

The M. A. C. Record.

VOLUME I.

LANSING, MICHIGAN, TUESDAY, JULY 28, 1896.

NUMBER 28

ANTS EXPERT HERDSMEN.

G. C. DAVIS.

A note has found its way to my desk asking the *why* of a little incident noticed at the greenhouse a few days ago. Mr. Gunson, the florist, in watering the plants, uses a spray of considerable force to wash off as many of the insects as possible. Many mealy bugs, *Dactylopius citri* Risso, were forced from a plant of the *Bigoniaceae* in this way and washed some distance from the plants. The interesting feature was in observing some small ants go almost immediately in search of the little helpless mealy bugs and, as soon as found, take them in their jaws, carry them back and place them on the plants again.

The explanation of this peculiar act on the part of the ant is easy when we know that she derives a large share of her food from these and similar little creatures. We have only to watch a colony of plant lice, *Aphidae*, a few moments to see how the ants are fed. As the aphid is approached, the ant reaches out her antennae and gently strokes the honey tubes of the aphid until it begins secreting a sweet liquid from these tubes. The ant then quietly drinks this secretion as long as it flows and, if not satisfied by the one, will go to others in succession until enough food is obtained. The mealy bug feeds the ant in the same manner, though the secretion is not as great as in the aphid. The young mealy bugs secrete more than the older ones, and for this reason the ants are more mindful of them.

The ants take good care of the little animals that supply so much of their food. In studying clover insects a few years ago, ants were seen carrying aphides from plants that were dying from the work of the root borer to fresh living plants. In the case of the corn root aphid, we know that the attendant ants carry it to their nests in the fall, care for it through the winter and return it to fresh pastures of corn the following spring. Surely the busy little ant is a wise creature, notwithstanding Mark Twain to the contrary.

Experiment Station.

CHAPEL TALKS.

The chapel exercises of last Monday morning were greatly enriched by the short addresses made to the students by President Fairchild of Kansas Agricultural College, and Mrs. Kedzie, Professor of Domestic Science and Hygiene in the same institution. In reply to President Snyder's felicitous remark in introducing the speakers to the students, that "the chief causes of the superior standing of the Kansas Agricultural College were now before them," Mrs. Kedzie responded that Kansas was much indebted to Michigan for the high standing of her college, as several members of her faculty were graduates of this place, while her president was formerly a teacher here. The Kansas Agricultural College differed from that of Michigan in but one important respect, that of having a course of instruction for women; a difference soon happily, to be removed. "It is often said that college days are one's best days; this ought not to be," said the speaker; "if we make the best use of today, it ought to prepare the way for a better tomorrow."

President Fairchild observed that it seemed like coming home to return to the College. Thirteen years of his life had been spent at this place, much the most important of that life he considered them. In going about the grounds old scenes were continually revived in his mind, but the one place not changed by all the years that had passed, was the strip of lawn directly west of College Hall.

President Fairchild referred also to the close resemblance between the College in Kansas and that in Michigan. The new course for women promised nothing, he thought, but good for the future—"it will be indeed the better half of the College."

Tuesday morning Prof. F. B. Mumford, '91, of the Missouri Agricultural College, and Dr. N. S. Mayo, '88, of the Kansas Agricultural College, occupied chairs with the faculty during chapel exercises, and responded to President Snyder's invitation to address the students. Prof. Mumford, while he admired the spirit of conservatism at M. A. C., a spirit which has

been the safety of the institution, was nevertheless pleased to note the breaking of the shell of conservatism on the one side, so as to admit ladies. He commended the West to the young men, because of its ready recognition of ability. There, not age, nor density of beard, but ability to work, is the standard by which a man is measured.

Dr. Mayo spoke with an especial feeling of satisfaction, because of the many changes for the better in our College, and in himself since he left. "If anyone had told me ten years ago, when I sat in these seats, a little black-and-tan sophomore, that I should now be addressing you under these circumstances, it would have been the most disastrous thing that could have happened to me." He cautioned students against too strong a manifestation of independence in their relations to the College; and urged them, rather, to push together for the advancement of the institution.



PROFESSOR EDITH F. McDERMOTT.

THE RECORD is indebted to the *Heliotstat* Board for the above cut of Miss Edith F. McDermott, who has just been elected to the position of Professor of Domestic Economy and Household Science at the Michigan Agricultural College.

Miss Edith F. McDermott, a native of Meadville, Pa., received her literary training in the high school of that city, and in Allegheny College. She then entered Drexel Institute, Philadelphia, and took up the work along the lines of Domestic Economy and Household Science. After completing this work and graduating with honors, she took charge of the cooking and Domestic Science Department of a large industrial school. Her work in this position has been of a very high order and has brought her to the notice of many prominent educators. She is a woman of thorough scholarship and training; has more than an ordinary amount of tact and general good sense. If the same success attends her efforts in this College that has characterized all her past work, the success of the new department is fully assured.

ORCHARD GRASS, COCK'S FOOT, *DACTYLIS GLOMERATA*.

THE FOLLOWING IS AN ABSTRACT OF A GRADUATING THESIS BY C. A. JEWELL.

Orchard grass is a native of Europe, and is now found in northern Africa, India, and North America. It has been in cultivation in England since 1763, and is considered of great value. In this country it has been more or less tried in Virginia, Kentucky, Tennessee, New York, Massachusetts, and many of the western states. It grows in bunches to the height of two to five feet; it is a perennial, producing numerous long, broad leaves. The panicle is easily distinguished by its crowded and nearly sessile spikelets arranged in a branching one-sided panicle, which when inverted and pressed out on a flat surface presents the idea of a bird's

foot. Because it thrives so well in shady places it has been called Orchard grass.

The fibrous roots often penetrate to a depth of three feet or more. The plant when it has a good chance is very vigorous. The culms are stout, erect, rather rough and not very numerous—perhaps twenty to a bunch.

(Numerous drawings and herbarium specimens accompany the text.—Ed.)

The drawings show how stout, erect branches grow within the closed sheaths near the ground. These branches are from half an inch to two inches long, and in turn push up other branches; in this way the bunch seems to gradually creep up above the ground. Some of the short branches bear no spikelets, but numerous leaves, and are known as sterile shoots.

The leaves spring from the superficial part of the nodes or joints, and are arranged alternately in two vertical ranks or rows. The lower portion is the sheath and surrounds the stem completely. At the upper part of the sheath is a little tongue, known as the ligule, from which extends the blade which curves away from the stem.

A microscopic examination shows the leaf to have several vertical rows of epidermal cells, penetrating quite deeply into the leaf on the upper side just over the midrib. These peculiar cells are known as bulliform or hygroscopic cells and are very sensitive to alterations of dry or moist air. The contraction of these cells when dry causes the two sides of the leaf to close up against each other, much as the two halves of a long, narrow book would close up. This closing of the leaves in dry time diminishes the leaf surface that is exposed nearly one-half. The minute structure of the roots and leaves were studied. Some experiments were made by setting long tile over bunches of the grass. The experiment showed that the leaves elongate by a growth just at the base of the blades. The youngest part of the blade is the lower part; the older is the upper part. The leaves are thus admirably adapted for pastures. When the tips of the leaves are eaten off by cattle, they usually continue to elongate by multiplication of cells, as has been mentioned, at the base of the blade.

Drawings show the spikelets, the two empty glumes, the two to five florets, the shape and structure of the small grain. The lodicules are delicate organs, low down in the floret, and when the flower is ready to open the turgescence of these two bodies, spreads the glumes, exposing the three stamens and the two delicate feathery stigmas. Soon after flowering, the lodicules wither, never to expand again.

Young plants were grown from the seed in a damp place, pressed, dried, and pasted to a sheet of paper. In ten days the plant was two and a half inches high; in twenty days, larger, and four inches high; in forty days, fifteen inches high.

Orchard grass produces seed freely, usually blossoming but once during the year, and that from two to four weeks in advance of Timothy. A bushel in the chaff weighs from twelve to fifteen pounds, and retails at about one dollar and a half per bushel. To save the seed, cut the grass when mature, bind and set the bundles two by two in shocks where they stand till thoroughly dry and the tops become brittle. An acre yields from five to fifteen or more bushels of seed.

Orchard grass likes a deep, rich loam, and will stand dry weather very well, though it likes moist weather much better. A top dressing of manure is of great value.

This grass is seldom troubled by disease; some times by ergot, and to a slight extent by rust.

A number of chemists from 1826 to the present time have analyzed Orchard grass, all agreeing that when in good condition it is very nutritious when compared with other grasses in cultivation. The newly grown leaves contain one-half more nutrition than the older ones.

In England, and in some portions of this country, where thoroughly tested, the use for pasture is of most importance. When young, all kinds of grazing animals are fond of it. The grass comes forward very early in the spring and grows till late in the fall, furnishing many fresh bites. It endures dry weather well, and will endure much tramping by cattle.

For good hay, Orchard grass must be cut as soon as

in flower, or better if cut a little sooner, otherwise the stems become woody and the hay will be of inferior quality. It flowers as early as early red clover. In favorable seasons two or three crops may be mown in one year. It is oftener commended for its affording fine pastures than for its supply of hay.

Very remarkable and very valuable varieties and races of corn and wheat have been secured by the process of selection. In a similar manner selections of Orchard grass have been made. Six years ago five selections of bunches were made at the College, and they have grown ever since in the grass garden. Herbarium specimens are here exhibited, with dates and measurements:

One plant showed flowers on May 4, another not till May 13. One plant had leaves $5\frac{1}{2}$ millimetres wide, another 9 m.m. wide. Some had rather stiff, erect leaves, while others had weaker leaves. There was much difference in the shades of color. The seeds from these plants were saved and sown by Mr. Crozier, and to a considerable degree the seedlings came quite true to the parent plants.

There are many good reasons why farmers would do well to add to their list of grasses and other forage plants, and not continue as in the past, to sow only timothy and clover. We have no hesitation in claiming a high place for Orchard grass as one suitable to many farms of Michigan.

Botanical Department.

AT THE COLLEGE.

The base ball team elected C. H. Adams captain last Wednesday.

Instructor Pashby is entertaining his sister, Miss Alice Pashby, of Toledo.

Rainfall at the College for July, 6.68 inches. Last Sunday 3.48 inches fell.

Prof. A. B. Peebles, '77, left for Storrs, Conn., Saturday evening, taking with him a horse—a near relative to Maud S.

Since the beginning of the experiment by Prof. Peebles to learn the cost of board, the refuse appears to have diminished.

Columbian society entertained their lady friends last Friday evening. A very pleasant time is reported by those present.

The family of Dr. Grange have returned from a visit of several months in Canada to their home on Seymour street, Lansing.

Miss Nellie Mayo is the guest of Miss Jennie Buell, in Lansing. She makes frequent calls at M. A. C., where she has many friends.

The roof hat been removed from the wing of Abbot Hall and workmen are putting up the second story—the model kitchen for girls.

The Hesperian Society entertained their lady friends last Friday evening. After a potpourri program they indulged in dancing until 11 o'clock.

At the time of the Odd Fellows' picnic a girl's plaid coat was left on a settee near the greenhouse, which the owner can have by calling on Mrs. Gunson.

The senior class, in surveying, took midnight observations on Polaris two nights last week, to determine the true meridian and the magnetic declination.

The King's Daughters meet with Mrs. Wiel a week from tomorrow. Those who forgot their pound at the last meeting, please send it to Mrs. Wiel by Wednesday of this week.

On wet days and at odd times, the teams of the Farm Department are kept busy scraping off the bank and covering stone and brush in place of the wash-out, south of the dam.

D. B. Baldwin, the engineer who succeeds E. A. Edgerton, moved his family and household goods into the residence near the boiler house last Monday. He anticipates a good deal of hard work during the year.

The last number of the *Farmer's Advocate*, London, Ont., contains nice electrotypes of the graduating class of the Agricultural College at Guelph, Ont. A word to our seniors: You furnish the cuts, THE RECORD will do the rest.

Now that the Street Railway Company and the city council have settled all differences on the paving question, it is hoped and believed that we may soon note the extension of the College line to a convenient terminal point on the campus.

The Misses Wheeler gave a delightful entertainment to about twenty of their friends last Friday evening. The features of the evening were the "Side talks with

girls." Misses Charlotte and Rebecca McCallum, Lu Baker, and Mr. L. H. Baker were out from the city.

J. T. Stimson ('90, of Iowa Agricultural College), Fayetteville, Arkansas, visited the College last week. He is Horticulturist of the Experiment Station. He says of Prof. G. L. Tetter, '88, the chemist: "You can't say anything to good of him. Everyone likes him. He is thoroughly competent and reliable."

For several weeks plumbers have been at work in Williams and Wells Halls. When they have finished, it is expected that the sanitation of these dormitories will be complete and perfect. In connection with the plumbing, a sewer is being constructed from the west side of Williams Hall to the main sewer near the Physical Laboratory.

The college is much indebted to the boy choir of the Lansing Episcopal Church for the excellent music given by them in the chapel services Sunday. The sermon presented by Mr. Osborne was addressed particularly to the students of the College, and supplemented by the impressive service of the Episcopal church, made an enjoyable contrast to the ordinarily more simple exercises.

In No. 3 a plot of rye was seeded to clover last spring. It has been cut at three different times to illustrate the influence of early cutting of the nurse crop on the growth of the clover. The results are very marked. The season has been favorable, which lessens the difference between the various cuttings, but still the clover is much larger, more vigorous and promising, where the rye was earliest cut.

G. E. Hancorne, '90, when he began thesis work for his master degree here a few weeks ago, complained a little of a pain in his side. This gradually grew worse until last Tuesday, when he was obliged to take to his bed. Dr. Ranney was called and diagnosed his case as appendicitis. Sunday an operation was performed, and at present Mr. Hancorne seems to be resting easily. His father is with him and his wife is expected tomorrow.

Dr. and Mrs. Beal entertained the seniors and about twenty young ladies last Thursday evening. The rooms were very prettily decorated with flowers—verbenas and yellow day-lilies with maiden hair ferns, cardinal flowers with periwinkle, tiger lilies with ostrich ferns, and roses with their own foliage. Miss Nellie Mayo, of Battle Creek, was present, and delivered several very interesting and pleasing recitations. Partridge brothers and Eastman furnished music.

The drive through the College farm has heretofore ended on the farther side of the Grand Trunk railroad. It is now being graded and gravelled as far as the D., L. & N., and will probably be extended before fall to the south line of the farm. The wagon track is laid out with slight grades and it is the intention of the farm department to demonstrate a system of construction and maintenance of country roads over ground originally rough and uneven both as to grades and road material.

R. S. Baker, '89, arrived at the College Saturday morning. In the afternoon he and Mrs. Baker, '90, together with Mr. and Mrs. A. D. Baker, '89, Misses Lu Baker and Lucy Davis, and Messrs. L. H. Baker, '93, and D. J. Crosby '93, took a bicycle ride to the "red bridge," near the former home of J. H. F. Mullet, '89, where they feasted on wild blackberries and numerous civilized edibles. Mr. and Mrs. R. S. Baker leave today for St. Croix Falls, Wis., to spend a vacation of five weeks.

A graduate of this College, now living in this state, writes: "I want quite a number of gardeners, florists, nurserymen and cultivators of the soil generally, to help develop a tract of land which I have, just inside the city limits. If you will suggest any way of reaching the students at the College, I shall deem it a favor, and if you will give me the names of any students there who want to go into business this year, I will write them personally. There is an especially good opening for an energetic young man with a little money who understands greenhouse work or the nursery business, who will take charge of a cemetery in addition to raising plants and flowers."

R. M. Kellogg, of Three Rivers (formerly of Ionia), the well-known fruit grower, dealer in small fruit plants, and lecturer at institutes, visited the College on Monday. or five or six years Mr. Kellogg has spent one or more days here, looking over the small fruit plantations and studying the characteristics of the new varieties in order to post himself upon their merits. Upon his new farm in Three Rivers he has just put in an irrigating plant with which he applies the water to his berry plants by the method employed in the College garden. Mr. Kellogg's sales of strawberry plants alone for the past season amounted to about

five million, and he expects to greatly increase the output for the coming year.

As noted in this column recently, there are some bicyclists who persist in wheeling on the cinder walk at the entrance to the grounds, to the peril of pedestrians. Several narrow escapes from injury have been reported and at least one serious accident. Last Wednesday a wheelman coasting down this walk, without ringing a bell or giving other warning, struck and threw to the ground a lady, who had heard no signal of his approach. As a result, the authorities are considering the enforcement of a penalty for wheeling on the walk or the alternative of making it impassable for bicycles. Either of these seems too much of a concession to the bicycle beast, who deserves rather a ducking or a whipping.

The game of ball last Saturday, M. A. C. vs. Holt, was watched with interest by base ball men of the college, because every player except the pitcher played a new position. The visitors were weak in team work and fumbled the grounders. The battery work of Warren and Adams was excellent. Warren held the visitors down to 6 hits and struck out 14 men. Score:

	1	2	3	4	5	6	7	8	9	R	H	E
M. A. C.....	1	6	0	3	1	1	0	1	*	13	11	3
Holt.....	0	0	0	0	1	0	3	1	0	5	6	10

Batteries—M. A. C., Warren and Adams; Holt, Elliot, Manley and Gunn. Base on balls off Warren 4, off Elliott 5, off Manley 3. Struck out by Warren 14, by Elliot 1, by Manley 5. Double plays, Holt, Gunn to Manley to Pratt.

Geo. T. Fairchild, LL. D., president of the State Agricultural College, Manhattan, Kansas, visited friends at M. A. C. for several days, beginning on the 19th instant. He graduated at Oberlin College, in the Literary department and in the Theological department. He became instructor in English at this college in 1865, was professor of History and English Literature 1866 to 1879, and during one year in the absence of President Abbot, he acted as president of the College. Seventeen years ago he accepted the position he still holds. Although patterned to a great extent after M. A. C., the Kansas Agricultural College has deviated from us in adhering to one course for all, viz., that in Agriculture. The continuous occupancy of the president's chair by one person well qualified for the position has had a marked effect on the College and has made it one of the very best and the largest in the United States. Set-backs and turmoils have been avoided; progress has been continuous.

Mr. Chas. E. Greening, of Monroe, a member of the firm of Greening Bros., nurserymen of that place, made his first visit to the College July 20. A large part of the day was spent inspecting the new fruits that are now coming into bearing in the College orchards. Greening Bros. are about to issue a new edition of their large descriptive catalogue, and in order to make it of value to their customers and others into whose hands it may fall, they have requested the horticultural department of the Experiment Station to revise the descriptions of the varieties offered for sale. Not only will the names be made to conform to the approved nomenclature, but they desire to have changes made in the descriptions wherever necessary to make them reliable. The catalogue will also contain complete cultural directions, including directions for spraying and for preparing insecticides. The Greening Bros. have been in the nursery business for thirteen years, and their success illustrates what can be accomplished by push and good business management. They began without capital and at first did all of the work themselves, using one horse. Their nursery now covers 600 acres, and they use more than twenty horses and employ several hundred men in the busy season, while their correspondence occupies the time of one of the firm with the help of four stenographers.

NEW FORCING HOUSE.

Work has commenced on the new forcing house for the Horticultural Department. It will be a lean-to or side-hill house and will be located upon the steep hill-side east of the graperies, upon the site of the old vineyard. The house will be 35 by 50 feet, with a slope upon the ground of 12 degrees, and with a slope of the roof of 20 degrees. The south wall will be five feet in height, one-half of which will be of glass. The roof will be of cypress sash bars and 16x16 double strength glass. Heat will be supplied by the Hitchings' hot water heater in the graperies, through two-inch gas pipes.

The house will be used for the forcing of such vegetables as lettuce, radishes, parsley, asparagus, rhu-

barb, and mushrooms, and will be valuable for the purpose of illustrating winter vegetables growing to the regular and special students.

Beyond this the house will be useful for determining a number of points that are as yet in dispute. Among them will be the comparative value of subirrigation and surface watering, upon different soils and for different crops; of raised benches and solid beds, both with and without bottom heat; of butted and lapped glass; and of the different varieties for forcing purposes.

Aside from the above, various tests of fertilizers will be made. To some extent the house itself will be an experiment, as it will be the first of the kind in the state.

ONE OF OUR GRADUATES.

The subject of this sketch is one of a large number of M. A. C. graduates who have made their way through College by their own individual efforts. The fact that any young man is capable of making a good College record, and at the same time earn enough to pay his own expenses, raises him above the plain of his fellows.

Mr. Jason E. Hammond was twenty-one years old when he entered M. A. C. For five years he had paid his own way and assisted an invalid sister at a sanitarium. By hard work he had enough ahead to carry him through one term. One of the writer's most vivid recollections of first days at M. A. C. is the method and care with which his room mate counted every cent and calculated just how far it would carry him in the College course. Every spare minute, every Saturday, and every vacation was looked forward to with pleasure as an opportunity for paid labor. A rainy Saturday was a calamity liable to be followed by a blue week. Only by good food and care is it possible for any one to successfully carry such a continuous strain of mental and manual labor.

Mr. Hammond soon became a force in the student body, from the very first he was a leader in good government, in the class room and in his society. Almost every high office in class, society and student government was filled by him. His reputation for good management elected him steward of one of the boarding clubs, making it easier for him to keep in the course. Members of the faculty soon recognized that he had right ideas of law and order, and that his influence was valuable in the student body. He graduated in '86 with honors. He began teaching in Hillsdale county and his numerous successes as teacher and commissioner together with his thorough knowledge of school law, made him the first choice of Prof. Pattengill in the office of Public Instruction. Every one knows of the masterly way in which Mr. Hammond has filled the office of Deputy Superintendent of Public Instruction for the past four years. Mr. Hammond was married in 1893 to Miss Whittier, of Jonesville. They have a very pleasant home in the city at which all M. A. C. friends always find a welcome.

Mr. Hammond is now a prominent Republican candidate for Superintendent of Public Instruction.

P. B. W.

ASSISTANT IN BACTERIOLOGY.

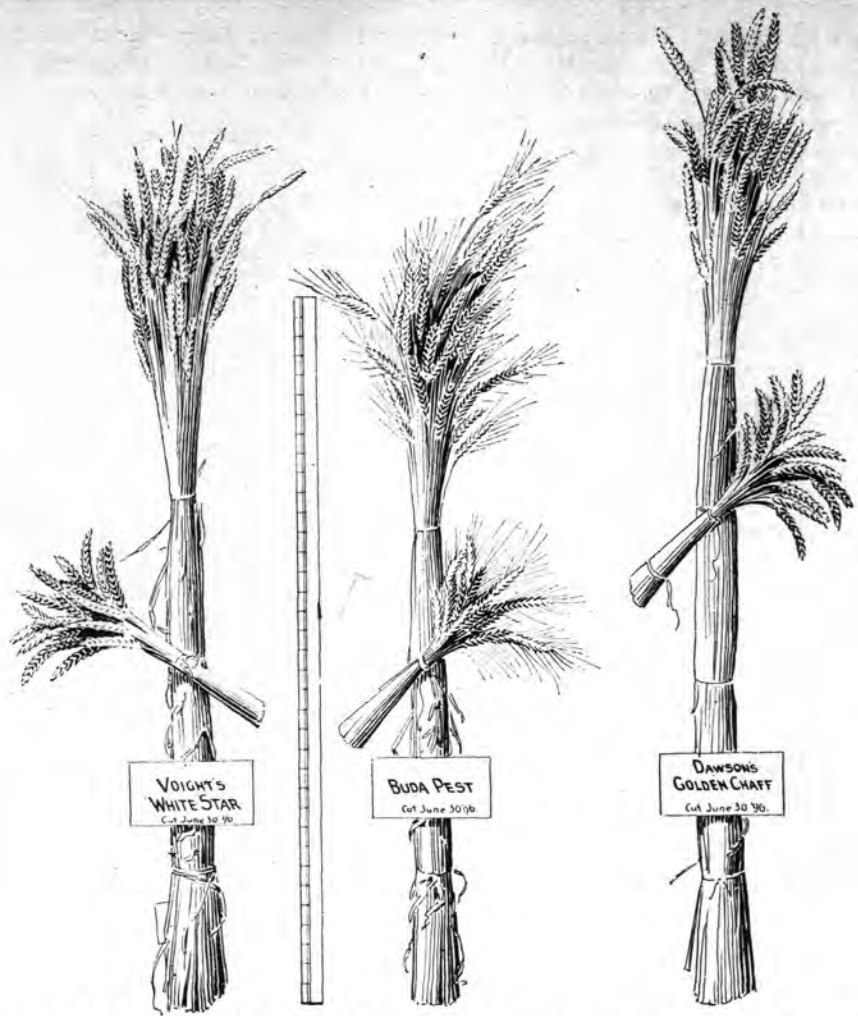
J. E. Marshall, Ph. B., who is to assist Dr. Grange in the bacteriological work of the station, comes to us from the University of Michigan, where he has been the instructor in bacteriology and the assistant of Dr. Vaughan for three years.

Born in Ohio, his early education was obtained in the schools of New York. He graduated from the State Normal school at Fredonia, and came thence to the University of this state, where he took his degree in 1894, meantime taking two years of the medical course and completing the literary course.

Thereafter he took post-graduate work in bacteriology, hygiene, and organic chemistry, and at the same time gave instruction to the large classes in bacteriology in that institution.

Mr. Marshall is still a young man, on the bright side of 30, and is full of enthusiasm and "good works." He has recently manifested his excellent judgment by uniting his fortunes with those of one of New York's fair daughters. We wish for them here a most happy and fortunate beginning of their married life.

There now remain only two colleges in the west which do not admit women—Wabash and Illinois—*Ed.*



CUT OF THE NEW WHEATS FOR MICHIGAN.

In order to give the farmers a good idea of the habit of growth of the three new wheats now being introduced into our state, the above illustration is presented of the wheats cut at the ground level on June 30, as they were growing on the College farm, and a small bunch of the wheat heads cut three days later. The specimens were mounted side by side, with a yard stick in the center to give a standard of the height of the crop, as it stood in the field. After these were properly arranged, Prof. Woodworth photographed the group, and from this photograph the cut was made. The habit of growth of Voigt's White Star, or "Corinth Clawson," with its bold heads; of the Buda Pest, with its bearded heads, in the center; and the strong growth of the bold Dawson's Golden Chaff, give a fair idea of the appearance of the crop in the field and the manner of growth, of the three varieties. As they grew in the field they were a fine sight. It is hoped that the cut will enable the farmers to get a glimpse of their appearance in the field.

BOTANIC NOTES.

DR. W. J. BEAL.

Our pieces of orchard grass were cut early, and already a second growth of leaves is knee-high to the cattle.

Conspicuous among the plants now in flower are cardinal flowers, wild rice, trumpet creeper, martyinas, buttonbush.

There is something attractive, even beautiful, in the details of some of the fifteen kinds of thistles in the Botanic Garden. We should apply to them the term "picturesque."

The compass plant and rosin weeds (*Silphiums*), five in number, are now at their best. They are coarse plants, nearly related to the sunflower; some of them are eight feet high.

Better than a *Zinnia*, as we believe, are the large orange-colored flowers of *Rudbeckia speciosa*, now in full bloom. The wild plants were found in a wet place near the river at North Lansing.

No, the leaves of that patch of cockleburrs in the weed garden are not annoyed by black lice. They are suffering terribly from a rust, a bad thing for the weed, but a good thing for people who have no use for weeds.

Wild asters from the upper peninsula are already well along in flower, having formed the habit, after long experience, of starting early and keeping right at it, making the best use possible of the long days of summer. How long it will take them in our garden to change this habit we have not determined.

Some years ago, Dr. E. L. Sturtevant, director of the Experiment Station at Geneva, New York, sent us a root of cord grass (*Spartina cynosuroides*). The grass bears very long, stout, drooping leaves, which present a pleasing appearance. In the case in question, the leaves are striped more or less with bands of yellow. See plants in the grass garden, worthy of promotion to the flower borders near the greenhouse.

A large per cent. of the leaves of plants are destitute of hairs on the surfaces while some are very smooth. From the smooth leaves, drops of dew or rain soon disappear, often rolling off entire, while on hairy leaves like those of crab-grass or finger-grass (*Panicum sanguinale*) numerous drops remain impaled by the scattered stiff hairs. Crab-grass is an annual weed, common in gardens and fields, and is now rapidly taking possession of the students' cinder track.

For two years a small barberry bush has been growing where it was set in the midst of the grass garden. This spring the young leaves were well peppered with yellow cluster cups, the "germs" of which came from a rust on the neighboring grasses. For a month, numerous kinds of grasses near the barberry bush are thickly covered with rust. When grass, or wheat, or oats, or rye catch the rust from the barberry, there will be little of the red rust, but much of the black rust. In the cases referred to, the straws of the grasses are annoyed by black rust. This black rust is the prevailing form which annoys the English farmer who calls it "mildew."

Two years ago the professor of botany purchased half a bushel of seed of June grass for seeding the new paths in the Botanic Garden. The Lansing merchant put up seed of orchard grass in its place, and sent to the College. A good part of the seed was sown before the professor had examined it. The gardener spent a day or more removing the surface soil to get out the seeds. June grass was then sown, and in due time some of the remaining seeds of orchard grass came up with the June grass. Several days more have been occupied in removing the orchard grass from the paths. In the weed garden, and some other little patches on the bank, the narrow paths were sown with the orchard grass. Is the merchant responsible for the seeds he sells, or can he impose on a customer with impunity?

C. L. Bemis, '74, is one of the most prominent candidates for member of the State Board of Education. For twenty years he has been actively engaged in school work as teacher in the public schools, Commissioner of Schools in Ionia county, and Superintendent of the Ionia city schools, which position he now holds. If records speak, no better man could be chosen for this position.

The M. A. C. Record.

PUBLISHED WEEKLY BY THE

MICHIGAN AGRICULTURAL COLLEGE

EDITED BY THE FACULTY,

ASSISTED BY THE STUDENTS.

ADDRESS ALL MAIL TO LOCK BOX 262, LANSING, MICH.

SUBSCRIPTION, 50 CENTS PER YEAR.

Business Office with ROBERT SMITH PRINTING CO., Printers and Binders, 108-120 Michigan Ave. West, Lansing, Mich.

Entered as second-class matter at Lansing, Mich.

For various reasons THE M. A. C. RECORD is occasionally sent to those who have not subscribed for the paper. Such persons need have no hesitation about taking the paper from the post-office, for no charge will be made for it. The only way, however, to secure the RECORD regularly is to subscribe.

THE sermon to the senior class will be preached by the Rev. Thomas Chalmers, of Port Huron. President Snyder is of the opinion that a baccalaureate address on some political, moral, or semi-religious subject should not take the place of a sermon delivered by some one properly ordained for such service. While this College is not sectarian, yet it is distinctively religious. Each day's work is begun by devotional exercises, and in addition to the work done by the Y. M. C. A. and Society of King's Daughters, preaching is heard each Sunday in the chapel. It seems altogether proper that the religious exercises of the year should close with a special sermon to the out-going class.

ON ANOTHER page of THE RECORD appears the official directory of the numerous societies at the College. Those who have never been students may not fully understand the nature of the work performed by the members of many of these organizations. They usually meet on Saturday evenings, dressed in their "Sunday best." They evince great interest and care in the selection of new members, and after election, strive to keep them in the right course, as one brother looks after another, not only in scholarship, but in right doing. If a member is sick or destitute, his associates strive to help him. The program is very often a good one, well carried out, consisting of quotations from some author, declamations, biographies, essays, orations, debates, notes on parliamentary law, instrumental music, songs, etc. One of the oldest members serves as critic, and performs all the duties devolving on such officer without fear or favor, the members respecting the criticisms, as they know it is for their best interest. Non-attendance or failure to perform the part assigned, without a good excuse, is not infrequently accompanied by a fine, which is considered a disgrace to the delinquent. They take great pride in keeping the room of their society well furnished, clean and in good repair. Near the close of each term new officers are elected to serve the ensuing term. In this way each has an opportunity to become well versed in parliamentary tactics and acquire the habit of self reliance, so valuable to any one at numerous gatherings during a busy life.

It is justly claimed that no time at the College is more profitably spent than that in attending the meetings of one of the best of these societies. The new student should be in no great haste to join any society on account of any rosy statements he has heard regarding the qualifications of its members, but make diligent inquiry of some of the faculty or other friends. The most valued and confidential associates of a student in College are usually those who are members of his society, hence the great importance of making a good choice.

COMMENCEMENT.

The exercises of commencement week, August 9-14, promise to be among the most brilliant ever held at the College. Everything is well in hand; the work of the students is well advanced; and a steadily increasing interest is manifest.

For some years the custom has been for the president's address to be the main feature of the Sunday preceding commencement day. This year the College proposes to go back to that time-honored New England institution, a genuine baccalaureate sermon; and it has invited the Rev. Thos. Chalmers, a gifted young divine of Port Huron, to preach it. The time is Aug.

9, at 10 a. m. standard, and the place is the chapel of the College.

The second event of the week will be the annual joint celebration of the College societies and fraternities, which will take place Aug. 11, at 8 p. m. The exercises of the evening will consist of contests between representatives of the societies and fraternities for three medals offered by the College. The declaimer's medal, a handsome solid silver disk, will be contested for by Mr. C. D. Butterfield, the representative of the Eclectic Society, and Miss Sadie Champion, of the Feronian Society. The other two medals are of gold, and are offered for excellence in oratory and debate. Messrs. N. M. Morse, of the Olympic Society, L. D. Sees, of the Hesperian Society, and O. P. West, of the Columbian Society, will contest for the orator's medal; while B. A. Bowditch, of Phi Delta Theta Fraternity, and L. S. Munson, of the Union Literary Society, in competition for the debater's medal, will discuss the election of United States Senators by direct popular vote.

All regular College duties will cease on Wednesday, the 12th, at midday. In the afternoon, at 3 p. m., the final battalion drill will take place in the presence of the U. S. army inspector for this district, and the adjutant-general. In the evening the various societies and fraternities will entertain their friends. These society reunions are usually among the most charming features of the College commencement.

On Thursday, the graduating class will hold its final class-day. The exercises will consist of an address by the class president, Geo. Williams, an oration by C. A. Jewell, a class history by L. P. Fimple, a poem by L. D. Sees, prophecy by R. B. Buek, and a class paper by N. M. Morse. In the evening President and Mrs. Snyder will hold a reception, to which are invited the College population and their guests.

The commencement day is Friday, Aug. 14. The exercises of the day will begin at 10 o'clock in the Armory, and will consist of an address on "Transportation," by E. D. Partridge, the College representative of the Mechanical Department; an address on Sir John Laws and his work for Agriculture, by C. H. Briggs, the College representative of the Agricultural Department; and an address by Wm. Kent, of New York, the orator of the day, who will handle some topic connected with the mechanical side of our social life. After these addresses, the medals contested for on the Tuesday evening preceding, will be presented to the successful contestants; the president will make a short address to the graduating class; the diplomas will be presented, and the work of the year will be closed.

During all the exercises of the week, excellent music will be provided.

In conclusion, we would again urge our friends to make our boys happy by a large attendance. We believe you will be well repaid. Come up and see the well-equipped specimens of manhood the Agricultural College turns out.

THE FARMER'S TABLE.

MRS. MARY A. MAYO.

We believe that if any one has earned a well-spread table and should have it, it is the farmer's family. By well-spread we mean clean, white linen, pretty dishes, and plenty of well-cooked, wholesome food.

We are fearful that sometimes we do not give sufficient care to the appearance of our family table. When company comes we want to make it look as nice as possible. The best dishes are brought out, silver knives and forks taken out of the wrappings, any piece of silver we may have is brightened, dainty dishes prepared, all for the stranger or friends who are to break bread with us. Why not use the best every day? The best we have is none too good for our dear ones. For whom should we do more than for those we love?

A well-spread table, dainty dishes, and a few flowers make the plainest meal appetizing. There is no sweeter sight to us than to see a family—father, mother, and all the children, with perhaps a dear old grandfather or grandmother, gathered about the table. We like to see the father serving, giving as much consideration to the youngest as to the oldest, and each doing all in his power to make every other body comfortable and happy. We believe most emphatically in teaching children proper table manners. We think the little children, just as soon as they are old enough to come to the table in their high chairs, should be taught to keep their hands out of the food and themselves off from the top of the table. It can be done, and with very little trouble either to mother or child,

if it is begun soon enough and in the right way.

Not long ago we invited a mother and her little girl of four years to come to dinner. The mother declined because, as she said, her child behaved so at the table she could not take her anywhere. Our children will go from home some time, and there is nothing that shows good breeding and training more than their demeanor at table. I pity the young person who is obliged to go out into the world and meet people, who has not had proper training in regard to manners and deportment at home.

With plenty that is ours (and despite the hard times we have had food in abundance) we need not sit at meagre board—plenty of flour, fruit, vegetables, meat, cream, butter, ice, and the necessary groceries—every farmer's wife can set a table fit for kings to dine if you have flowers, and every family should have a few at least. Let a small, low bouquet grace the farmer's table; not a high arrangement that is easily overturned, or that hides even the face of the smallest child; but a few loose flowers nicely arranged in a low, flat dish.

Let each meal have the best of all qualities served with it, and that is good cheer. We believe every person should be at his best at the table. Let no disappointment or failure be recounted; whatever may have gone wrong on the farm out of doors, let it be left there, and the father bring nothing but kind words and a happy heart. If mother is tired, head aching, or feet so weary, let her show a brave face, keeping back any complaining, for, surely, though all may pity, the recounting of ills will only sadden the hearts that else would be gay.

We have seen some families that found or made it a convenience to take their medicine at the table. If it must be "taken before meals" let it be where others will not have the benefit of seeing the nauseous stuff swallowed.

Never wait until the family are at the table and then tell of the misdemeanor of some of the children. We have known parents to be so injudicious as to do this. The little eyes would fill with tears, face all aflame at the thought of being reproved before others, sobs rise in the throat, and the whole meal spoiled because a parent has been so unwise. Not only was the child deprived of its food, but the shock to sensitive nerves and a feeling of injustice has so smitten it that it has been wounded worse than blows would have done. Study these children's natures, know how best to train each one, and never wound its spirit nor crush or break its will, but train it, helping it to take care of and help itself.

We believe in having good times at the table, taking plenty of time to eat, and all the time you want to talk. Talk about what you have read; let the conversation be so directed that the children will be drawn out, and let them talk, telling funny stories and good jokes. If friends or strangers sit at the board, make no excuse as to the quality or quantity of the food, but make them feel that they are heartily welcomed.

Over all and with all let love abound, for "better is a dinner of herbs where love is than a stalled ox and hatred therewith."—*Grange Visitor*.

EMANCIPATION DAY IN WASHINGTON

WRITTEN FOR THE FRESHMAN CLASS IN RHETORIC, BY T. H. LIBBY, '99.

To the Washington ducky, Emancipation day is about the greatest day in the year. It is his own day, and even the 4th of July pales a little in comparison with it.

In order that the day may be complete and satisfactory, there must be a parade, with bands, the Masons, Odd Fellows, "Sons of Lazarus," the "Independent Odah ob Full Moon," and other organizations out in full force, with all the glory of uniforms, regalias and badges.

There is nothing that I know of that so delights the average ducky as pomp and show of any sort, the more gorgeous, the better. He would rather be a drum-major of a band than president of the United States, unless he could wear a uniform, of a combination of colors that would rival Jacob's famous coat, with at least three dozen brass buttons on it.

But to describe a little more fully some of the wonders that go to make up this parade. First comes a detachment of colored policemen, who march in silent dignity, or turn back the crowd with a "Git back dare you niggahs, git back!" and much flourishing of clubs. I was wrong, though. First comes the small colored boy. He usually comes first, in a crowd of thirty or forty, in every procession you see. He often twirls

an old broomstick, with the skill of a "crack" drum-major, and if it is in summer, he wears as little clothing as the law will allow.

After the small boys and the policemen, comes the marshal of the day on horseback. He wears a three-cornered hat topped off with a big ostrich feather; a white coat, with wide red or blue braid on the seams, shiny epaulets, and a liberal allowance of brass buttons; blue trousers, with white stripes down the sides; and patent leather riding boots, which have seen better days, and which come to his knees. Usually, too, he wears a broad sash of some bright color. The marshal's staff ride with him, and are outshone only by the marshal himself. Then comes the first band. They can't play together very well, or quite in tune, but they play with a gusto, and the sound makes up in quantity what it lacks in quality. The drum-major takes the cheers of the crowd to himself, and bows right and left as he struts along. Next come the Odd Fellows, or some other order, and a military company or two. So on to the end of the procession.

To me the crowds that line the streets are as interesting as the procession. Big and little darkies, fat darkies and thin darkies, men, women, and children, they chatter and laugh and are thoroughly happy. There stands Lily Ophelia Jones, and, as this band goes by, she nudges her companion and exclaims, "Dare goes George Washington Smiff." Doan he look gran." Perhaps G. W. Smith sees the girls and stops playing long enough to call out, "Ah dare, m' sweetness!" Right here is the "Johnsing" family. "Paw" Johnsing, in his carefully pressed old black coat, an old-fashioned silk hat, and a "biled" shirt, keeps one eye on the procession and the other on his six or seven uneasy youngsters. "Maw" Johnsing is fat, dark and forty, and, as a colored company of the D. C. N. G. marches past, she grabs up young Samuel Ebenezer and says: "Look at yoh brudder, chile!" Young Samuel Ebenezer calls out, "Oh, you Henery Clay, gimme dat soad!" Here comes "Rastus R. D. Bowen" in his uniform—he is a bell boy in the Cairo—with Grace Washington by his side. She is eating peanuts; and as she smiles a large "2x4" smile, at some remark of his he feels as proud as any man in Washington.

The parade is past, and the crowd gone, but you can hear the bass-drum in the distance. As you walk absent mindedly across the street, laughing to yourself, as you think of the fat little drummer in the procession, who continued to play the cymbals and pound the bass-drum though his hat was down over his eyes; you are suddenly aroused by the clang of the gong on a cable-car, and quicken your pace to get out of the way.

PRIORITY CLAIMED.

W. G. Merritt, with '92, questions the validity of claims of the wild and wealthy West on the "capacity story" quoted in THE RECORD July 7, from U. of M. sources. He writes from Western Pennsylvania: "Many people now living in this region remember the character 'Jim' Tarr and his tragic death. To him is credited the following capacity story:

"Before Oil Creek got its name, this 'Jim' Tarr was one of the poorest 'buckwheat farmers.' He owned a hundred acres of rocks along that creek, and was as poor as only 'buckwheat farmers' can be. 'Jim' had positively no education himself, and his children had less, for there was no school within many miles. Oil was struck on his farm and he suddenly became immensely wealthy. He decided to 'college' his grown up daughters, but they were excused after prolonged probation.

"Old 'Jim' paid the school a visit to see what was the matter. 'Yes, Mr. Tarr,' said the teacher, 'your daughters try hard enough, but we fear they lack capacity.' That was a new word for 'Jim,' and he exclaimed, 'Capacity, capacity, why just buy them some, old 'Jim' Tarr has lots of money.'"

This "Jim" Tarr was one of twelve persons who were burned to death a few years ago by the accidental igniting of a flowing well. They were in the derrick watching a 4,000 barrel gusher when it exploded.

It gives me pleasure to this day to send to my friends in the Chemical Department a large photograph of that most magnificent sight, so often to be seen in an oil country—the torpedoing of an oil well.

M. A. C. is the paradise for children, especially during the summer months. They stroll in groups or singly about the spacious lawns and sit or roll under the trees, run doll-carts over the smooth stone paths or slowly coast for considerable distance in their wagons. When six or more years old, some of them

begin to attend the meetings of the Natural History Society or the Botanical Club, and in several instances have formed societies of their own. A few get lessons on birds and insects, frogs and fishes, direct from their fathers; others get some points about plants. The rest of the children catch the study from the few who had the start. They hunt mushrooms and wild flowers, build play houses, make mud pies, or play in the sand. We met one of them—B. E., the other day—a lad who said he was "just about nine years old." "What do you find to do these times?" "O, I play around." Near the path he was watching the ants. "What are you doing here?" "I am getting some ants in this box. There are six queens here." "How can you tell which are the queens?" "They are larger and fat and have wings and lay eggs. They go down through holes into the ground where they live and keep their larvæ.

The ants bring the larvæ out and keep them in the sun during the day time, and at night carry them back into their holes. Morton and I keep ants in wooden boxes lined with tin so they cannot gnaw holes in the boxes and get out." The lad has already decided that he will take a scientific course in College, but whether he does or not, this kind of play is to be commended and will tend in the future, as well as the present, to add much enjoyment to life. These little nature studies are just as attractive as shooting, fishing or boating, and are always right under the noses of every one, whether he sees them or not.

"How is it that Watley has so many new suits? He gets a small salary."

"Oh, he is an electrician and his clothes are all charged."—Detroit Free Press.



for ladies

We call especial attention to our extreme needle toe "Columbia" at \$3.00 (like cut) which we claim superior to any \$3.50 shoe shown in this city and superior to most \$4.00 shoes. Lace or button, black or russet.

for gentlemen

The new "Lennox" is one of our most popular styles for gentlemen, and comes in wine and brown Russia, patent leather and fine calf at \$3.00 to \$6.00. Our "Stiletto" is the very latest pointed toe and absolutely correct.



103
WASHINGTON AVENUE S.,
LANSING, MICH.

C. D. WOODBURY.

103
WASHINGTON AVENUE S.,
LANSING, MICH.

W. E. TRAGER,

DEALER IN

FRESH AND SALT MEATS

509 Michigan Avenue East.

Fred Shubel,

Leading Dealer in Fine
Footwear . . .

WE QUOTE THREE POINTS



Fitting,
Style,
Durability.

We Carry All Grades.
Repairing Done.

FRED SHUBEL.

BETTER BUTTER

results from using better salt. "The Salt that's all Salt" makes poor butter better and good butter best. Salt your butter with

Diamond Crystal Salt

next time you churn and note the finer, more delicate flavor it will have.

Sold everywhere in barrels (280 lbs.) and bags (56 lbs., 28 lbs. and 14 lbs.)

DIAMOND CRYSTAL SALT CO.,
ST. CLAIR, MICH.



LOWEST PRICES
WILL BE QUOTED TO SCHOOL LIBRARIES

and others sending lists of books wanted to

Lansing Book & Paper Co., Lansing, Mich.

Preferred Bankers Life Assurance Co.

OF MICHIGAN.

Incorporated under the laws of Michigan by 100 leading Michigan Bankers.

HOME OFFICE, Lansing, Mich.

Sound
and
Cheap

BOYS . . .

BUCK sells Furniture Right.

ALL GOODS DELIVERED TO
COLLEGE FREE.

Best Woven Wire Cots - \$1 25
" " " Springs, - 1 50

WE SELL EVERYTHING.

M. J. & B. M. BUCK.

OPEN EVENINGS.

Where * *

do you go for your

Printing?

You * *

will make no mistake if you
take it to

Thompson &
Van Buren

They do all the best work. Ask
the M. A. C. boys if this isn't so.

BOARD OF AGRICULTURE.

Hon. Franklin Wells, President.....Constantine.
 Hon. Chas. W. Garfield.....Grand Rapids.
 Hon. Chas. F. Moore.....St. Clair.
 Hon. C. J. Monroe.....South Haven.
 Hon. Henry Chamberlain.....Three Oaks.
 Hon. W. E. Boyden.....Delhi Mills.
 Gov. John T. Rich..... } *Ex-Officio.*
 The President of the College..... }
 Hon. I. H. Butterfield, Secretary..Mich. Agr. College.

FACULTY AND OTHER OFFICERS.

J. L. SNYDER, A. M., PH. D., PRESIDENT.
 ROBERT C. KEDZIE, M. A., M. D.,
 Professor of Chemistry, and Curator of the Chemical
 Laboratory.
 WILLIAM J. BEAL, M. S., PH. D.,
 Professor of Botany and Forestry, and Curator of the
 Botanical Museum.
 E. A. A. GRANGE, V. S.,
 Professor of Veterinary Science.
 LEVI R. TAFT, M. S.,
 Professor of Horticulture and Landscape Gardening,
 and Superintendent of the Horticultural Department.
 HOWARD EDWARDS, M. A., LL. D.,
 Professor of English Literature and Modern Languages.
 HERMAN K. VEDDER, C. E.,
 Professor of Mathematics and Civil Engineering.
 EDSON A. LEWIS, 1ST LIEUT. 18TH INFANTRY, U.S.A.
 Professor of Military Sciences and Tactics.
 I. H. BUTTERFIELD,
 Secretary.
 CLINTON D. SMITH, M. S.,
 Professor of Practical Agriculture, and Superintendent
 of the Farm.
 CHAS. L. WEIL, S. B.,
 Professor of Mechanical Engineering and Director of
 the Mechanical Department.
 WALTER B. BARROWS, S. B.,
 Professor of Zoology and Physiology, and Curator of
 the General Museum.
 FRANK S. KEDZIE, M. S.,
 Adjunct Professor of Chemistry.
 WILLIAM S. HOLDSWORTH, M. S.,
 Assistant Professor of Drawing.
 PHILIP B. WOODWORTH, B. S., M. E.,
 Assistant Professor of Physics.
 ALVIN B. NOBLE, B. PH.,
 Assistant Professor of English Literature and Modern
 Languages.
 CHARLES F. WHEELER, B. S.,
 Assistant Professor of Botany.
 WILBUR O. HEDRICK, M. S.,
 Assistant Professor of History and Political Economy.
 PAUL M. CHAMBERLAIN, M. E.,
 Assistant Professor of Mechanical Engineering.
 WARREN BABCOCK, JR., B. S.,
 Assistant Professor of Mathematics.
 EDITH F. McDERMOTT,
 Professor of Domestic Economy and Household Science.
 MRS. LINDA E. LANDON,
 Librarian.
 H. W. MUMFORD, B. S.,
 Instructor in Agriculture.
 GAGER C. DAVIS, M. S.,
 Instructor in Zoology.
 A. L. WESTCOTT, B. M. E.,
 Instructor in Mechanical Engineering.
 DICK J. CROSBY, B. S.,
 Instructor in English.
 MERRITT W. FULTON, B. S.,
 Instructor in Agriculture.
 BURTON O. LONGYEAR,
 Instructor in Botany.
 CYRUS C. PASHBY, B. S.,
 Instructor in Mathematics.
 GORDON H. TRUE, B. S.,
 Instructor in Dairying.
 D. B. BALDWIN,
 Engineer.
 THOMAS GUNSON,
 Foreman of Greenhouse.
 F. C. KENNEY,
 Assistant Secretary.
 ERNEST WITTSTOCK,
 Foreman of the Farm.
 VINTON V. NEWELL, B. S.,
 Foreman of Machine Shop.
 THOMAS DURKIN,
 Foreman of the Horticultural Department.
 CHARLES E. HOYT,
 Foreman of the Wood Shops and Foundry.
 C. J. FOREMAN, B. S.,
 Assistant Librarian.

E. S. GOOD.

Clerk to President.

CHACE NEWMAN,

Clerk of Mechanical Department.

Aside from the State Board of Agriculture given
 above, the following are the officers of the Experiment
 Station:

STATION COUNCIL.

Clinton D. Smith, M. S.....Director and Agriculturist.
 Jonathan L. Snyder, Ph. D., Pres.....Ex-officio.
 L. R. Taft, M. S.....Horticulturist.
 Robert C. Kedzie, M. A., M. D.....Chemist.
 Ira H. Butterfield.....Secretary and Treasurer.

ADVISORY AND ASSISTANT STAFF.

A. A. Crozier, M. S.....Assistant in Agriculture.
 Herbert W. Mumford, B. S.....Assistant in Agriculture.
 H. P. Gladden, B. S.....Assistant in Horticulture.
 M. L. Dean.....Assistant in Horticulture.
 Thorn Smith, B. S.....Assistant in Chemistry.
 E. A. A. Grange, V. S.....Consulting Veterinarian.
 G. C. Davis, M. S.....Consulting Entomologist.
 Chas. F. Wheeler, B. S.....Botanist.
 Mrs. L. E. Landon.....Librarian.
 T. T. Lyon, So. Haven.....In charge of Sub-Station.
 R. L. Taylor, Lapeer.....In charge of Apiary.

SUB-STATIONS.

Grayling, Crawford county, 80 acres deeded.
 South Haven, Van Buren county, 10 acres rented; 5
 acres deeded.

OFFICIAL DIRECTORY.

Sunday Chapel Service—Preaching at 2:30 P. M.

Y. M. C. A.—Holds regular meetings every Thursday
 evening at 6:30 and Sunday evenings at 7:30. S. H.
 Fulton, President. C. W. Loomis, Cor. Secretary.

Natural History Society—Regular meeting second
 Friday evening of each month in the chapel at 7:30.
 L. R. Love, President. J. W. Rigtterink, 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
 in Prof. W. O. Hedrick's office, College Hall. Prof. A.
 B. Noble, President.

Students' Organization—S. H. Fulton, Vice-Presi-
 dent. H. L. Becker, Secretary.

Columbian Literary Society—Regular meeting every
 Saturday evening in their rooms in the middle ward of
 Wells Hall, at 7:30. F. N. Jaques, President. T. A.
 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
 evening in the society rooms in the west ward of Wells
 Hall at 7:30. W. T. Barnum, President. D. J. Hale,
 Secretary.

Olympic Society—Meets on fourth floor of Williams
 Hall every Saturday evening at 7:30. C. A. Jewell,
 President. F. J. Kling, Secretary.

Phi Delta Theta Fraternity—Meets on Friday even-
 ing in chapter rooms in Wells Hall, at 7:30. C. K.
 Chapin, President. J. W. Michen, Secretary.

Union Literary Society—Meetings held in their Hall
 every Saturday evening at 7:30. J. T. Berry, President.
 F. V. Warren, Secretary.

Tau Beta Pi Fraternity—Meets every two weeks on
 Thursday evening in the tower room of Mechanical
 Laboratory. E. D. Partridge, President. J. H. Steele,
 Secretary.

Club Boarding Association—I. L. Simmons, Presi-
 dent. H. A. Dibble, Secretary.

M. A. C. Grange—Meets every two weeks in the Col-
 umbian Society rooms. G. H. True, Master. H. W.
 Hart, Secretary.

Try and Trust Circle of King's Daughters—Meets
 every alternate Wednesday. Mrs. W. B. Barrows, Presi-
 dent. Miss Lilian Wheeler, Secretary.

STRICTLY FIRST-CLASS PHOTOGRAPHY AT
LeCLEAR'S.

The Farm ...Department

Offers for sale the
 following head of
 live stock:

A Yearling Shorthorn Bull, out of Mysie 3rd, and
 by the prize winning Volunteer, 101205, a
 pure Cruikshank.

The Thoroughbred Jersey Bull, Rettas Averroes,
 35119, bred by G. A. Watkins, Detroit, solid
 color, 4 years old. This bull is by Averroes
 who was a son of Matilda 4th and by Ida's
 Rioter of St. Lambert. His dam was Retta
 of Bloomfield (29520) who was by the famous
 bull Ramapo. No better bred Jersey bull
 exists today in the state.

Three Holstein bull calves, three months old or
 younger, all by Maurice Clothilde and out of
 the selected cows Oatka 3rd's Wayne, College
 Houwtje and College Pauline Wayne.

Owing to the crowded conditions
 of the stables these animals will
 be sold cheap.

Nine Yearling Shropshire Rams out of thorough-
 bred ewes and by a prize Shropshire ram.

Poland China and Duroc Jersey Pigs of both
 sexes.

These Animals will be registered,
 transferred and placed on
 board cars at Lansing on
 receipt of price, which will
 be given on application to

CLINTON D. SMITH,

Director and Superintendent
 of Farm,

AGRICULTURAL COLLEGE, MICH.

THE MAPES CLOTHING CO.

207 & 209 WASHINGTON AVE. S.

When young man's fancy lightly
 turns to thoughts of duck trousers,
 vacation, and all that sort of sunshiny
 loveliness, he should direct his steps
 towards our store, where we make a
 specialty of

**MID-SUMMER CLOTHING
 AND BICYCLE SUITS.**

NEWS FROM GRADUATES AND STUDENTS.

J. R. Petley, with '96, visited friends in Lansing last week.

H. R. Parish, '95, 9134 Erie avenue, Chicago, thinks he will have to come back and take the "Ladies' course."

John W. Beaumont, '82, W. L. Carpenter, '75, and Frank E. Robson, '78, are members of the Detroit college of law.

J. E. Niswander, '95, writes that he will be here to attend commencement exercises. Mrs. Niswander will accompany him.

M. J. Johnson, with '90, formerly of Dimondale, now of Denver, Iowa, is running a creamery. He called with friends on Monday. He thinks Iowa well advanced in work of the dairy.

Joseph T. Merkel, with '97m, is working in the drawing room of the Ed. P. Allis Co., Milwaukee. He likes his position and invites the boys "to come over and have one." Address, 501 Walker street.

R. J. Wilson, Jr., with '97 m, has secured a good position with the National Tube Works, McKeesport, Pa., where he expects to remain for some time, perhaps permanently. He lives at 309 Whigam street.

Dr. N. S. Mayo, '88, Professor of Veterinary Science and Physiology, State Agricultural College, Manhattan, Kansas, accompanied by his daughter, Marguerite, visited friends at the College on Monday and Tuesday of last week.

Dwight Cole, '93m, was a recent caller at the college. He has left the Berkely & Gay furniture company, for which he was traveling, and will now take up work in hydraulic engineering in the East. He called not long since on C. F. Weideman, with '91m, at Hartford, Conn., and on A. H. Kneen, '91m, superintendent of the Mt. Vernon Water Supply Co., Mt. Vernon, N. Y.

S. P. Orth, with '94, writes from Adams, Mass.: "I am beautifully located in the heart of the Berkshire hills at the foot of old Greylock. The scenery is unsurpassed, and my weekly tramps are sources of great pleasure." Mr. Orth has decided to devote his life to law and politics instead of the ministry. "I believe that an honest public man can impress his character and thought upon people more than any other, and there is more opportunity in Law than Theology."

G. H. Hicks, '92, Instructor in Botany at M. A. C., for a time past expert investigator of commercial seeds for the Division of Botany, Department of Agriculture, Washington, D. C., recently received an increase in salary which we recorded. Now comes the news of his promotion to the position of chief assistant in the division of botany, with a salary of \$1,800. It occupies considerable of our time to note promotions and other good things said of our alumni; but let them come. We never tire of such work. We are not surprised to hear of this promotion, knowing the ability of the man.

C. B. Waldron, '87, Professor of Horticulture and Forestry in the Agricultural College, Fargo, North Dakota, Instructor in Botany at M. A. C. in 1888, visited his alma mater last Monday, as he says, "to show Dr. Beal and Prof. Wheeler through the Botanical Department." His salary has been raised to \$1,800. He complains that his oldest boy hooks the lead pencils from his vest pocket. On his return, he with several other professors, are to visit the Black Hills on a trip of exploration, collecting and recreation. He gives good reports of T. D. Hinebaugh, '85, Professor of Veterinary Science, and H. W. McArdle, '87, Instructor in Mathematics.

One question led to another until the fruit dealer and the poultry man gave business a secondary consideration and devoted the greater part of yesterday morning to argument on "Geese and gooseberries—which were first?" The poultry man held that the goose must have been the forerunner and the fruit dealer declared that the gooseberry was first to make its appearance in the world.

"Tradition and history have, in my opinion, made it plain that the goose was first and that the gooseberry, which is to the goose as bread is to man, was made for the subsistence of the goose," said the poultry man in a somewhat triumphant manner.

"On the other hand I maintain that the gooseberry was first," said the fruit dealer. "The berry appeared first and then the goose came to use the gooseberry. The berry most certainly was meant for something more than to be made into jams and jellies."

Chicago Record.

DAVIS & CO.

114—Washington Ave. North—114

DUCK SUITS

CRASH SUITS

DRESS SUITS

WE SELL THEM AND RENT THEM.
WE CAN SUIT YOU IN EVERYTHING.

CLOTHING,
FURNISHINGS
OR
HATS.

To Close at Once!

300 pairs Gents' Russet Shoes

328 pairs Ladies' Russet Shoes

AT COST!

REASON FOR CLOSING OUT:—TOO MANY RUSSET SHOES.

JESSOP & SON, CASH SHOE STORE

HOLLISTER BLOCK.

M. A. C.

SPECIAL RATES ON PHOTOS
AT

SHARPSTEEN'S STUDIO.

Phone 192.

New Phone 76.

J. G. REUTTER,

322 Wash. Ave. S.

Fresh and Salt Meats

Fine Chicago Beef a Specialty.

We are Headquarters for all Kinds of Home-Made Sausage.

W. S. BAILEY

109 MICHIGAN AVE. W.

CUSTOM AND READY MADE CLOTHING

JOS. T. BERRY, COLLEGE AGENT.

R. W. MORSE,

... DENTIST ...

Hollister Block.

...COLLEGE BUS...

Leaves M. A. C. for Lansing at 8:30 a. m. and 1:30 p. m.
Returning, leaves Lansing at 10:30 a. m. and 4:30 p. m.

Packages left at Emery's will receive prompt attention.
Livery or Bus for picnics at reasonable rates.

NEW PHONE

H. O. PALMER.

TO OUR FRIENDS

And that includes everybody who has ever purchased a shingle or a foot of lumber of us, we desire to impress on your mind the fact that

◀WE HAVE MOVED▶

In our new quarters, we are better prepared to unload lumber on your premises than ever before. Years of experience have taught us a thing or two about the lumber business, and this experience may possibly be of advantage to you if you think of building. Our facilities are unexcelled and we are at your service.

H. W. RIKERD

Telephone No. 51. Successor to Capital Lumber Co.

Straw Hats

Are in season now, and in looking for a place to supply your wants I desire to call attention to my stock, believing it the most complete in this city.

Belts, Sweaters,
Negligee Shirts,

in fact anything in the way of up-to-date furnishings.

ELGIN MIFFLIN.

HAVE YOU FIVE OR MORE COWS?



If so a "Baby" Cream Separator will earn its cost for you every year. Why continue an inferior system another year at so great a loss? Dairying is now the only profitable feature of Agriculture. Properly conducted it always pays well, and must pay you. You need a Separator, and you need the BEST—the "Baby." All styles and capacities. Prices, \$75. upward. Send for new 1894 Catalogue.

THE DE LAVAL SEPARATOR CO.,

GENERAL OFFICES:

74 CORTLANDT STREET, NEW YORK.



Did it Ever Occur to You That

"We may live without poetry, music, and art;
We may live without conscience, and live without heart;
We may live without friends; we may live without books;
But civilized man can not live without cooks.
He may live without books,—what is knowledge but grieving?
He may live without hope,—what is hope but deceiving?
He may live without love,—what is passion but pining?
But where is the man that can live without dining?"

And yet how infinitely better it would be to find books, music, art, conscience, love, and a good cook, all in the same home.

This is what the

WOMEN'S COURSE AT M. A. C.

CONTEMPLATES.

THE MODEL KITCHEN

is now in the course of construction. It will be ready for use when school opens September 14.

FOR YOUNG MEN WE OFFER TWO PRACTICAL COURSES

AGRICULTURAL ANDMECHANICAL

each of which requires four years; also four short courses during the winter terms.

You can take an examination for entrance to any course in your own county. Go to the teachers' examination, August 20, and ask your commissioner for Agricultural College entrance examination questions. A third grade certificate will also admit you to any course.

For catalog and particulars, address,

J. L. SNYDER, President.