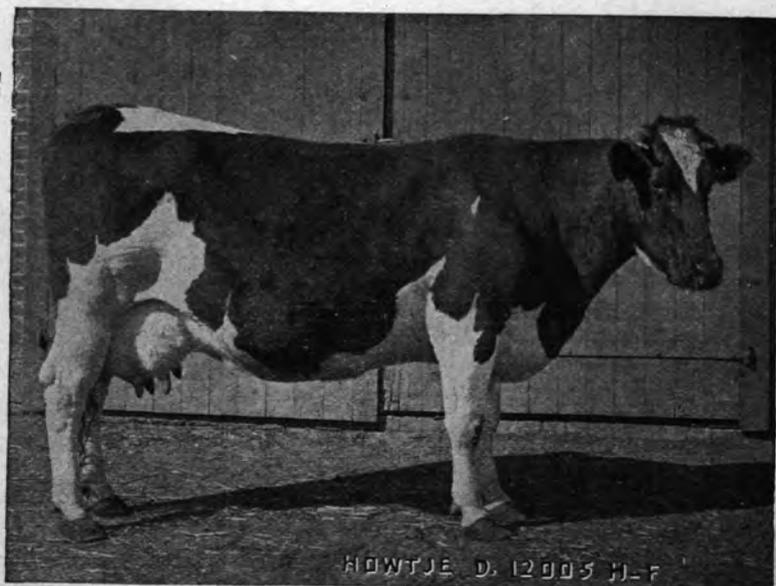
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