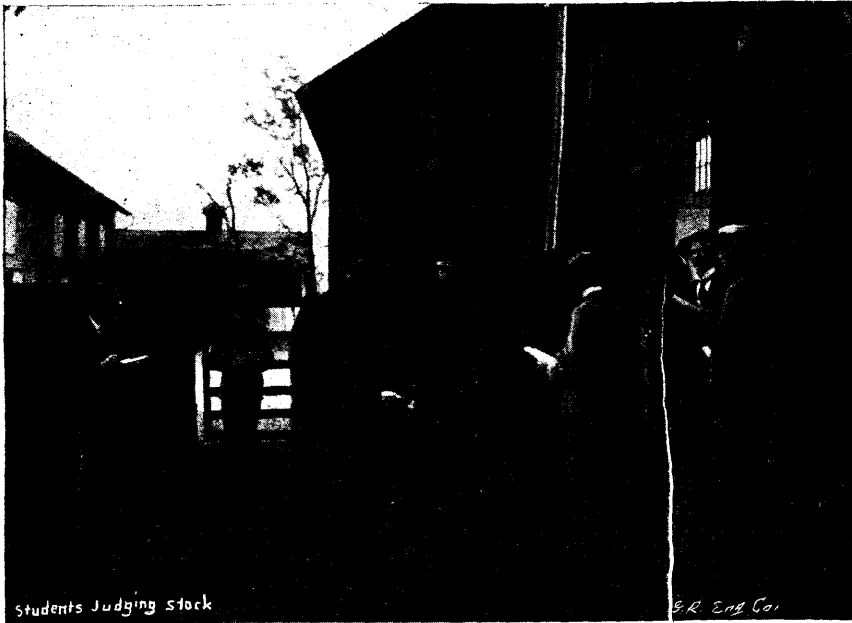


The M. A. C. Record.

VOLUME I.

LANSING, MICHIGAN, TUESDAY, JUNE 30, 1896.

NUMBER 24



Students Judging Stock

JUDGING STOCK AT M. A. C.

BY H. W. MUMFORD.

The ability to measure the value of an animal for a given purpose is a very practical accomplishment for the farmer and stock breeder alike. The success of some of our most noted stock breeders and our best farmers has been due in a large measure to the fact that they were able to distinguish between the really useful animal and the one which is simply pleasing to look at.

Like other highly desirable accomplishments, this ability comes but slowly. To be a successful judge, one must first study the whole subject in detail, and then he can only hope for proficiency after much practice and experience.

I believe, however, that some men are natural live stock judges, so to speak; that is, they appear to have an instinct, an inborn discrimination that is almost invaluable. Such men become competent judges seemingly without much effort on their part. On the other hand, some men never seem to acquire skill, although they may work ever so faithfully. The more we know of this subject the more we are convinced that we must recognize a certain natural taste, a fine discrimination, in the individual as a necessary, qualification of a man who would hope to become thoroughly competent as a judge of farm animals. Much can be done, however, to correct this natural deficiency by proper study and training. The individual, too, with the natural good judgment will improve rapidly by giving a little time to the systematic study and practice of judging animals. Long and varied experience is almost indispensable to give accuracy.

At the Michigan Agricultural College one of the practical features of the Agricultural course is the instruction and work in stock judging. The herds and flocks containing many typical animals of the leading breeds of live stock, furnish ample opportunity for the student to become conversant with their leading characteristics and their adaptability to every day conditions on the farm.

Believing that the score card is one of the most effectual methods of teaching the beginner, it is largely used in our work in judging stock. It is not urged or suggested that the score card should be used in the show ring or by the farmer in selecting stock for breeding or feeding purposes, but as an educator of the student with but little or no experience it is found invaluable.

A careful study and the continued use of the score card will teach: First, habits of close observation. Second, the relative importance of the different points of stock and how these points vary with types. Without the score card the novice will not be thorough or systematic in his work. A separate and somewhat different score card is used for each variety as well as each type of farm animals.

We give below the score card used by students in judging dairy cattle:

DEPARTMENT OF PRACTICAL AGRICULTURE.

MICHIGAN AGRICULTURAL COLLEGE.

SCORE CARD B.—DAIRY COWS.

SCALE OF POINTS.	Perfect.	Student's Estimate.	Corrected.
General Appearance:			
Age—Estimated.....; corrected.....			
Weight—Estimated..... lbs; corrected..... lbs.			
Form—Wedge-shaped, viewed from front, side and above.....	9		
Quality—Hair fine; skin soft; medium thickness; bone clean.....	7		
Temperament—Nervous.....	4		
	20		
Head:			
Muzzle—Clean cut; mouth large; nostrils large; face lean, long and dishing.....	2		
Eyes—Full, mild, bright.....	1		
Forehead—Broad.....	1		
Ears—Medium size, fine texture.....	1		
Horn—Small at base.....	1		
	6		
Forequarter:			
Neck—thin, medium length.....	2		
Withers—Lean, sharp.....	2		
Shoulders—Light, oblique.....	2		
Legs—Short, straight, clean boned.....	1		
	7		
Body:			
Brisket—Thin, sharp.....	1		
Chest—Deep through lungs, girth large..... ft. ins.	8		
Ribs—Well sprung, broad, far apart.....	3		
Belly—Large, roomy.....	7		
Chine—Large, prominent, open.....	1		
Back—High, lean.....	1		
Loin—Broad.....	2		
Flank—Deep, thin.....	1		
Navel—Large.....	2		
	26		
Hindquarters:			
Hips—Wide apart.....	2		
Rump—Long and high.....	2		
Pin Bones or Thurls—High, wide apart.....	1		
Thigh—Thin, incurving.....	4		
Tail—Fine, reaching hock.....	1		
Escutcheon—Spreading and high.....	1		
Udder—Long, not fleshy, attached high; quarters even.....	17		
Teats—Large, evenly placed.....	5		
Milk Veins—large, tortuous, branching.....	4		
Milk Wells—Large.....	3		
Legs—Short, clean boned, far apart.....	1		
	41		
Total	100		

Name of Animal.....

Owner..... Date.....

Student's Name..... Standing.....

In the first column at the right and opposite each respective part is placed a figure which is supposed to represent the proportionate numerical value of that part in a theoretically perfect animal which should

score 100. Should the student think, after careful study, that the animal is defective in any point he records that fact in the next column at the right by placing there the number of points in his judgment he thinks the specimen comes from being a perfect specimen.

At first the work is more or less unsatisfactory, but with a few weeks' work it is encouraging to witness the progress made and the increased interest in the work.

Farm Department.

A NEW BIRD IN OUR CLOVER FIELDS.

T. L. HANKINSON, '98.

While walking up the lane on the College farm, during the first June afternoon of this season, I heard for the first time in this locality, the familiar song of that gay little bird, the Black-throated Bunting or Dickcissel.

I was pleased to meet this bird on the College farm, for it is a species that is attracting much attention among the ornithologists of this state, as it is a peculiarly interesting little bird, and it has many winning ways, that make it a most desirable inhabitant of our fields and meadows.

It is, each season, becoming more common throughout the state. Dr. Morris Gibbs, of Kalamazoo, says that it was not known in Michigan twenty years ago, but now we find it common in many places in the southern part of our state; and each summer we find it inhabiting new regions where it was formerly very rare or never seen at all.

I cannot find a single record of the occurrence of this bird in the locality about the College, prior to this season, and it is quite evident that this year marks the beginning of the Black-throated Bunting with us. Prof. Cook, in his "Birds of Michigan," records them as "rare at the College," but Mr. L. Whitney Watkins, who did four years of earnest work in studying the birds of this region, tells us that in all his field work, he failed to meet a single Dickcissel. If anyone can give information as to the appearance of this bird in this county at any past time, it would be of interest to hear from him.

Those who reside in the neighborhood of a field where the Dickcissel is abundant must certainly be acquainted with it, for it is a very conspicuous bird, and its song is so characteristic and is uttered so frequently, that even the most casual observer could not pass it by unnoticed.

The favorite home of the Dickcissel is the clover field. Here we find it from about the middle of May till late in the summer. During a good share of this period, the male bird is in song. We hear him from early morning till sunset, singing almost constantly from a prominent perch on some fence-post or tree-top, or other conspicuous place. He is probably singing to his little mate, which we may find concealed on her nest beneath the clover or the foliage of a small tree or bush.

Its song could hardly pass for music, but from the cheerful and earnest spirit with which it is uttered, we cannot help but admire it. It consists of two notes followed by a short unmusical jingle.

One writer, on hearing the bird sing, fancied it to say, "Look! Look! See me here!" This is not only descriptive of the song, but also of the spirit of the bird, for it seems that the one great object of its life is to attract attention and to make itself noticed above all other birds of the field.

The Dickcissel belongs to a family of birds with our sparrows, finches, grosbeaks, etc. In form and size it resembles our common English sparrow, and at a distance, it might easily be taken for this bird, were it not for its yellow breast and black throat, which distinguish it from every other member of the sparrow family that is found in this locality.

The Dickcissel is peculiarly distributed throughout its habitat. In many places the bird is found abundant while in others that are as well adapted as a home for the species, it is never seen at all. About my home at the outskirts of the city of Hillsdale in the southern part of the State, this bird was a regular inhabitant of a few clover fields for three seasons. It was abundant here, but beyond a radius of about

a half mile I never saw one nor heard of one being seen in any other part of the country.

At present in this locality the Dickcissel is common on the College farm, but it is found most abundant at Chandler's marsh.

The Dickcissel is a bird that we may welcome to our fields. It is not only an interesting bird, but is a friend to man in every way. They seem to prefer his cultivated fields to the wild meadows. They are not shy or suspicious and always seem to recognize man as their friend. They are not only desirable birds in the way of giving new life and interest to our fields, but they are truly beneficial birds, as Prof. Forbes has shown that fully one-half of their food consists of canker-worms.

AT THE COLLEGE.

Miss Pearl Kedzie is home from Olivet.

Prof. Frank Kedzie was in Saginaw Wednesday.

The Eclectic Society gave a party last Friday evening.

The Seniors are taking "sunrise" agriculture from 7 to 7:40 a. m.

Harry McGee, a brother of W. J. McGee, '96, is visiting at the College.

George Williams, '96 m, received a visit from his father last Wednesday.

The Union Literary Society entertained their lady friends last Saturday evening.

Stanley Partridge is spending the summer with his brother E. D. Partridge, '96 m.

The Delta Tau Delta Fraternity held an alumni meeting Friday evening, June 19.

G. H. True, instructor in dairying, is spending a few weeks at his home in Madison, Wis.

Mrs. C. D. Smith returned to M. A. C. last Wednesday from a six-weeks' visit at her old home in New York.

Rev. F. O. Wynau and wife, of Grand Ledge, old friends of D. J. Crosby, spent part of Friday on the grounds.

D. J. Hinkley, Olivet's pitcher, who recently graduated from that College, was the guest of John Tracy a part of last week.

H. L. Becker, who has been very low with pleurisy, is now in a fair way to recover rapidly. His mother and two sisters are now with him.

Alsike clover is nicely in flower, mammoth clover just coming out, black medick (a clover-like plant first cousin to alfalfa) seems more productive than white clover.

There is a scheme on foot to unite the Botanical Club and Natural History Society with the M. A. C. Grange. It is thought that all will be strengthened thereby.

The Hesperian Society held a declamatory contest on Saturday evening, in which D. J. Hale, '98, received first prize, a \$5 gold piece, and D. E. Hoag, '99 m, second, a \$2.50 gold piece.

Miss Zina Snyder, formerly a teacher in the public schools of Allegheny, Pa., is visiting her brother, President Snyder. She goes next year to a better position in the Kansas City schools.

We recently mentioned the mode of arrangement of our exchanges by counties in a neat case in the Library. We now have the exchanges of colleges and schools arranged by states in the same case.

Sections of the Sophomore class in Botany spend one hour per week in examining the peculiarities of trees and shrubs about the campus. Nearly all the class speak of the high educational value of this feature.

Commencement programs in considerable numbers have recently been received; those particularly noticeable are from the State University, where Dr. Angell has remained for twenty-five years, and from the University of Chicago, now at the close of its fifth year.

The Golden Elder (*Sambucus nigra aurea*) grows rapidly and in shape much resembles our native Elders. The leaves remain golden yellow all through summer. Two or three attractive bushes may be seen between the Library and the Horticultural Laboratory.

In the weed garden chicory is rampant with its blue flowers, toad flax (also called butter and eggs) shows spikes of yellow flowers. Moth mullein also shows yellow flowers in the shape of wheels; the common milkweed thrives even in hard land. Every one calls to see the Russian thistle and every one is disappointed or surprised at its innocent and insignificant look, while yet only a foot or two high, appearing more like a pigweed than a thistle.

Several large, round-topped chestnut trees on the campus are now in full bloom. They are fragrant, pretty and rather unique for this portion of the State. These trees were planted some twenty-seven years ago. Chestnut trees are found in small quantity indigenous in Washtenaw, Wayne, Monroe and one or two adjoining counties. Low, round-topped basswoods are now full of sweet flowers; the tree is not planted as extensively as it should be.

J. B. Grak, E. A. Marshall and their wives, from Charlotte, Eaton county, visited the College on Wednesday. They rode out on the street car from Lansing, and trusted to "footing it" about the campus and farm. As is usually found out by such visitors, they soon saw that they had undertaken more than they could accomplish in one day. Two families from Mason by the name of Bates and Raymond, on the same day, spent several hours looking about, and seemed delighted with what they saw.

In the greenhouses and surrounding grounds it is just now "between hay and grass." In the houses one of the sweetest things is a woody vine bearing firm white flowers, known as *Stephanotis floribunda*. It belongs to the milkweed family, the leaves looking much like those of the wax plant. There are some very showy *Caladiums*, with pink veins in the leaves, and many delicate ferns. If nothing happens, about the last of August you may see some fine things north of the green house by way of bedding plants.

In an interesting game of ball here Saturday afternoon our team was defeated by the Orientals of Lansing. Costly errors in the sixth and seventh lost the game for M. A. C. The battery work of Warren and Adams was especially fine. Score:

Innings	1	2	3	4	5	6	7	8	9	R	H	E
M. A. C.	0	0	0	1	2	0	2	2	0	7	10	8
Orients	0	0	1	0	2	5	3	0	*	11	11	4

Batteries, Warren and Adams, Reed and Fox; two-base hits, Adams, Crosby; three-base hits, Buermann; struck out, by Warren 6, by Reed 2; base on balls, off Warren 1, off Reed, 2. Umpires Hoyt and Piatt.

TROUBLES OF ARMEINA.

A PAPER READ BEFORE THE COLLEGE Y. M. C. A.
BY OUR ARMENIAN STUDENT.

Being an Armenian, and recently from that country, you expect from me some curious information about those fable-like stories which you read in the course of the winter in every newspaper. Indeed, I have a good deal of news about those troubles and about the real cause of them. I have much information about the Turkish people and government. I have personal and national ideas about the causes of that indifference which European powers are showing to my bleeding nation. I could say many things about the Mohametan religion, which, though very familiar to me, would be interesting for Americans. Each of these is a broad topic and would furnish material for many essays.

I am sorry to say that I shall not be able to content you fully this evening, because my knowledge of English is so limited that sometimes I have been obliged to chase in dictionaries for the exact word to explain my idea; and many parts of this essay I wrote first in Armenian, then translated into English. I am afraid you will find many misused words in it. I hope you will excuse me my abuses in language. Besides this, my classes and work left me so little time that I shall hardly be able to explain to you a red page of the book of horrors which is called, sometimes the "Armenian Question," or "Armenian Massacres," and sometimes, with wrong application, the "Eastern Question."

It is impossible to understand or realize, in a single night, the whole grief of a suffering people; impossible to bear in mind the horrors which blushed the Parliamentary blue books of the English government; impossible to conclude in a speech of a few minutes an account of the series of martyrdoms which happened in the course of years. If it were possible to give shape or body to any kind of grief, the monsters of hell described by Dante would be like innocent lambs, compared to the monsters of our sorrows. If the snow-capped white Ararat had the ability of speaking every event he had witnessed, those words would make a higher mountain than himself. As I said previously, I am going to speak only of the troubles of Armenia, alluding only to some circumstances which are essential.

"People" is a single and simple word used by everybody, but what a vast difference exists in its meaning in the different parts of the world. You all know the American meaning of this word, and I have some idea about it. Being born in Turkey, naturally I

learned first the Turkish meaning of this word. Before discussing the situation of the people of Turkey, let us know their degree of importance in that country. People in Turkey are human creatures made only to fulfill the pleasures of the monarch; they have no property for themselves; all they have belongs to their King or Sultan, who is both political and religious chief of them. People have no wives nor children for themselves; they, too, belong to the Sultan, who is authorized to kill, hang, or do anything he pleases with them. They have no right of speaking their griefs; the Sultan, who is the *Califa* or the successor of the best of all prophets, as well as the shadow of God on the earth, knowing like God every grief of his sons, does better for them. People in Turkey have no right of thinking, writing, meeting or discussing about popular matters. In a word, people are subjects in Turkey, while they are citizens in America.

Truly, I say dogs are more happy in Turkey than the people. Nobody asks them for any pass if they go to another city, while a man cannot go to a village two hours distant without a pass. They are free to roam over the streets day and night and no policeman defends them, while men can not get out of their own doors without a lantern. They are free to bark and even to bite the leg of the governor, and make any kind of disgusting noise, while any man who speaks the least word against the lowest soldier is a great criminal. I say dogs are happy, because they have no taxes to pay nor blame to bear, and are liberally protected and sustained by the government.

All the people of Turkey except Mohametans are called by them *Giacoors*, that is infidels damned to eternal punishment. The Turkish constitution pretends to give freedom of religion to the nations of Turkey. But you can understand what kind of a freedom this is, if I say that in my country Christians tried more than ten years to be allowed to ring a bell in their church. To give permission to repair the time-worn walls of our church, the governor wanted \$300—not to repair it himself, but to allow the people to pull down those walls and build again. If any Christian has a case with a Turk 80 per cent is the chance of his losing it in the courts, and 20 per cent is the probability of gaining if he gives more money to the judges than his Moslem rival does.

In an important part of Constantinople the Protestant people had no church. Every effort to secure permission to build a church was in vain. At last they built a little chapel of some boards in two hours of a night. As soon as the police heard about this bold enterprise they rushed there with soldiers, checked operations, and strictly prohibited putting another nail to the building. And now they are attending religious exercises there, sometimes under the rain, and sometimes under the cold and snow. Indeed, there is religious freedom in Turkey, so that if any Christian wants to become Mohametan he is free, because "the grace of God has come on him;" while if any Mohametan, seeing the nonsense of the Koran, wants to be a Christian, he is immediately put to death. In a part of Turkey near to my country, there is a certain town where people have two names; the first is a Turkish name for the day time, while the second is a Christian name, which they bear only in the night. They attend their secret churches at night.

Some students here have asked me if there are any Young Men's Christian Associations in Turkey. It must be known that there is no liberty for any kind of meeting in Turkey except those seldom commercial associations which are acknowledged by the government, or those which are under the immediate protection of foreign missionaries. Although there are some Christian associations, they are in great cities, or where missionary stations are. Five years ago, when I turned back from high school to my country with some of my friends, we made an attempt to organize a Christian association; but in the second meeting some of our members were arrested and put into prison for a few days, and we gave up our intention.

The only Armenian Scientific Association, which was sustaining about forty schools in different parts of Armenia, is now paralyzed by the oppressions of the Porte. Missionary schools are burned in many places; some of the missionaries are killed, others are expelled. Dr. Herrick cannot go to any part of Turkey except Constantinople. Mr. Knap is sent from Bitlis to Constantinople as a prisoner, and others are following. This is the religious freedom of Turkey! But I am convinced that if the present situation there undergoes some serious reforms, this country will be the most convenient part of Asia for religious improvement.

(To be Continued.)

BOOKS RECENTLY PLACED IN THE LIBRARY.

The American Anthropolgoist. Vols. 1-8.
 Adams, Civilization During the Middle Ages.
 Atkinson, Science of Nutrition.
 Bailey, Plant Breeding.
 Baudement, Les Races Bovines. 2 vols.
 Barrows, The English Sparrow.
 Bigelow, Florula Bostoniensis.
 Biddell, Heavy Horses.
 Brew, Light Horses.
 Baltet, L'Horticulture.
 Brewster, Bird Migration.
 Bankson, Slide-valve Diagrams.
 Brewster, Martyrs of Science.
 Cook, Corporation Problem.
 Cone & Gilder, Pen Portraits of Literary Women. 2 vols.
 Corson, The Voice and Spiritual Education.
 Candolle, Origin of Cultivated Plants.
 Curtis, Voice Building and Tone Placing.
 Dorfler, Botaniker Adresbuch.
 Dean, Fishes, Living and Fossil.
 Dybowski, Traite de Culture Potagere.
 Elliott, Introduction to the Algebra of Quantics.
 Emerson, Two Unpublished Essays.
 Edwards, Butterflies of North America. Vol. 1.
 Egleston, Arbor Day.
 Furness Edition of Shakespeare, The Tempest, Midsummer Night's Dream.
 Garnet, The Age of Dryden.
 Godwin, Out of the Past.
 Holman, Computation Rules and Logarithms.
 Hutchinson, Grasses.
 Knobel, Guide to Find the Names of Trees and Shrubs by their Leaves.
 Merrill, Electric Lighting Specifications.
 Nuttall, Ornithology Club. Bulletins, Vols. 1-8.
 Nocard, Animal Tuberculosis.
 Pierce, American Standard of Perfection.
 Pritzel, Thesaurus Literature Botanice.
 Records of the Australian Museum, 1 vol.
 Rose, Window and Parlor Gardening.
 Sargent, North American Silva, vol. 9.
 Stickney, The Railroad Problem.
 Stevens, Six Months at the World's Fair.
 Watson (Ian McLaren, pseud.), Days of Auld Lang Syne.
 Wilkinson, Memorials of the Minnesota Forest Fires.
 Wright, Industrial Evolution in the United States.

A LECTURE ON STEEL.

Friday evening, students and faculty listened to a very interesting lecture on steel, by Mr. J. C. Danziger, of Detroit. Being a specialist in this particular field, the lecturer was able to offer a multitude of facts and observations, and succeeded in pleasing those in whom the technical interest was uppermost, as well as those who listened for general information. An incomplete synopsis of his remarks follows:

After he had made a differentiation of the Bessemer, open-hearth and crucible steels, Mr. Danziger stated that open-hearth products are displacing Bessemer steels. A lower percentage of phosphorus can be attained by the open-hearth process, which largely accounts for the preference for that product in structural work.

A test of the endurance of steel is made by determining the length of time and number of revolutions before rupture, when the metal is shaped into a shaft and loaded, then set in rotation.

The order of importance of the elements mixed with iron in steel manufacture is first carbon, then manganese, phosphorus, nickel, chromium, tungsten, aluminum and copper. A peculiar manganese steel was noticed on whose surface no other steel tool has any effect, because of the hardness of that surface.

Segregation of elements in steel making was touched upon, also physical defects, blow-holes, flaws, and the "pipe" of castings. Working of the ingot into the shapes of commerce by hot and cold rolling and by forging was treated at some length, and instances and accidents were cited to enforce the principle that for best results, all processes of manufacture must be applied with skill and intelligence.

Tempering in water and oil was explained, and especially the tempering of armor plates under a spray of ice water.

A feature of the lecture was an exhibition of lantern views illustrating the casting of steel ingots, forgings of large dimensions, the shaft of the Ferris wheel, armor plates, and the shops of the Bethlehem Iron Works.

Mr. Danziger is a graduate of Stevens, '89, and is a member of the American Institute of Mining Engi-

neers. He was engineer of tests at the Bethlehem Iron Works for six years. He now represents them in Detroit, where he is established as a consulting mechanical engineer.

INGHAM COUNTY POMONA GRANGE.

For the meeting held with Felt's Grange on June 12 and 13, W. M. Hugh Blakeley in the chair, the program pertained mostly to education for farmers' children. The attendance was large, the program excellent, the meeting considered one of the best ever held. The address of welcome by E. H. Angell was responded to by Mr. Gunson, of M. A. C. Grange, and as usual was right to the point.

Mrs. Della Proctor of White Oak, formerly a teacher, now secretary of the county grange, spoke on "What the public has a right to expect of the schools from a patron's standpoint." Recitations were given by children from the Felt's school.

Hon. D. E. McClure, commissioner of schools in Oceana county, on Friday evening addressed a full house of eager listeners. W. T. Webb, master of Williamston Grange, spoke of the history of the school system of our State. E. A. Holden, '89, of Capital Grange, Lansing, after spending considerable time in the study of the township unit system, believed its adoption would be detrimental to the best interests of the district schools of the State. Mrs. Kate Everett, master of Capital Grange, read a paper on "The relation of school life to after life." Good music was furnished. Resolutions were passed favoring D. E. McClure for State Superintendent of Public Instruction.

ECLECTIC SOCIETY.

This society was organized by a number of students in 1877. Its rooms are located on the fourth floor of Williams Hall, east end. These rooms have recently undergone an extensive course of repair and are now in excellent condition.

Though the main object of this society is the perfection of literary culture in its members, musical and social development are not lost sight of, and occasional social and musical festivities intermingled with the regular work, tend to make the society a pleasant and flourishing one.

The meetings of the society are held every Saturday evening of the College year.

H. M. HOWE RESIGNS.

H. M. Howe, who has so efficiently discharged the clerical work in the president's office for the past three years, has resigned to accept a position with D. M. Ferry & Co., Detroit, and will leave for his new field of labor next Monday. For the purpose of getting acquainted with the business, he will travel for the company a few weeks in Tennessee, after which he will go into the Detroit office. Mr. Howe has served the College faithfully since coming here, and his many friends, while they regret his departure, unite in wishing him success in the better position to which he goes.

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1. "In dollars and cents. All testimony of statistics agrees, it showing that educated laborers of all ranks have better work and better wages than the uneducated.

2. "In influence and position. Careful estimates make it certain that the chances of promotion to places of trust and power among men are almost two hundred times as great to an educated man as to the uneducated man.

3. "In usefulness. The bulk of good work in the world—discovery, invention, government, philanthropy, and religion—is brought about by those who learn to think by study.

4. "In enjoyment. Our pleasures grow out of what we are ourselves more than from surroundings. A well-trained man sees, hears, and handles a great deal more of the world than an untrained one. All things do him more good, not so much because he owns them as because he understands them. He always has good things to think about."—*The Industrialist, Kansas.*

Among the graduates from the U. of M. this year were H. C. Buell, with '93 m, from the mechanical course, and W. E. Davis, '89, who secured an M. S. in physics.

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ELGIN MIFFLIN.

The M. A. C. Record.

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CHEAP books are a great temptation to the average reader, but they are sometimes a delusion and a snare. This the class in masterpieces discovered when, having purchased what purported to be George Eliot's *Silas Marner*, published by "The William L. Allison Company," of New York, they found that (to mention merely one instance) between two utterly disconnected yet consecutive paragraphs, a whole page and more had been omitted. This was not due to an accident of binding, but was a deliberate fraud characteristic of the whole edition. There are many such fraudulent books afloat on the market, and it is needful to exercise great care or one may be led into serious error. Furiously garbled editions, especially of the earlier classic writers, are everywhere offered for sale, and the only way to detect them is to compare them paragraph by paragraph with some standard edition.

* * *

THE M. A. C. commencement exercises for 1896 will take place Aug. 9-14, and will be of unusual interest. We earnestly hope that our friends and the public generally will give us the honor of their presence. The public interest in our work should manifest itself, not merely by cold and sometimes hostile criticism at long range, but also by personal inspection, by the kindly smile and the hearty grasp of the hand. And when can this interchange of opinion, this cultivation of mutual knowledge and sympathy, better take place than at our commencement season? Then the campus, the gardens, the farm will put on their best appearance. The result of the year's work will not be entirely in the future, but will already have been in large part realized. The methods employed and the fruitage ensuing will both lie open to the practical eye. Our buildings inside and out will look their best. But we will not leave our guests to wander around in a silent wilderness of fields and groves and gloomy cloisters; at this time campus and hall will be vocal with song and laughter and college yell. You will see old *alma mater's* youngest progeny say their good-bye to the home-folks and make their bow to the great world. You will see her older sons come trooping back to spend an hour amid familiar scenes, to dream again the sunlit dreams of earlier days, and take fresh courage for the monotonous tasks that sometimes wound and gall and burn. You will see the silver-haired father and mother with faces that tell of a rare inner joy, as they lean with confident pride upon the arm of the stalwart youth, whom their labor and sacrifice has fitted out for life's conflict with better armor than their own ruder youth even dreamed of. Really, a college commencement is an inspiring scene. It is for us a fountain of youth, reviving the hopes and ambitions of our own youth, smoothing out the cockled integuments of the heart, quickening its more generous pulsations, and arousing it once more to higher aspirations and broader human sympathy.

If you have not already done so, begin now to plan for a visit to the M. A. C. at commencement time. Whether you have acquaintances here or not we will try to make you feel that we are friends of thirty-nine years' standing. If you have an acquaintance or a son among our students, by all means make it a point to visit him at that time. Give him the proud pleasure of introducing you to the friends that are in a peculiar sense his own, and see for yourself the influences that are, or have been, at work upon him. The order of the exercises will be published later. They will begin with a baccalaureate sermon from an eloquent minister of this state on Sunday morning, August 9, and will terminate on Friday, August 14 with the delivery of diplomas to the graduating class. Among many other attractions during the week will be the commencement address of William Kent of New York, editor of the *Engineering News*.

OLD M. A. C. MEN AS VISITORS.

DR. W. J. BEAL.

Occasionally one returns to the College, sometimes after a long absence. Unless he has often been here since he entered in 1857, at the opening of the institution, or, we will say, ten years after that date, he seems dazed at the great changes that have been wrought by time and hard labor. In moving about the campus with some one who is better acquainted, he is especially interested in finding some of the old landmarks, which he recognizes. We enumerate a few. There are the four houses built of red brick which were made on the campus just west of the ball ground. These houses are now occupied by Doctors Kedzie, Beal, and Edwards, and Prof. Weil, and have all been considerably enlarged and otherwise changed. Over yonder is College Hall, with the roof somewhat changed; we used to call it the College, as all the classes met there, besides, it contained the library and Museum.

"The chapel is in the same room, only the rostrum is now on the south side instead of on the north." Some may not know that the pulpit was designed by Dr. M. Miles, then professor of agriculture, and the top-piece, made of walnut, was planned and put together by George T. Fairchild, then professor of history and English literature and for a long time past the successful president of Kansas Agricultural College. The Chemical Laboratory used to be in the north end of College Hall in the room now used by Prof. Vedder as a class room.

The student of '57 to '70 is conducted to the spot where stood the Old Boarding Hall, familiarly called "Saints' Rest." This was a plain three-story building and was situated about six rods east and a little south of where Williams Hall now stands. While undergoing repairs it was burned in the vacation of 1876. Wells Hall over to the southwest, was soon after erected to take its place. You can still see traces of the shape and place of the walls, where the students of today play lawn tennis or catch ball, oblivious of the fact that they are treading on sacred ground.

It has been proposed to place a plain monument, marking the northwest corner of "Saint's Rest." Farther to the southeast our visitor recognizes, back of the Veterinary Laboratory, the old brick horse barn, long since used for a carpenter shop. "The old barn with its small window-lights, is still where it used to stand; the cattle barn to the east must have been enlarged or rebuilt, and the silo-attachment on the north was then a thing none of us ever dreamed of.

"Is that the old Farm House?" pointing to the cottage now occupied by Mr. Fulton and wife. "It must be; it was moved to its present place from near the road east of the apple orchard."

At one time the barn was overrun with rats. Dr. Miles about 1870, put a stop to all this by thoroughly grouting, and covering the stables with tarred plank. Ventilating shafts, also convenient for throwing down hay and straw, were put in by Dr. Miles. The pigery was planned by Dr. Miles, and erected mostly by the students, on heavy grout, some of which can yet be seen just east of Machinery Hall. The horse barn and sheep barn were also erected by Dr. Miles. Observe the uniformity in the tops of the ventilators of these buildings. The old barn for the use of the Horticultural Department stood between College Hall and the present Machinery Hall, much nearer the present location of the latter building. The roof was raised, the building otherwise modified, moved to near the present location of the building last named, and a tool shed and seed room added. About 1873, the whole was moved to its present location, east of the Farm house, where it has again been enlarged.

Williams Hall was completed in 1870, and the dwellings now occupied by President Snyder and Profs. Vedder and Barrows, in 1873.

If our visitor is one of the really old boys, he is very likely to wander back to the time when the campus was nearly all covered by forest trees. If he seem to boast about his achievements in cutting the timber, burning the log heaps, pulling stumps, digging ditches, there is no one now here who can dispute him.

"There was a tamarack swamp," pointing north from the Horticultural Laboratory. "I wonder if those trees are a part of the same old swamp, where we made a pile of roots nearly as large as the Botanical Laboratory?" "No, the tamaracks now on the spot have grown rapidly, since Prof. Bailly planted them, not many years ago." There was a greenhouse near the present sites of Abbot Hall and the Armory; if you are anxious to get the details, you are referred to

Profs. A. N. Prentiss, '61, or W. W. Tracy, '67. In the fall of 1873, it was torn down by Dr. Beal, who moved the plants into the new structure, which stood for 16 years, where the present house is now to be found.

If you will go to the maple trees near the present drive south of the houses occupied by Doctors Kedzie and Edwards and look east or west, you will see there considerable of what was a long straight row of trees, which in early days marked the north side of the public highway. Some of the trees were cut out in 1873, that the straight row should not be so apparent.

Botanical Dept.

THE FARMER OF 1900.

We shall then have the "new farmer." His portrait has not yet appeared in the illustrated press, but we fancy that when it does he will not be swinging a scythe, riding a hay-rake, or holding a cow by the horns while the lawyer and middleman fill their pails with milk. Oh, no! The artist will get a snap shot at the new farmer while busy setting nitrogen traps, cultivating bacteria or hunting for nodules, armed with a compound microscope, if need be, or perhaps his pencil may sketch him on a tour a-wheel with beaker, glass rod, and bundle of blue litmus paper looking for acidity in his soil. Leguminosæ will be his watch-word, and his conversations will be of lime and clover, chemicals and thorough cultivation, nutrients, rations, and calories, butter-fat, starters and ripeners, the bacteria of the dairy, the field and the silo, insecticides, fungicides, smuts, scabs, blights, rots, and the like. Dr. H. W. Wiley, chemist for the department of agriculture, aptly points the way in the following poem:

And the fellers from the College of Agriculture they,
Wuz thick az lightning bugs in June, and had a heap
to say.

There wuz one they called a chemist, and he kind a
seemed to know

All that wuz in the air above and in the ground below.
He said we needed nitergin, and showed how the stuff
Wuz awful high and skeerce for crops, while in the
air enuff

Wuz found to make us 'tarnal rich if we could only git
Some cheap and sartin projek of hitchin' on to it.
He said that peas and clover and other crops like
them

Wuz just the stuff to do it and store it in the stem.
And the yeerth is full of critters that eat this stuff,
you see,

And change it in a twinkle to ammoniee.
Since I come back from the institoot, it really appears,
Potash, nitrate, fosferous wuz ringin' in my ears,
And William, it seems perty tuff that you and Jim
and me

Hev went along so ign'rant of what we daily see.
Jist hauled manure out on the pints and plowed and
hoed and mowed

And worked so hard for little pay, and never, never
knowed

Thet clover, peas, and beans, and sich as the chemist
mentioned there.

Hev the highly useful knack of suckin' niter from the
air.

You may think the above all caricature, but rest assured that there is much more than a substratum of truth in the picture, and the new farmer in his pursuit of agriculture must be familiar with every new "wrinkle," and an adept in strategy if he has any serious intention of catching her. He must not carelessly ignore either old or new methods, but carefully study both, holding fast to those which stand the test of science and practice.—CHAS. O. FLAGG, director Rhode Island Agricultural Experiment Station, in *The Industrialist*, Kansas.

"Michigan, in common with many other states here represented, has not been exempt from the foolish waste of energy in the improvement of her highways. We have, in common with all the northwest, one difficulty to surmount in this movement. Our surveys are rectangular, and our highways laid out under these surveys run along section lines without regard to the proper locality for a road, and public sentiment has made it necessary to place the house and barn and curtilages along these section lines. The man who establishes his home in the center of his farm is the exception. The roads that are constructed along the best lines for roads—to avoid hills and morasses and other obstacles to good roads—are few."—Ex-President EDWIN WILLITS, before the national road convention.

THE REASON WHY

YOU WEIGH NO MORE AFTER YOU EAT THAN YOU DID BEFORE.

"Many of us have laughed at that absurd conceit in one of Hoyt's production—'A Texas Steer,' we believe—where, in the restaurant scene, customers are put on the scale immediately before and after eating, and are charged in proportion to the extra weight they have taken on. The idea for a comedy is good, but restaurant keepers who adopt it as a practical means of gauging their charges would come out at the small end of the horn.

"It is a well-known fact, though somewhat anomalous, that a person weighs no more after eating a hearty meal than he did before. A little reflection will readily explain this apparent mystery. During the process of mastication, deglutition, etc., certain muscles are brought into active play, and the exercise of any muscle necessitates a temporary waste of its tissues, and a certain amount of carbon is eliminated and passed off during the course of the meal.

"This loss, however, is trifling, as compared with that of respiration and perspiration, both of which are increased during the various operations of making a meal. The length of time one may take to consume a pound of food makes no little difference to these losses, for if eaten leisurely, there is but slight increase of respiration or perspiration, whereas, if it is hurried through, both are abnormally accelerated. Hence, by the time the pound is eaten, the consumer has lost appreciably in moisture or carbonic acid."

This gag (to use a slang term) comes up smiling in some form or other in the papers every few years. In reality it is more than a hundred years old, and probably originated with George III, who delighted to poke fun at the solemn doctors who composed the Philosophical Society. The king was wont to propound questions for their discussion and for enlightening the public. Among other questions was this: "When a live fish is placed in a tub of water, why does the tub (and contents) weigh no more than it did before the fish was placed in the water?" The doctors discussed long and learnedly: "If the fish lies on the bottom of the tub the weight would be increased;" or "If the fish floated on the top, the pressure of the fish on the top must increase the weight;" "but if the fish was in suspension or swimming in the water, the pressure upward or downward would be equal, and hence the tub and contents must weigh the same after the fish was first put in as before, and so the king's question is answered." But one Doubting Thomas LL. D. raised the question, "Is it true that the tub of water and fish will weigh no more than the tub of water alone?" "Ah!" laughed the king, "know your facts before you try to explain them!"

Many years ago the village doctor, the merchant, the squire and the farmer were debating why a horse would weigh no more after drinking a pail of water. The doctor scouted the idea that matter was destroyed by being swallowed and weight was an essential quality of matter. "But," replied Merchant Proctor, "the air inside the horse is very heavy—as heavy as water—and in drinking a pail of water the same volume of air is displaced, and hence no change of weight." "There is no use of talking when we can know," said Farmer Fairfield; "there's my horse that wants a drink, let's try him." "And here's my hay scales," said Squire Martin, "and we can try it now." The horse was weighed, watered, and again weighed, with an increase of 25 pounds.

I read the opening quotation, "The reason why," just before supper, and as I was hungry for truth and my supper I thought it was a good time to see if anything peculiar in this respect belonged to the human organism. I weighed myself before supper, 187½ pounds; took a hearty meal and again weighed myself, 189½ pounds; gain two pounds and a fact.

Moral: Be sure of your facts before you explain them.

Chemical Department.

R. C. K.

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CHACE NEWMAN,
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 Herbert W. Mumford, B. S.....Assistant in Agriculture.
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Y. M. C. A.—Holds regular meetings every Thursday
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Natural History Society—Regular meeting second
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 L. R. Love, President. J. W. Riggerink, Secretary.

Botanical Club—Meets first and third Friday of each
 month in Botanical Laboratory at 7:30. C. F. Wheeler
 President. B. Barlow, Secretary.

Dante Club—Meets every Wednesday evening at 7:30
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 B. Noble, President.

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 Chittenden, Secretary.

Delta Tau Delta Fraternity—Meets Friday evenings
 in the chapter rooms on fourth floor of Williams Hall,
 at 7:30. A. C. Krentel, President. J. M. Barnay,
 Secretary.

Eclectic Society—Meets on fourth floor of Williams
 Hall every Saturday at 7:30 P. M. W. R. Vanderhoof,
 President. W. Newman, Secretary.

Feronian Society—Meets every Friday afternoon at
 2:30 in U. L. S. Hall. Miss Bertha Baker, President.
 Miss Ellen Vaughn, Secretary.

Hesperian Society—Meetings held every Saturday
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Olympic Society—Meets on fourth floor of Williams
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Phi Della Theta Fraternity—Meets on Friday even-
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NEWS FROM GRADUATES AND STUDENTS.

Born to Mr. and Mrs. F. R. Poss, '95, a daughter, June (?), 1896.

Jesse Tarbell, with '97, visited at the College the early part of last week.

George B. Craw, with '95 m, is running a successful grocery store at Lowell, Mich.

Grant Morse, with '75, is a prominent candidate for probate judge in Ionia county.

Jason E. Hammond, '86, delivered the commencement address at Grand Ledge last week.

E. M. Kanter, with '96 m, is now junior member of the firm of Crouse & Co., mechanics' supply house, Detroit.

Prof. A. T. Stevens, '93, is spending his summer vacation at M. A. C. and vicinity. He will do some work at the College during the summer.

L. H. Baker, '93, is spending the summer at his home in Lansing. He will do some work in Latin and Zoology, besides a considerable tutoring.

G. E. Hancorne ['90], a former Michigander, now in Iowa, reports an increase in salary of \$200. Happy Hawkeye Hancorne.—*The Moderator*.

E. J. Heck, '95, will remain at Grandville next year with an increased salary. He will start soon on a wheel trip through Indiana, Illinois and Kentucky.

W. C. Bagley, '95, called on friends at the College Saturday. He was on his way to Chicago, where he will take up work at the Chicago University at once.

H. W. Tracy, '94, will again go on the road for D. M. Ferry & Co., within a week. His territory includes Maryland, New Jersey, and several other eastern states.

George J. Jenks, '89, of Sand Beach, Mich., among other duties, is secretary of Harbor Beach Association, which he believes is a first class place for recruiting.

W. J. Cummings, with '97 m, has located as architect and builder at Munising, U. P., Mich. He considers it a hustling place, in one of the finest natural harbors in the world, only a few miles from the famous pictured rocks.

C. E. St. John, '87, for a time instructor in physics at the State Normal, and then for two years a student at Heidelberg University, Germany, has recently been appointed as professor in physics at the University of Michigan.

We notice in the prospectus of the Long Beach Chautauqua Assembly, that Prof. A. J. Cook, '62, will lecture on entomology and physiology. Long Beach is near Pasadena, Cal. The assembly opens July 14 and closes July 24.

The high school pupils of Saranac recently surprised their principal, R. S. Campbell, '94, by taking possession of his home one evening during his absence. No depredations were committed aside from "penning" him upon his return, according to the orthodox gold standard.

G. L. Teller, '88, chemist of the experiment station, Fayetteville, Arkansas, writes: "I wish prosperity to M. A. C. as ever. Very likely you are all busy with summer students. The teachers here are all on a vacation, but we, poor fellows, in the Exp. Station, are trying to earn our bread by the sweat of our brows."

J. A. White [with '92], formerly principal of schools at Jacobsville, but for the past year in charge of the commercial department of the Burlington, Ia., high school, is re-engaged for next year at an advance of \$160 in salary. His department is fitted out with an elegant equipment of business college furniture and other material for carrying on the work, in consequence of which J. A. is happy.—*The Moderator*.

David Anderson, Jr., '89, is a member of the law firm of Anderson & Chase, Paw Paw, Mich. We clip the following interesting item regarding him from the South Haven Messenger: "Married, at the home of the bride's parents, at Berlamont, Wednesday, June 10, by A. H. Rose, David Anderson, Jr., of Paw Paw, and Miss Hattie Summey. Mrs. D. M. Cooley and daughter Era, respectively aunt and cousin of the bride, and Miss Acca Carrier, niece of the groom, attended from this place. The Messenger voices the best wishes of itself and a host of friends."

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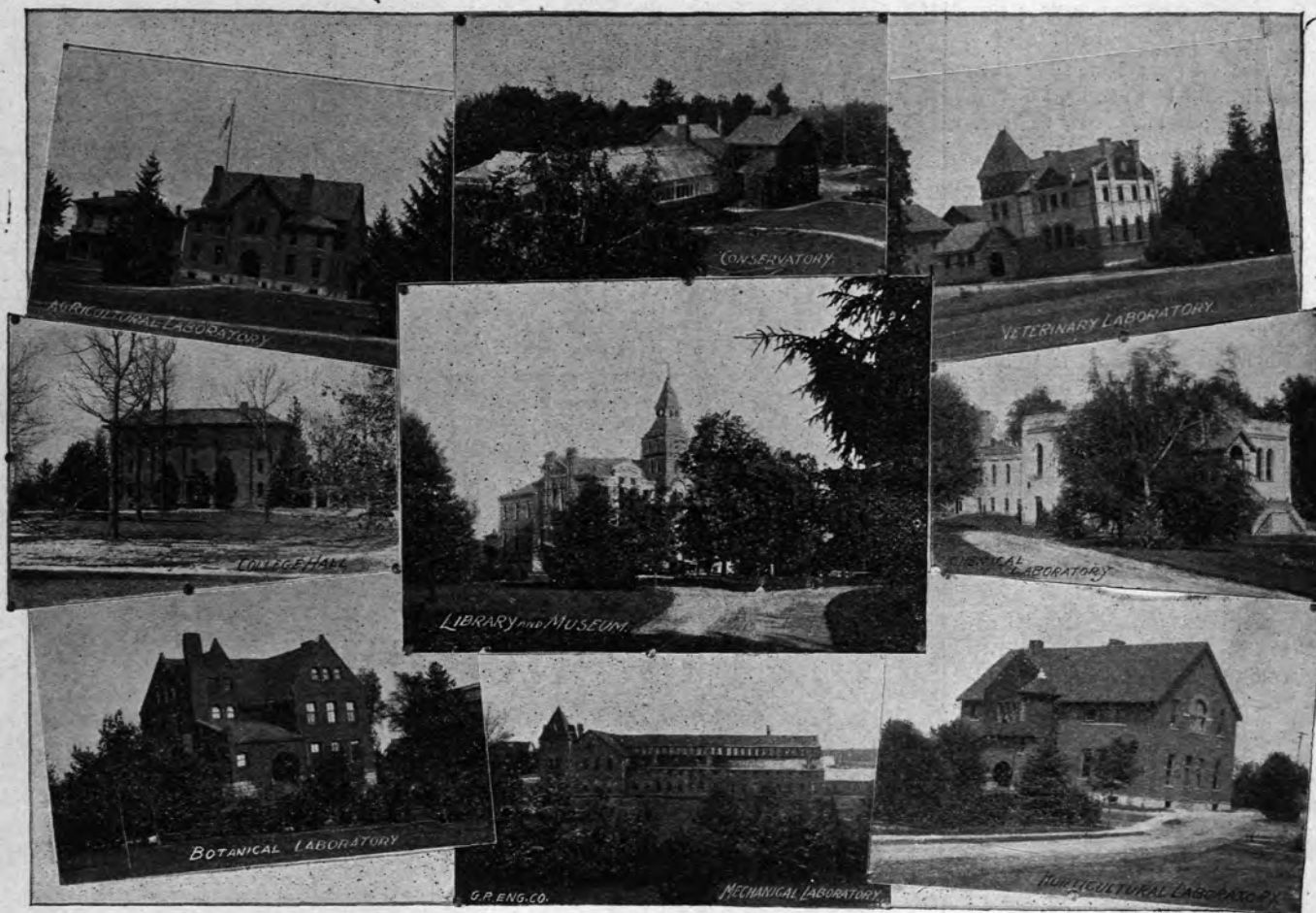
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