

The M. A. C. Record.

VOLUME 2.

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NUMBER 16.

Banquet to '97.

The banquet given to the Senior Class, by President and Mrs. Snyder last Friday evening, proved to be one of the most delightful social events of the year.

At 7:45 the guests were assembled in the dining room, Dr. Edwards being given the seat of honor as toastmaster of the evening.

The class received a delightful surprise in finding the tables decorated in their class colors, heliotrope and lemon yellow, the decorations being Maréchal Niel roses and heliotrope.

After the banquet Dr. Edwards in his inimitable way introduced the first toast and, though he assured us he felt out of place and very much frightened, his ease afterward allayed our fears. The first toast, "Agriculture," was responded to by Mr. Fulton. He had chosen for his motto: "Adam, still may we labor; still to dress this garden; still to tend plant, herb, and flower." He expressed the feeling of a large number of people in a quotation from Charles Dudley Warner: "Blessed be agriculture, if one does not have too much of it." But of a still larger class he expressed the feelings when he spoke of the advance farming had made on account of new inventions and improved methods, and the advance farmers as a class had made in intellectual developments. Some amusement was created when he gave us a mental picture of a '97 graduate on a farm. From his description we have no difficulty in imagining our hero feeding to his stock the proper amount of proteid, fat, and carbohydrate required to give best results.

The next toast, "The Social Spirit of '97," was ably responded to by Miss Champion. Her description of the class of '97 was so ludicrous we think she must have painted the picture from real life. She assured us that the class in a social way was a unit. But by way of amending this last, she spoke of something with which anyone acquainted with the class of '97 could not have failed to be impressed, namely, that though their hearts beat as one they possessed more than a single thought.

Mr. Parker was to have responded to the toast, "Some Historical Notes," but on account of his absence our worthy toastmaster in, shall we say spirit of revenge, called on Mr. Amos as a married man to give an impromptu speech. Though taken unawares Mr. Amos acquitted himself admirably.

The next toast, "Our Success," was appropriately introduced by the oft-repeated quotation, "Of all sad words of tongue or pen, the saddest are these: It might have been." Mr. Goodwin assured us that the above did not refer to the class of '97. His regret in regard to the failure of the class to perform their duty to certain members of the class was touching in the extreme.

Mr. Herrmann, in response to the toast, "Sewing on Suspender Buttons," succeeded very well in evading any mention of the above named subject. His surmise that the next toast would be a good one was correct; and when Mr. Sanderson had given his response to "The Twentieth Century," we saw M. A. C. transformed into an immense university with numerous new laboratories, etc. Athletic sports had taken

their proper place as the most important branch in the College curriculum. His picture of a sign on the Armory announcing that the band holds (Bandholtz) its meeting at 6 a. m. was peculiarly apt, as it was afterward announced that it would enable the Seniors to be awakened in time for Chapel.

President Snyder in closing gave some informal remarks in which he wished everything for the future success of the Class of '97. L. E. M.

Senior Orations.

It is desired that seniors observe the following schedule of dates for the presentation of orations in chapel during the present term:

April 26, H. A. Dibble; 27, H. A. Hagadorn; 28, E. H. Sedgwick; 29, D. J. Hale; 30, E. A. Robinson.

May 3, Miss May Baker; 4, S. J. Redfern; 5, H. A. Dibble; 6, W. G. Amos; 7, J. E. Elliott; 10, G. N. Eastman; 11, W. R. Goodwin; 12, H. W. Hart; 13, C. F. Herrmann; 14, H. A. Hagadorn; 17, E. A. Robinson; 18, Miss Sadie Champion; 19, Miss May Baker; 20, W. G. Amos; 21, I. L. Simmons; 24, H. A. Dibble; 25, G. N. Eastman; 26, H. E. Van Norman; 27, J. A. Elliott; 28, H. W. Hart; 31, E. A. Robinson.

June 1, W. R. Goodwin; 2, W. G. Amos; 3, Miss May Baker; 4, H. A. Dibble; 7, I. L. Simmons; 8, C. B. Laitner; 9, E. D. Sanderson; 10, W. G. Amos; 11, G. N. Eastman.

All orations should be presented for corrections at least one week before the date of delivery. It will be necessary that students present their orations at the time designated, since only three days of the term remain un-taken. Further information can be had from the teacher in charge of the work. W. O. HEDRICK.

Prof. Smith's Lecture - Unsolved Problems.

The first lecture of the term in the Y. M. C. A. course was given Friday evening by Prof. C. D. Smith. Anyone who has heard Prof. Smith lecture will appreciate the futility of attempting to impart his personality to a written report. The good things he says are so interspersed with flashes of wit and touches of pathos that one must hear to appreciate.

The future of the laboring classes is one of the most perplexing problems. In the North improved machinery is taking the place of the laboring man. Each generation finds itself in possession of the accumulated wealth, knowledge and inventions of the preceding generation; it also falls heir to many of its unsolved problems.

In the South the slavery problem is still unsolved. But you say "The civil war"—the civil war did not settle the slavery question; it was but one step toward settlement. What shall be done to prevent the alarming increase of lawlessness in the South—the hundreds of lynchings?

We have in the South three classes, whites, poor whites and negroes; and it is with the negroes that come the most perplexing problems. But why are there more negroes in the South than in the North? Because it paid to keep slaves in the South and did not in the North. While the people of one section gradually worked away from slavery, those

in the other, at first gradually, and after the invention of the cotton gin in 1793 rapidly, worked into it. The economic effect on the South was not good; it remained agricultural; it did not develop its other resources.

The war came, slaves were freed, but the blacks still remained, improvident, uneducated, helpless. The old masters felt it their moral responsibility to care for the physical welfare of those who had been their slaves. Asked why they do not introduce improved northern machinery, these masters reply "What will our negroes do? They are here and must live. If we do our work with machinery they will have nothing to do, and they cannot care for themselves." And so we find the South confronted with the same problem that confronts us; they are 50 years behind us, it is true, but are facing the same way—machinery or labor, which?

We must not be discouraged. Our nation has long been paralyzed on one side; and now, as that side is slowly coming back to life, there comes a tingling sensation like that which is felt when an arm has been asleep and sensation begins to return. The pain almost makes us wish that sensation would not return. But something must be done. We must adhere to the idea that the public conscience will no longer submit to the frequent lynchings or to the petty annoyances to which the negro has always been a victim. Advancement, however slowly it comes, must come through the influence of public opinion and the enlightening influences of education.

An Inspiration to Students.

Every student in College should have heard the inspiring chapel talk given by Hon. A. C. Bird, '83, last Friday morning.

He said that during the past two and a half years his newspaper work had led him to ask college graduates a series of questions. One of these questions was "Do you often visit your alma mater; if so, why?" To the first part of this question most all answered "Yes, as often as possible." To the second part a variety of answers were given, but the most common was "To get renewed inspiration for my work." There seems to be encouragement in getting back and looking into student faces, in going over the college grounds and, most of all, in looking into the faces and shaking the hands of the faculty, who have done so much for us.

Another question was, "What do you most regret in connection with your college course?" To this there was but one answer, "That I did not better improve the opportunities offered me." No matter how poor or how good a student a man was, when he gets to dealing with the cold facts of a business life he finds reason to regret neglected college opportunities. But no man ever regrets the time spent in college; no man regrets that he took the full course. The instance was cited of the cashier of one of the leading banks of Detroit, a very successful business man, who left M. A. C. at the end of his sophomore year to accept a good position. Notwithstanding his success, he considers it the greatest mistake of his life that he did not remain in college for the full course.

Mr. Bird concluded with warm words

of praise for the student who works his way through college and then goes out into the world to be an inspiration to his fellowmen for a higher and broader intellectual and moral life.

Botanizing in California.

Will Cannon, with '93, who is a student of Stanford University, writes from Palo Alto, California, a very interesting letter describing his experiences during the spring vacation. We take the liberty of quoting portions of the letter.

"Monday I determined to begin to collect grasses, even if I had no wheel and had to rent one whenever it would be necessary to get about in collecting; accordingly, I started Tuesday for the mountains to collect and rest from study.

"The mountains west of here, about eight miles away, run parallel to the coast. They present an even and regular side to the valley but run out in many wooded spurs and deep ravines to the ocean. The 'greasers' and Portuguese live on the lower seaward side, where they raise cattle, chop wood, work in the lumber camps, fight, drink much whiskey, and die. The roads wind up and down the ravines or the ridges, running from one small town or hotel to another; and trails make short cuts through woods and ranches, skirting steep places or tumbling pell-mell down into rocky gulches.

"This is much the sensation that one receives from tramping for miles through these mountains. Of course, there is the sea that rolls its white breakers on the shore miles way and below you, and the occasional white specks which you are made to believe are boats, and this lovely valley which greets you in different vistas, full of trees and towns, and the San Francisco Bay, and the Mt. Hamilton range. You remember with longing the rich cream at some rancher's or the chicken at King's (hotel), but after all it is the un-American Spaniard with his long leather stirrups and black face, and the woods and roads and trails that impress you most.

"Tuesday I went to King's Summit. This is 14 2-5 miles according to the bicyclists, who have ridden to the base of the mountain and 'led' their wheels up the grade. I made it shorter by taking trails. I lunched in a corner of the mountain road where a noisy stream leaps rocks and fills gullies to run out again and on, and a long wooden trough leads water to the horse trough in the bend of the road. The water was so cool and pure! By four o'clock I had reached the hotel and engaged room and meals.

"That evening the sunset was most imposing. The sun went down in the distant sea behind a few bars of clouds. The deep wooded gulch sank at first gradually and then, as the sun quite disappeared, rapidly into twilight and darkness. The owls below began to hoot, and their long drawn and hollow sounds echoed like the call of lonesome men in the night. It was a sight and sound most impressive."

Mr. Cannon then tells of a trip down the gulch on Wednesday, a thirty-four-mile tramp on Thursday, back to King's and then to Palo Alto on Friday, by which time he was ready to rest.

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Official Directory.

PREACHING SERVICE—Sunday afternoons at 2:30 in the Chapel.

Y. M. C. A.—Regular meetings Sunday evenings at 7:30 and Thursday evenings at 6:30. C. W. Loomis, President. E. M. Hunt, Cor. Sec. retary.

Y. W. C. A.—Weekly meetings for all ladies on the campus, Tuesday evenings at 8:00, in Abbot Hall. Sunday meetings with the Y. M. C. A. Miss Clara J. Stocum, Pres. dent. Miss Ella Phelps, Cor. Secretary.

KING'S DAUGHTERS—Meet alternate Wednesdays. Mrs. J. L. Snyder, President. Mrs. W. Babcock, Secretary.

NATURAL HISTORY SOCIETY—Meets second Friday of each month in the Chapel at 7:00 p. m. H. C. Skeels, President. W. R. Kedzie, Secretary.

BOTANICAL CLUB—Meets Monday evenings at 6:30 in the Botanical Laboratory. Thos. Gunson, President. W. R. Kedzie, Secretary.

SHAKESPEARE CLUB—Meets Wednesday evenings at 7:30. Dr. Howard Edwards, President.

COLUMBIAN LITERARY SOCIETY—Meets every Saturday evening at 7:30, Middle Ward, Wells Hall. S. H. Fulton, President. H. Caramanian, Secretary.

ECLECTIC SOCIETY—Meets every Saturday evening at 7:30, Fourth Floor, Williams Hall. C. D. Butterfield, President. W. A. Bartholomew, Secretary.

FERONIAN SOCIETY—Meets every Friday afternoon at 1:00, West Ward, Wells Hall. Amy Vaughn, President. Katherine McCurdy, Secretary.

HESPERIAN SOCIETY—Meets every Saturday evening at 7:30, West Ward, Wells Hall. C. B. Laitner, President. L. E. Sage, Secretary.

OLYMPIC SOCIETY—Meets every Saturday evening at 7:30, Fourth Floor, Williams Hall. Elwood Shaw, President. W. K. Brainerd, Secretary.

PHI DELTA THETA FRATERNITY—Meets every Friday evening at 7:30, East Ward, Wells Hall. R. W. Clark, President. A. B. Krentel, Secretary.

UNION LITERARY SOCIETY—Meets every Saturday evening at 7:30, U. L. S. Hall. L. S. Munson, President. G. N. Gould, Secretary.

TAU BETA PI FRATERNITY—Meets on alternate Thursday evenings, Tower Room, Mechanical Laboratory. G. A. Parker, President. E. H. Sedgwick, Secretary.

CLUB BOARDING ASSOCIATION—I. L. Simmons, President. H. A. Dibble, Secretary.

M. A. C. ATHLETIC ASSOCIATION—C. B. Laitner, President. G. B. Wells, Secretary.

Gall Insects.

R. H. PETTIT.

A question often asked of the entomologist is "How did the little grub get inside of the oak-apple?" We are all familiar with the oak-apples or oak-galls found clinging to the leaves and twigs of our oaks. Most of us have found galls on various plants and trees, and some of us have, in an inquiring frame of mind, gone so far as to cut open one of these galls in hopes of finding some cause for its existence. If we were so fortunate as to carry on our investigation before the inmate had arrived at maturity and escaped, we found inside a small footless grub having a soft white body.

The growth of these galls and their tenants is yet full of unsolved mysteries, but we know something of the manner of their development. The mother gall-fly, a small winged insect belonging to the Hymenoptera or wasp order, lays an egg on the growing leaf

or twig. This egg hatches in due time and the grub which comes from it secretes a substance which causes an abnormal growth in that part of the plant which harbors it. This growth is definite and regular, resulting in the formation of a gall which envelops the little grub and completely encloses it as the growth advances.

The galls formed by this order of insects are always completely closed, leaving no means of getting rid of ordinary waste products of life. For this reason nutrition is carried on through the skin by absorption and the waste is probably disposed of in the same manner. The digestive organs have become, through disuse, of small size and are completely closed at the posterior end.

After a time, which varies with the species, the little grub passes into a pupal stage, corresponding to the cocoon stage of moths, and later after turning to an adult gall-fly like its parent, it gnaws its way out into the light and air.

There are many species of gall-flies, and each species with a few exceptions, produces a definite kind of gall on a definite part of a particular plant, be it on leaf, stem or root. Many of these flies may be reared with a small amount of care if the galls are gathered when full-grown and before the insect emerges. The galls require only to be placed in a jar with a cloth tied over the mouth.

Department of Zoology.

The Book Store.

The College cooperative book buying association has been for so brief a time the means of procuring books for the students that some statement of what it has done will doubtless interest our readers. Much was said during the establishment of this association about what "books should sell for" under the new scheme in comparison with what they had sold for. We give below the facts of such a comparison. The price is given of what books under the old system sold for during the past year, and then the price at which the association, after paying all expenses of buying and handling the books, were able to furnish the same books to the students of the college:

Text Books.	Former Price.	Association Price.
Hammel's Elocution	\$1.00	\$.81
Churche's Mechanics	5.50	5.31
Klein's El. Machine Design	4.75	4.18
Walker's Pol. Economy	2.25	1.85
Bloxam's Chemistry	4.25	4.17
University Algebra	2.00	1.85
Analytic Geometry	1.40	1.14
Genung's Soph. Rhetoric.	1.40	1.13
Beman & Smith's Geometry	1.40	1.13
School Algebras	1.30	1.13
Jevon's Logic	60	50
Anthony's Mech. Drawing	1.65	1.09
Ganot's Physics	4.00	3.73
Pancoast's English Lit.	1.40	1.20
Descriptive Geometry	2.75	2.22
Hodgman's Surveying	2.25	1.91
La Conte's Geology	3.50	2.96
Johnston's Surveying	4.00	3.67

This does not include the entire list of books handled by the association since many kinds of books were used this year for the first time, hence could not be compared with former prices. The association has 190 members, purchased \$760.43 worth of books (including a small amount of stationery) last term. The expense of carrying on the business was \$50. An inventory of \$64.43 was left on hand at the end of

the term. By an 8 per cent increase on the cost of books \$57 was secured to defray expenses. W. O. H.

The Threshing Machine.

A. E. WALLACE, '99

UNION LITERARY SOCIETY.

It has been claimed, and justly, too, that the railroad was the pioneer of western civilization, but a very important factor in advancing this civilization in some of our western states has been the threshing machine. Without it our civilization would have been confined to a comparatively small area; this machine alone having made possible the growing of thousands of acres of grain upon land which it would otherwise have been impossible to improve.

Let us glance at the improvements made by Americans in the implements for threshing grain. Until within the last century, the flail and even more primitive means were employed in separating the grain from the chaff and straw. The first great step in improvement was the invention of a small separator which was run by a tread mill and later by a horse-power. This machine was slow and very inefficient, but at the time was considered a great invention and was, indeed, far better than the old method.

Frequent inventions have been made, each better than the preceding; different features have been added until the modern threshing machine stands forth as one of the most useful agricultural implements ever invented by man. If we compare it and its appliances for self-feeding, self-weighing and self-stacking with the improved machinery of other industries, it shows that the advancement in this line has more than kept pace with that in other lines.

The type of machine used in the West differs widely from that used in Michigan and other parts of the East. The engine is a straw or coal burner and a great deal larger than our engines. The separator is also large, having a very wide cylinder, and, if not a self-feeder, is fed from both sides at the same time. The self-feeder has been a successful feature except in very heavy, tangled grain. The only serious objection to it was that if the bundles were thrown upon it crosswise or overlapped they clogged the machine, as the belts running the feeder were not powerful enough to draw them under the shaft upon which the knives revolve. These knives are usually made of steel, although a few companies use some hard wood.

The automatic stacker has been used for some time with varying degrees of success and is a great saving of labor and money, as it requires only one man to do the work of stacking. But the automatic stacker is being rapidly replaced by the cyclone stacker or straw blower.

This contrivance consists of a large cylindrical tube of sheet iron having a hood on the end to regulate the direction of the straw. At the bottom of the tube is a large steel fan which revolves at a very high rate of speed and blows the straw falling directly upon it, up the tube. It is furnished with machinery by means of which the tube is given a radial motion, thus making the stack of straw larger than it would be if the tube were stationary. The stack is also larger and better shaped than when the automatic stacker is used. This invention is not appreciated in the Dakotas as much as it is in other places because the greater part of the straw is merely drawn a

short distance from the machine to get it out of the way, and is afterward burned.

The self-bagger is not much used in those parts most exclusively devoted to wheat raising, the usual method being to elevate the grain from the spout to about five feet above the top of the separator, where it is weighed and run into a grain tank by means of a movable spout.

In many parts of the West where the season is comparatively long, it is not of so much importance that the separator be of such large capacity; but in the Dakotas and Manitoba, where the crop is late in ripening and the season short, it is of the greatest importance that the threshing be done with all possible haste. Here the very largest machines are used and everything possible is done to hurry the work and even then they are often compelled by the setting in of winter to leave some grain until spring. Only machines of the very best quality can endure the strain placed upon them. Twenty-eight hundred bushels of wheat is not an unusual day's work for an enterprising thresher, and under favorable circumstances still more can be done.

The making of these machines is a lucrative business and one in which Michigan is much interested, as more machines are made in this state than in any other state in the Union.

To Tax Bachelors.

B. BARLOW, '99.

Rep. Donovan of Bay County introduced into the House a bill for the taxing of unmarried men. This bill now rests in the hands of a committee and will probably never come to anything. It is not printed and, indeed, was only the skeleton of a bill, yet the problem involved in it is one of vital importance to the state and to the nation.

Americans do not marry fast enough, too many of our young men remain unmarried. Is the native stock to die out and are we to be disinherited by the more fertile peoples from Europe? We find no adequate answer in this proposed bill. Two claims are made for it—first that it would cause bachelors to marry, and second that it would be a source of much-needed revenue.

These two claims are incompatible, for, if the bachelors marry, where then is the revenue? Conversely, if the revenue is large, it must be that the bachelors have not married. In so far as the one succeeds, the other of necessity fails, and to claim both is inconsistent. Let us look at them separately.

If the tax is for revenue only, why select the bachelors, already unhappy? Why not tax the married people? there are so many of them the revenue would be large. Why not tax the very old people, say \$20 every year after 70 and \$40 after 80? There is the income tax not yet tried.

But it is urged that bachelors do not own real estate nor taxable property and so do not bear their share of taxes. To this we answer: Others besides bachelors do not own real estate, in fact there are thousands of married people living in rented houses in this state; many bachelors do own real estate and others would if they could get it.

The proposed tax would not be equitably adjusted, it would not be proportionate. Forty dollars would be 10 per cent of a poor man's yearly income and not 1 per cent of a rich man's. There are other sources of revenue both ample and just without having recourse to class legislation.

But would such a law cause bachelors

to marry? Of course the rich man will not be influenced one way or the other by a trifling tax. But the poor man, it is argued, will marry to avoid the tax. Now if the married man's taxes are so burdensome will the bachelor make haste to assume them? That would be out of the frying pan into the fire.

If a poor man is working hard and saving money for a future home and family, a bachelor's tax will not hasten his marriage, but rather defer it. A man knows his duty in these matters better than the state and will marry or delay to marry as it seems to him fitting. There are relations in human life which the individual must decide. They are too delicate, too sacred, for the harsh interference of the state. As to such a measure as we are now considering, it may be that Americans are too much influenced by money considerations, but we do not put marriage on a money basis.

At the College.

Mrs. Bandholtz and son, Cleveland, returned to College, Friday.

On Monday of last week D. J. Crosby received a short visit from his brother-in-law, F. F. Wetmore of Pentwater.

Abbot Hall has undergone a revolution during the past week—Miss McDermott has received her wheel from the East.

The King's Daughters will meet at Mrs. Holdsworth's, tomorrow afternoon, Leader, Mrs. C. L. Weil. Text, "Fear Not."

Mr. G. H. True returned Saturday from Madison, Wisconsin, where he has spent a month studying cheese making methods.

Hon. A. C. Bird and Hon. T. F. Marston spent several days at M. A. C. last week familiarizing themselves with the work of the College.

The Thursday evening Y. M. C. A. prayer meeting will be led by Mr. R. M. Agnew. The topic will be "Bible directions for practical life."

Sunday evening the union services held in the Y. M. C. A. rooms will be led by Mr. Cartland. The topic for discussion will be "Christian Self-reliance."

The boys say it is quite an inspiration to have a crowd of enthusiastic co-eds cheering them on to victory. This happened last Saturday for the first time in the history of M. A. C.

In the Balmy South.

Students who were here in 1889-91 will be glad to hear from their warm friend, Mrs. Jane Sinclair-Deal, who was librarian during those years. Mr. and Mrs. Deal have been spending the winter in Florida, whence Mrs. Deal has written to college friends several delightful letters. In one of these from Daytona, March 12, she tersely describes the dining-room of the first hotel tried—"Spots on the table cloths, ragged napkins, slow waiters, \$10 a week." The next experiment is evidently more to her liking. "This is a beautiful house facing the broad Halifax—service perfect, everything right and terms reasonable—\$15 per week." Describing some of her pleasant experiences, she says: "One of the most delightful trips that I ever took was on the Ocklawaha river; our boat was the Okeelunikee. There was a party of 32—I do not mean that it was an excursion but that was the number of tourists on board. We had first 25 miles of the broad, beautiful St. Johns, then 192 of the Ocklawaha and eight miles of the Silver springs, and it is on this latter stream where we saw alligators

and turtles without number. There are 976 turns in the Ocklawaha river in that distance, and it is so narrow in some places that the boat had to go nearly aground in making the turn.

"Bushes covered with white blossoms, gray bushes hanging over with their own weight of red berries, cardinal flowers, the wild jasmine with golden blossoms, and a lovely white lily, were among the things almost within reach from the deck, that tantalized us; but our hard-hearted though jolly captain would not stop even once to let us gather them."

Surely all who know Mrs. Deal will unite with us in wishing her the enjoyment of many such happy winters.

Have Fish a Memory?

This question is being studied by Prof. Ludwig Edinger of Frankfort-on-the-Main, who has sent to scientific journals a request couched in the following language:

"Have fish a memory? A request for information. There is a general opinion that fish have some sort of memory, that they can recognize people, know how to find or to avoid places where they have made formerly some experiences, that fish which have once escaped the rod know the bait, etc. It is highly desirable that all experience of this kind should be collected in the interest of comparative psychology. The reason is that till now we believed the function of memory to depend on the action of the brain cortex. All experience in man and in the higher animals has led to that conclusion. During the last years it has been proved that fish have no brain cortex at all. They are the only existing vertebrates without a brain cortex. Now if we could prove beyond the possibility of doubt that fish really have a memory, that they gain experience and can make use of it, then we shall have to give up the till now general opinion that memory has its seat in the brain cortex. Therefore it is extremely important to have an entirely new set of experiences."

Professor Edinger is anxious to hear what anglers and naturalists may have to say on the subject, and requests all who have anything to say about it to communicate with him at 20 Gartnerweg, Frankfort-on-Main, remembering that the most trivial circumstance may be of value in his investigation.

Sugar Beet Culture.

Waldo Rohnert, '89, is in the business of seed growing at Gilroy, California. Under date of April 3 he writes an interesting letter to Dr. Kedzie, from which we are glad to quote such parts as will be of value to prospective Michigan sugar-beet growers.

"The ideal soil for beets is a sandy loam, one that will work up as friable as a garden. Plowing usually starts after the first rains in the fall and is usually done to the depth of from 7 to 9 inches. The land is then harrowed down and made very fine. The second and main plowing usually starts about March 15 and is as deep as a 14-inch plow can go. This second plowing is done with a three-horse team—one horse in the furrow and two on the land. The land is again harrowed very fine and sowed. It is of the utmost importance to plow deep, as the sugar factory will not accept forked beets or those grown out of the land.

"For sowing, a two-horse drill is used, sowing four rows at a time. The drill is 'force feed'—usually a revolving wheel with stiff bristles is used to force the seed. The seed is sown about

an inch deep and after a rain. Even a light shower will sometimes crust the light soils and make a second sowing necessary. After the seed is up the fields are taken in charge by Chinese and Japanese, who work the beets for \$1.10 per ton. This includes all the work of thinning, hoeing, topping and putting into wagons. In poor soil the plants are not thinned very much, but in rich soil they are left six to eight inches apart. The factory refuses all beets over four pounds, and would rather have them average about two pounds. The factory pays \$4.50 per ton delivered, and deducts always 5 per cent and sometimes 20 per cent for dirt. The average crop is about 14 tons per acre, but a crop of 18, 20 or 22 tons per acre is not uncommon.

"To get the beets out of the land, a regular beet plow is used, which is simply a double-beamed plow—beams joined together by a steel arch above. From the lower side of each beam projects (curving in) a piece of wrought iron, to the lower end of which is fastened a plate. This plow can be arranged to go deep or shallow, and does not take the beets out, but lifts them up several inches so the topper can pull them out without any exertion.

"There is building now at Salinas, about 20 miles from here, one of the biggest beet sugar factories in the world. It will require several thousand tons a day.

"Beet sugar pulp is used by the stock raisers very extensively for cattle, and is usually fed with grain. The tops and leaves are also used. The growing of beets is considered profitable. Ten tons to the acre will pay expenses, and over that is profit.

"Several reasons why farmers in Michigan should grow beets are:

- "1. It helps to make a rotation of crops.
- "2. Deep plowing and clean ground will help all kinds of land.
- "3. It is considered profitable.
- "4. It furnishes an abundance of work for the unemployed.
- "5. It furnishes feed for stock. I should think it would make good ensilage.
- "6. It would lessen the growing of other crops which are now considered unprofitable.
- "7. In case of war or international difficulty, the United States would not depend on other countries for her supply of sugar.
- "8. Much of our good gold would circulate at home instead of going abroad."

"The college men are very slow, They seem to take their ease; For even when they graduate, They do it by degrees."—E. r.

...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.

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News from Graduates and Students.

John D. Nies, '94m, writes that he will attend the triennial reunion.

Albert B. Chase, '93, has made arrangements to attend the alumni reunion.

H. B. Cannon, '88, has been appointed chief clerk of the school of agriculture at Cornell University.

Alfred R. Locks, '91, attorney at law, Belding, Mich., says "I hope to be in attendance at the alumni reunion."

G. A. Goodenough, '91m, will sever his connection with the Illinois State University at the end of the year, and accept his old position at Scranton, Pa., at a largely increased salary.

Charles S. Guile, '79, is a practicing attorney at Bellaire, Mich. Of THE RECORD he writes: "I find in its columns much of interest to me in matters pertaining to the College, its graduates and students; and in its special articles upon matters pertaining to the farm."

"Dusty" Rhodes, with 97m, was among our Albion visitors Saturday. He plays "sub" on their ball team. When "Dusty's" father heard that his son was playing on Albion's nine he said: "They must be hard up for baseball players."

Wilbur F. Hoyt, '83, physician and surgeon, Paw Paw, Mich., writes: "Tho' often too busy to give it (THE RECORD) the careful perusal I would wish, its weekly advent serves to keep me in touch with M. A. C. affairs to some extent, and shows me that, for the present at least, there is no danger of my alma mater being turned into a penal settlement."

From Henry G. Reynolds, '70: "It may interest some of your readers to whom California seems to be a long ways removed from the middle of things, to know that in the three and a half years we have lived here we have had the pleasure of meeting 36 former friends from M. A. C. and Lansing, and 50 from other parts of the country. Where could we have made a higher record?"

Appointed to a Good Position.

Maurice G. Kains, '95, [Cornell, '96], has been appointed to a government position at Washington as assistant to Mr. F. V. Coville, Botanist of the Department of Agriculture. Mr. Kains will be in the department which tests, as to their adaptability to the American soil and climate, the crops now imported into the United States.

His special work at the beginning will be experimenting upon the growth of chicory, which is grown but little in the United States, but which is imported in great quantities, and on which the Dingley Bill has imposed an ad valorem duty of 20 per cent.

Since his graduation here Mr. Kains has been a student at Cornell, from which institution he graduated last year, gaining a position on the Woodford stage. During the present year he has been pursuing a special line of graduate work in horticulture at Cornell. His many M. A. C. and Lansing friends will be glad to hear of his good fortune.

There are meters of accent,
There are meters of tone;
But the best of all meters
Is to meet her alone.—E.v.

"Oh, mamma, I have found out why Mrs. Solide talks so much." "Gwen, my pet, you shouldn't—" "Yes, but, mamma, don't you see she has a double chin!"—New York Tribune.

Principally through the introduction of improved American machinery the annual output of kerosene from Japan increased from 1,172,778 gallons in 1884 to 9,054,458 gallons in 1894.

The olive crop in Andalusia, Spain, amounted to 160,000 bushels in 1895.

ATHLETICS

Albion baseball player to Wells—"You are a pretty boy."

Wells—"I wish I could say as much for you."

Robert Gayle, the baseball coach, left for Detroit Sunday night. He has been a great help to our nine, and nothing but praiseworthy remarks are heard about him.

The practice game last Thursday, between the Lansing State league and M. A. C. was won by Lansing. Score, 17 to 7.

Baseball at Olivet, May 19: Olivet, 16; Ypsilanti, 12.

Olivet won from Kalamazoo Saturday at Olivet. Score, 8 to 7.

Albion was defeated in a game of baseball at Kalamazoo Friday by a score of 10 to 3.

We are in receipt of the first number of *The College Athlete*, which is published monthly in Boston, and is devoted to college and high school athletics. It includes many authorities in college athletics among its contributors and has correspondents in nearly every college in the country. Frank V. Warren is the M. A. C. correspondent.

M. A. C. Redeems Herself.

In spite of a heavy shower in the morning and another after three innings had been played, we saw a pretty game here Saturday afternoon. A wet ball in the third gave Albion her only scores, accounted for by three men on bases and a wild throw. The same cause contributed to Albion's defeat in the fourth, when five hits, three bases on balls and a few errors piled up six runs for M. A. C. Howe finished the game in the box and allowed but three hits and one run. Warren did remarkable work in the box, holding Albion down to two hits; and he was well supported in the field. In the second McLouth made a sensational catch of a foul behind third base. Gunn is making an enviable record, both in the field and at the bat.

The Albion boys played a very gentlemanly game but are weak at bat and reckless base runners. Howe seems to be the life of the team. A. A. Owens, of Lansing, umpired and gave excellent satisfaction. The score:

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DAVIS—THE CLOTHIER

M. A. C.

	AB.	R.	H.	O.	A.	E.
Adams, c	5	2	1	3	1	0
Krentel, A. C., 1b	4	0	1	9	0	0
Gunn, lf	3	0	1	2	0	0
Ranney, 2b	3	1	0	3	3	1
Clark, rf	4	1	1	2	0	1
Warren, p	5	1	1	0	4	1
Gould, 3b	4	1	1	2	3	1
Krentel, cf	5	1	1	2	1	0
McLouth, ss	5	0	2	4	0	1
Totals	38	7	9	27	12	5

ALBION.

	AB.	R.	H.	O.	A.	E.
Howe, 1b and p	3	1	0	9	1	1
Cogshall, ss	2	0	0	0	2	1
Loud, rf	3	0	0	0	0	0
Handshy, 2b	3	0	0	4	1	1
Beal, p and 1b	4	0	1	6	2	1
Coppens, 3b	4	0	0	1	4	1
Williams, lf	1	0	0	1	0	1
Thoms, cf and ss	4	0	0	0	0	0
Albertson, c	4	1	1	6	2	4
Rhodes, cf	1	0	0	0	0	0
Totals	29	2	2	27	12	10

Base hits—Off Warren 2, off Beal 6, off Howe 3. Earned runs—M. A. C. 1. Two-base hits—Clark, Warren. Sacrifice hit—Gunn. Stolen bases—A. C. Krentel 2, Gould, A. B. Krentel 2, Williams. First base on balls—By Warren 4, by Beal 3, by Howe 1. Hit by pitcher—A. C. Krentel, Howe, Cogshall. Struck out—By Warren 1, by Howe 4. Wild pitch—Warren.

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M. A. C.	500
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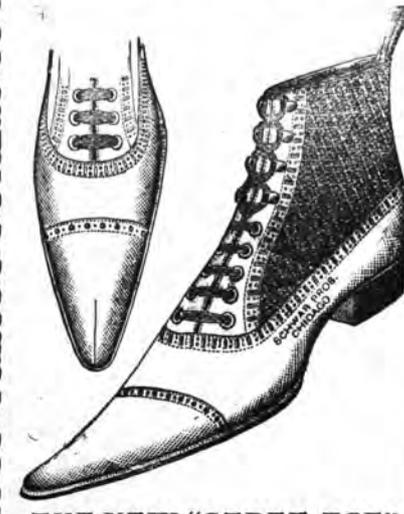
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