

THE SPECULUM.

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WHOLE No. 76.

Horticulture in San Diego Co., Cal.

SAMUEL C. DONDORE, CLASS '91.

No State in the Union promises such success in horticultural pursuits as does California. In order to appreciate the horticultural possibilities it will be necessary to give a short description of the country, climate, soil and the cultivation, planting and pruning of fruit trees. Also the vegetables best adapted to the county.

San Diego county is quite hilly and mountainous, but it is only the beautiful valleys and foothills that are under cultivation. They are very productive. The valleys, as a rule, are quite level, having grand and picturesque scenery around them. The land, not cultivated, is mostly covered with brushes of different growth and a few trees such as the live oak, sycamore, poplar, etc.

Under our climatic condition—all things considered—no State in the Union is as much favored for horticulture. The temperature varies very little during the year. We have the periodic winds that keep the days pleasant and the nights cool. Our rains generally come from November until May in intervals. The amount of rainfall varies from 15 to 25 inches a season in the foothills, and near the coast only about 10 inches. We do not expect any rain after May until November.

The soil varies in different localities as does the climate at different elevations. For fruit raising the soils best adapted are red sandy loam, and sandy alluvial. Some varieties of deciduous fruits such as the pear, apple and cherry do better on heavier soils. Small fruits and vegetables require a rich sandy alluvial soil.

In the culture and care of trees, much

of the success of fruit raising depends. Californians are noted for their perfection in cultivation. The orchards are plowed in December and in April so as to keep the soil loose and catch all the winter rains. We cultivate after each rain, and during the summer when we have our drought, we cultivate twice a month and thus retain the moisture to insure a good growth and fine fruit. Along the coast where the amount of rainfall is short, irrigation is practiced and the cultivation is slightly different. Small fruits and vegetables are irrigated every 10 days during the summer and cultivated two days afterwards.

After the soil has been well prepared the deciduous trees small fruits are planted from January on, till the middle of March, while the citrus trees are planted from March till July. The distance the trees are planted apart varies with the varieties. For most kinds they are planted from 20 to 25 feet either in a square or triangle, the latter method being preferred because the trees can be cultivated in three different directions.

Pruning is generally done from December on to March. The shape of the trees is that of a goblet or a V. Trees, after they are planted, are cut back from 18 inches to three feet. Cutting trees back to two feet is preferable. During the first year's growth only from three to five branches are allowed to grow out of the main stem. The second year they are cut back to one-third of their growth of the first year, and two more branches are allowed to grow, with laterals from these where the fruit sets. The third year the branches are again cut back to one-third of their growth, and two more branches are allowed to grow from the branches of the second year's growth. During the fourth and fifth years the

same method is followed as during the third year's growth, except that the branches are only cut back to one-half of their growth. After the sixth year not much pruning is done. The object of close pruning during the five years is to form a strong tree so as to support the tree when in full bearing. Small fruits are pruned mostly after the judgment of the owner.

The leading varieties of fruits raised for profit are the oranges, lemons, apricots, peaches, raisin grapes, prunes, almond and olives. Most of these begin to bear the second and third year. The first two varieties have to be irrigated from three to five times, while the remainder do not need to be, except along the coast where two or three irrigations a season are needed. Oranges ripen from November till May; lemons every month in the year, while the remainder of the fruits ripen from June till December, and come in the order above named. Among the small fruits raised here are the blackberries, raspberries, strawberries, gooseberries, currents, guavas, etc. After two year's experience I found that we could raise vegetables during the year as per schedule, except celery, asparagus, and rhubarb which are a failure as to quality.

TIME OF PLANTING VEGETABLE SEEDS.

January—After the 20th: Spinach, turnips, lettuce, early peas.

February—Potatoes in field, onion sets, radishes, beets, carrots.

March—Spinach, turnips, lettuce, late peas, early cabbage plants, wattermelons, muskmelons, pumpkins, squashes, cucumbers.

April—Tomato plants, radishes, beets, carrots, early beans, early corn.

May—Turnips, lettuce, carrots, late cabbage plants.

June—Radishes, beets, late beans, late corn.

July—Cucumbers, lettuce, carrots.

August—Late beans, late corn.

September—Potatoes in field, turnips, radishes, carrots.

October—Late cabbage plants, lettuce, beets, late peas.

November—Onion sets, turnips, spinach.

December—Winter radishes.

Flinn Valley, Lakeside P. O., Cal.

President's Address at the Public Meeting of the Honorary Fraternity, Tau Beta Pi.

BY GEO. E. SIMMONS OF THE OLYMPIC SOCIETY.

Ladies and gentlemen, fellow students:

In view of the fact that but little is known of this society, so quietly does it work, it seems but proper that something should be said at this meeting, in regard to its objects; and perhaps, also a brief history be given of it.

During the past few years there has sprung into existence in this country, a great many colleges which are purely technical in their teachings. Along with their establishment comes a desire for a society composed entirely of technical students. It was this desire which led to the establishment of the honorary society, Tau Beta Pi. It was first perfected in Lehigh University in 1885, and is now being talked of in a great many of the technical colleges of the country. A society of similar nature known as Phi Beta Kappa is old and well known in colleges of liberal arts.

The objects of the Tau Beta Pi, are clearly set forth in the preamble to its constitution as follows: "To mark in a fitting manner those who have conferred honor upon their Alma Mater by a high degree of scholarship as under-graduates, or by their subsequent attainments as alumni, and to foster a spirit of liberal culture in the technical and scientific schools of the United States."

Many students study for the delight of acquiring knowledge, an incentive somewhat similar to that which prompts men to jump from the dizzy heights of Brooklyn bridge or to swim the whirlpool of Niagra. They accumulate knowl-

edge as a miser does money. The average man desires to possess a record of his abilities, providing it can be obtained in a fair and just manner. Such a record can be used in dealing with strangers who desire to know what kind of a man he may be.

With the presentation of diplomas, college work ends. As a rule a diploma gives no indication as to the rank of its possessor. In the eyes of a stranger, the one to whom the graduate needs to show a record of his ability if to anyone, it reduces the valedictorian to the same level with the man who graduates only after repeated re-examinations.

If a man's college work may ever be taken as a criterion of his aptitude or inability, it is especially applicable in the technical course. Tau Beta Pi is designed to compensate for the deficiency of the diploma, and the time is coming, if it is not already here, when a certificate of membership to the society will mean more than his diploma.

But, high rank is not the sole requirement for membership; the candidate must be a man who can be lived with. Success in life depends as much on one's adaptability as on what one knows. High rank will put a name in the list of candidates, but an elective requirement is introduced so that all who have shown lack of congeniality, or have been dishonest in their work are passed at election.

It sometimes occurs that a class as a whole, is of low grade. So it would not do to take a fixed number from a class without regard to its rank. To avoid this a minimum grade of seventy-five per cent must be passed by all candidates, and a class of generally low stand will have no members or fail in its quota. Tau Beta Pi takes only the highest one-fourth of the class. It is often said and with good grounds for the assertion, that the men who hold highest rank in their class are not always those who attain best success in their professional life. There are many cases where this holds true. But, we must judge a man in college as he is judged by the business

world. We must remember that close application and strict attention to duty are keys to success. To hold a high rank in one's class requires a considerable amount of both. It is a reasonable application of the law of probabilities that if a man possesses this ability in college work, he will make use of them in his professional life.

One of the gratifying results of the society's influence, is the creation of a friendly and wholesome strife among students to see who shall be the first of their class to become a member. This strife cannot but improve the quality, and increase the quantity of the work done. The honor of wearing the badge of Tau Beta Pi is a reward for good solid honest labor.

The elections for membership are held during the first part of the junior year. Only the highest one-eighth of the class being eligible during that year. The remaining one-eighth are eligible at the beginning of the senior year. This method prepares the first one-eighth to receive the second, and greatly promotes the best interests of the society.

The meetings are held every two weeks and are secret. The work consists of preparing and reading papers, generally of a technical nature. The papers are to require not less than thirty-five minutes for reading, and are afterwards discussed. Each member chooses some particular line of work upon which to keep posted, and from time to time presents the results of his reading. Current technical literature receives especial attention.

The badge is a miniature "bent" of a trestle worn as a key, and has on it the owners name, chapter, and the symbols of the society. Each member receives a certificate which bears his rank, name, and its date of issue.

The possession of this certificate and badge indicate to all the ability of their possessor, and it matters but little whether the diploma reads "with honor" or not.

The fortunate owner goes out with his rank as a student accurately known.

pearing before a large commencement audience is beneficial to them. This is true, as far as it goes. There is no gain-saying that the orators are benefited by the parts they take at commencement. The exercise of writing and delivering an oration is always very valuable. Nevertheless the argument is a poor one, because such benefit is special, not general; is confined to a few, and not given to the many. If the college really sought by this means to benefit its students, its aim would be accomplished much better if all members of a class were given parts in the program. As this is not done, the argument that it is one of the aims of the present system does not hold, and cannot be used in support of it. The only real bearing of the argument under consideration is that the State is guilty of a form of favoritism.

The second argument is: That by hearing the orations people not connected with the college are given some idea of the work done by it in developing its students. In one sense this is true; that sense, however, is very narrow. It is true that the speeches as delivered at commencement show that the speakers have been benefited by their college training; they illustrate the improvement that comes to the student in the progression from a freshman to an alumnus. Nor is there anything objectionable in the wish to advertise the college and its work; but this method of doing so is open to criticism because it is one of the poorest that could be adopted. Successful business men advertise that part of their trade which is most extensive and profitable; a grocer does not seek to advertise his own goods by expatiating upon the excellence of another merchant's line of hardware. In strict analogy, this college should not attempt to make public its facilities in teaching agriculture or the mechanic arts by displaying the results of its students' somewhat limited training in oratory. A college for oratory alone might with propriety use that method; but not a college such as this.

The third argument is: That the

students are stimulated to higher scholarship in striving for commencement honors. This is by far the best argument that has ever been advanced in favor of the system, but nevertheless it is faulty. Let us see who are affected by it. Certainly not those whom instructors and classmates tacitly acknowledge to be leaders in the classes; they, knowing their object in coming to college, and working to attain it, need no such encouragement. The lukewarm, undecided students are the only ones whom this commencement oratorship bait incites to harder study and better scholarship. But this training is forced and far inferior to that which would result if the motive were a better one—if it were such as would lead to preparation for the broadness of life as a graduate, rather than the narrowness of a commencement honor.

To other members of the class this serves as a positive detriment. There are certain times in a man's existence, especially during that part of it spent in college, that a little encouragement or discouragement may be the shaping of his life, perhaps even the moulding of his character. Is there anything that can better furnish discouragement than a man's realization of the fact that he cannot secure the oratorship which is so often held before him as the *main* end of college life? This influence is active on very many, impelling some to leave college entirely, and others to become its poorest students. For every man that is benefitted by the system another man is pushed back.

We have seen how the system accomplishes but little of that which is claimed for it. It has, in addition, other defects, and they are so numerous that presentation of all would be impossible in an article of this length.

First, it is extremely unjust in very many ways. One is that it forces all who enter to compete with each other in the struggle for oratorships, although their associations, resources, educational advantages, etc., are so widely different. This statement may be objected to on

the ground that the students are not *forced* into any such competition. Let us see. If any student chooses not to be a candidate for commencement honors how many know of it besides his friends and associates? The world outside of the college does not recognize that he has not attempted to be an orator, but can only believe that he has failed as a scholar. No student can escape this; all are forced into the unequal contest and then compelled to accept the consequences of a possible failure. What can be more unjust than this?

The method by which the orators are selected is very wrong. It is based upon the assumption that a student's marks are indicative of his scholarship, which assumption is false. During the earlier part of the course the classes are quite often divided into sections for convenience as to numbers. In most cases the sections are taught by different instructors from whom the students receive their marks. It would be absurd to think that a man under one instructor would be marked the same as one who was even exactly his equal in the other division. Without further discussion it must be clear that during the first year or so of the course the records of the students cannot be taken as measures of their scholarship.

This, however, is but a specific instance. The same thing holds true all through the course. The "personal equation" of the instructor, which, in so complex a problem as the rating of a student's work must be a controlling factor; his individual likes and dislikes; the inefficacy of final examination standings in showing what the students have done; the use, by some students, of questionable methods to better their records; the fact that the classwork of a student depends so largely upon his training prior to entering college, which training is so widely different with different students; these causes combine to so affect a student's class records that it is most unfair to take them as being more than partially representative of his work.

If the statements just made are true, then certainly the assumption that marks indicate scholarship, which assumption is the basis of the present system, is ill chosen and false and its falsity carries with it emphatic condemnation of that system. A building is not stronger than its foundation.

The audiences which hear the orations are not appreciative. No orator has yet succeeded in interesting more than a little circle of his friends and relatives who were there solely to hear him speak and whose interest was all in *him* and would not cease even were his speech one of the poorest ever delivered. As for the greater part of the audience the impressions made upon them are as limited and fleeting as the sound of the orator's voice and of no utility whatever.

The orations are supposed to be instructive and useful and if they cannot be called such of what use are they? Let us see if they are of that nature. On account of the nature of his audience the speaker cannot choose a subject of local import, but must take one of general interest. Yet it is expected of him, who has completed a course which is only the beginning, not the conclusion of his education, that he will give useful instruction to those who hear him, upon a subject with which he must necessarily be unfamiliar. His hearers are, for the most part, people who have had actual contact with the conditions of life while he having been four years almost entirely isolated from the world's activities, cannot possibly present other than borrowed ideas upon any current topic. When one is about to start out for himself how absurd it is for him to attempt to instruct others. What he needs most is good advice from someone who has fought life's battles and is prepared to give good counsel from the storehouse of experience rather than from theory and can forewarn the student against possible mistakes.

Some such plan as that just hinted at has often been advocated and in all probability will some day be adopted. It

would possess all the advantages of the present system with none of its numerous defects. Other institutions have discarded the old system, adopting in its place the new one, which in all cases, experience has shown to be far better. It is to be hoped that such a change will ere long take place at this college.

SCIENTIFIC.

At the last meeting of the Natural History Society, Professor Barrows gave an amusing and instructive talk on the food habits of birds. The crow, for instance, swallows a large amount of food upon every occasion offered, and then at its leisure, regurgitates it and eats it again. The crow is also a lover of fruit and eats an enormous quantity of it, the seeds of which it regurgitates after denuding it of its flesh. A great many birds eat gravel with their foods to help grind it in the gizzard. This sand or gravel remains in the gizzard until it is worn down small enough to pass out of the intestines. A good feed of gravel will last some birds for a number of days. The crow, on the other hand, requires a fresh supply of sand with each meal; as all indigestible matter is at once regurgitated. Robins possess this same power of regurgitation. Often they fill the whole space from the gizzard to the tip of the bill with cherries which they regurgitate to their young. Crows have a passion for bright objects and swallow with avidity the wing covers of bright colored beetles, etc., with apparently no other reason than the attractiveness of the object.

Mr. John Neis gave a talk before the society on the relative strength of woods when cut in different forms. As an example two pieces of butternut, similar in regard to grain, seasoning, weight, etc., were taken and cut in the two forms shown by the following diagrams:



In these diagrams both pieces are of exactly the same length, have the same width at the center, and the end areas are the same; the only difference being that No. 2, instead of having a notch cut in the end as in No. 1, tapers from the end to the center of the stick. When these two pieces were put in the testing machine and tested, No. 1 broke at a pressure of six hundred pounds, while No. 2 broke only at a pressure above two thousand pounds. As nearly all joists are cut similar to Fig. 1, it would seem that this is not the best method of utilizing the maximum available strength of such timbers.

It has been quite generally believed among the farmers that clover should be sown either in the spring or in the fall. The Farm Department this year is conducting a series of experiments with clover by planting seed every month during the growing season. They hope by this method, to find some period when clover may be sown and the uncertainty of a "catch" by spring and fall sowing avoided. A great many acres of two-year-old clover in this section of the State has been completely ruined by the clover root borer (*Hylastix trifolii*). The new clover does not seem to be effected even when within a few feet of the old fields. Down in the southern part of the State the clover leaf beetle seems to be getting in its work rather freely. Professor Davis received a letter a few days ago from a farmer living near Cassopolis, stating that one of his cows had been made sick by eating the clover infested with this beetle.

An examination of the beetle, however, revealed the fact that the beetle had been attacked by a fungus disease. And it was the fungus which caused the sick-

ness rather than the beetle. The fungus attacks the beetle in the larva state and kills it in six or eight hours; hence if the spores of this fungus could be scattered throughout a whole field, it is quite probable that the beetles in that field would soon depart. Professor Davis and Professor Wheeler are now working to find some medium in which these spores may be propagated. Should they succeed, the raising of spores will make one more industry in which men can profitably engage for the purpose of laying up shekels.

The new forage plant on the farm, *Lathyrus Sylvestus*, has passed the winter in good shape and is looking well. The one objection offered to the raising of this crop is that it takes such a long time for the seed to germinate that the ground becomes full of weeds. The farm department is experimenting with these seeds to see if the period of germination cannot be hastened. In one experiment the seeds were kept in boiling water for five minutes. Only ten per cent of the seeds grew; yet there were many seeds found, even after this treatment, which were as hard as ever and which the boiling water did not seem to effect in the least. They are now trying sulphuric acid as a solvent of the outer covering of the seed. The next SPECULUM will contain the result of this experiment.

Some interesting facts have been observed on the farm this spring in connection with tile draining. About one hundred and fifty rods of three and four inch tile were laid to drain an area of three or four acres some of which was covered with water two feet deep. In less than three weeks after the drain was laid the ground was ready for the plow.

Three years ago a tile drain was laid in No. 5 in the fall, the following spring the water commenced running in the tile about the first of March. Last spring the drain commenced to run about the

second week in February, although at that time the ground was frozen six inches deep. This spring the drain commenced running by the first of February and by the middle of March was entirely dry—a verification of the fact that tile drains increase in efficiency with age.

We learn from the *American Cultivator* that Prof. A. D. Hopkins of the West Virginia Experiment Station, has discovered the cause of potato scab. It is due to the work of a small insect. This insect is from three to eight one-hundredths of an inch in length and of a dusky color. The female is wingless and is the second wingless female of this family ever discovered. To prevent the work of this insect the professor recommends that the seed be soaked in corrosive sublimate, with a strength of one to one thousand, for three hours. He also further insists that the soil be sandy and free from all vegetable matter. The theory as to the cause of the scab is a new one; the treatment, however, has been in use and recommended by the college for some time. To keep the soil free from vegetable matter, would seem like a rather heroic task for the ordinary farmer to undertake.

One of the needed improvements first noted by President Gorton was a complete equipment of electric lights. Through the action of the president and the kindness of Mr. Cooley the college was given a dynamo discarded 10 years ago and built for a type of arc lamps now obsolete. A couple of days were spent the last month of last fall term in digging the machine out of a scrap pile at the city electric light station. This spring preparations were made to try the machine as soon as the new shop engine would take the place and permit the removal of the old engine to the boiler house. Last Saturday the engine was connected and the dynamo began again. The test was very satisfactory.

Although we need the latest and the best possible equipment yet the college has no

funds available for such an equipment now. And it is proposed that the grounds, all corridors and part of the library be lighted by the use of the old dynamo and the engine which has become too small to run the machine shops. The college has boiler capacity to spare and the temporary plant can be operated until the State legislature see fit to give us something better.

The dynamo was built to be a separately excited, direct and constant current machine to operate 40 arc lamps at 16 amperes, requiring about 45 horse power.

The college proposes to run the dynamo at a constant voltage of about 1,000 volts and to put in incandescent lamps in multiple series. From 10 to 20 lamps will be placed in each loop, and the dynamo loaded to the capacity of the engine. The scheme is far from being an ideal one. If one lamp goes out in a loop all the rest in that loop will go out also. But the entire outlay for the temporary outfit including lamps will be a very small amount—a feature which plays an important part in this case. Part of the lamps will be in operation early next term.

P. B. WOODWORTH.

The State Board and "the powers that be," "out of the innate goodness of their hearts," have decided to allow all of the seniors to drill hereafter.

The botanical laboratory is kept open from 8 o'clock in the morning until 6 in the afternoon, on class days, and during the forenoon, Saturdays. Besides the regular classes, students from the Horticultural Department come in to study special subjects for thesis work; sophomores from the Farm Department to work upon smuts and rusts; seniors studying the peculiarities of milk. Students working up special topics for the Botany Club or Natural History Society are also among those who make use of the laboratory.

Most of the plants in botanic garden wintered well. Some trouble is caused by students, visitors, college kids and others who are not willing to follow beaten paths, but ramble around over the beds, trampling down plants and breaking labels. Perhaps the worst pest is the festive muskrat, which has improved the winter by eating up some of the choicest aquatic plants. Many of these, however, will be replaced by seeds.

THE SPECULUM.

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AGRICULTURAL COLLEGE, MAY 10, 1894.

HURRAH for the May vacation!

It takes "the farmer boys" to play ball.

ARE you and your friends going to attend the M. A. C. summer school?

How many loyal alumni will attend the triennial reunion this summer?

Look for an interesting article from Prof. Davenport's pen in our next issue.

Be back on time to begin the summer term, be it never so hard to come away.

Don't forget that the electric car will carry visitors to and fro between the capital of Michigan and the Agricultural College this summer.

M. A. C. CAMPUS, the pride of Michigan, the glory of every student, and lover of the beautiful in nature and art, begins to respond to the kindly touches of sunshine and rain; buds are bursting, trees are blossoming, and lawns are being clothed with their richest velvet green.

WHERE trees are so abundant as here, there seems little need of any more tree planting. Arbor Day has but little signification here, but notwithstanding the class of '94 planted a tree on Arbor Day—a white pine—to perpetuate their memory and serve as an object lesson on future visits to their Alma Mater. Hon. Chas. W. Garfield's address on trees in the evening was another of those opportunities that no student can afford to miss.

THE members of Dr. Kedzie's class in Meteorology are very deeply interested in the subject. Like many other studies of the course it opens up an almost entirely new field for observations. Many wish that the people everywhere might have access to the knowledge he imparts. One very practical phase of the subject is his discussion of the lightning rod. Were people more generally enlightened on some of these "points", the crooked lightning rod dispenser would not succeed in beating so many with his rod. "The rod for the fool's back,"—prov.

THE old school houses' wooden benches are now used only "to point a moral, or adorn a tale," but our chapel seats, which are more tiresome to sit upon than many of those, are in constant use. They may have been good once, but class after class of weighty men has made them so slanting that their occupants keep slipping down, slipping down, slipping down, till, within the space of half an hour on any occasion, the uneasiness produced becomes very noticeable. A good mechanical student could remedy the declivity in a very short time, thus greatly improving the situation.

time on the same string," but we do wish to refer again to Dr. Edwards' Bible Talks, for they seem to be filling a long felt want at this college. Any institution that makes no provision for the moral and spiritual development of its students should be severely criticised. We believe all sane men admit the development of this side of a man's nature to be of the highest importance to the individual and to the State. The doctor's manner of presenting the subject, secures undivided attention. His thoughts are well matured, and, though they differ from much that is commonly heard from the pulpit, they are not thrust upon his audience in a dogmatic way, but with the request, "Search the scriptures to see whether or not these things be so."

PRESIDENT Gorton's efforts to secure men of note from various parts of the State to preach as often as possible, also deserves favorable comment. If some men took half the interest in their own welfare as others do, much of life's burdens would be removed. The boy frequently does not appreciate the father's concern for him, until in after years he takes a retrospective view of his life, or, perchance, has a son of his own.

IT WILL be remembered that last fall we expressed a hope that some time in the near future we might have an inter-collegiate oratorical contest. Such hope seems now likely to be at least partially realized through the Young Men's Christian Associations of the various colleges. It is proposed to hold the contest at the time and place of the Inter-collegiate Athletic Association sports. Such an event as this would bring out a phase of student life that ought to be encouraged, and be even a more fitting representation to the world in general of what a college is really for than the impression left on many people's minds after witnessing the usual exercises of our present field days.

WE do not wish to be "harping all the

WE often hear of the "dark horse,"

and many such there are. The men whose names stand out in letters of gold on the pages of history, are not the only men of real merit the world has borne, nor are they by any means the greatest that have lived. Life is too short and circumstances too varied to give ample opportunity to show what is in men. "Many mute inglorious Miltons" live, and "Many Cromwells guiltless of their country's blood." Sometimes we think of this as we see students, busy students, working when others are idle, struggling upward against difficulties, bearing their burdens alone and unknown, but by and by perhaps standing on the top-most round of the ladder. But whether they reach the top or not, if they are going up, give them the encouragement they deserve. How many men there are, destined to live lives of abject drudgery with scarce the time to rest beneath the scorching sun to wipe from their brows the heavy drops of sweat! Men who convert the desert into a garden, build our cities, open up the great highways for commerce, and all that they may live and be independent. Let us who toil with brain and nerve give due honor to him who toils with muscle and sinew. We need his aid, he needs our help. Let the highest indignation arise in the breast of every true man, when he sees the laborer despised by a "spoiled monkey" without brains enough to earn his bread and butter.

It is not too early for M. A. C. alumni scattered over the U. S. and other lands to begin to think about the reunion next August. Busy men cannot leave their business on "the spur of the moment," and it will take thought, preparation and careful planning, with a great deal of self-denial on the part of many to be able to come. Loyalty to the institution is a characteristic of M. A. C. men, and loyalty to the institution can be shown in no better way than by attending these reunions. Come from the east and from the west, from the north and from the south; come with full hearts,

clear minds, and an earnest purpose to make this reunion greater, more enjoyable, fraught with better results than that of any that has ever been before. The SPECULUM's pages are at your service to afford you an opportunity to speak to one another during June and July. Have you any project to offer, any enterprise to advance, any good news to publish, do not keep silent. We ask that you will do us, your fellow classmen and yourselves this one favor at least, viz., send the "Personal" editor or the editor-in-chief a line or two stating your intention of being present. We will be glad indeed to keep before the readers of the SPECULUM during June and July issues a list of the men who are coming. What is the prime object of the reunion? Is it not to meet the "old boys" again? And isn't it a very uncertain thing, not calculated to awaken very strong emotions to go out to see you know not whom? We believe many more would come, and that all who do come would come with greater eagerness, and more joyful anticipations if they knew the *special friends* they were going to see.

We have listened to the watermill and also to the poet's refrain and thought of "Wasted hours of life," "Neglected opportunities," "What might have been," "Thoughts conceived but never penned," etc., and thought what application can this be put to in our college life? Are we neglecting anything of prime importance to our future success? Are our lines of thought and study the most wisely chosen? Are there some things that we can afford to pass over lightly for the sake of other things that we may never have the opportunity to get again? We believe there are unequalled opportunities of development, in many cases outside of our prescribed line of work, that we ought to take advantage of, when possible, e. g. there is the Natural History Society, coming at a time in the day when one would rather rest himself and be entertained than read or study.

By a regular attendance at these meetings of this society very valuable information will be gained, and the men carrying on the society greatly encouraged. The same is true of the Botany Club. A club of unusual interest and one that imparts exceedingly practical information. Yet few students attend it or know anything of what they are missing. What is true of these is also true of the Mechanical Club to whose meetings any one is admitted. And the discussions are usually very general and applicable to every day life. Patriotism to your class and the student body demand the presence of every man at class meetings, B. C. A. meetings, Students Organization meetings, and last but not least, Y. M. C. A. meetings. Does someone say he hasn't time? Nonsense! The busiest students in the college are the men who have the time for these things. Contact with men is what we need—the living men—we need this much more than we do the dried up, fossilized thought of much that we read in the library. "A word to the wise is sufficient." Attend.

WE wish to call the attention of SPECULUM readers to the copy in this issue of "An act to authorize the State Board of Education to grant teachers' certificates."

A very large per cent of our students have been successful teachers before entering this college, a great many of them employ their winter vacations in teaching during their college course; and after they graduate, a greater number of them follow the teacher's profession than any other. Why do many of them teach after graduating? For various reasons. First. Few have the capital needed to engage successfully in agricultural pursuits; if they had they would gladly become farmers. Second. There is a great demand in the teacher's ranks for the kind of men that this college graduates—broad minded men full of facts which they know because they have proven them by actual experiment. Wherever our men have gone they have taken their place as leaders, and have brought to

the Agricultural College of Michigan a name of which she may well feel proud.

This being true, is it a thing unreasonable to ask that our faculty adopt a course in the science and art of teaching, to be submitted to the State Board of Education for its approval? We have already in the course, psychology, moral philosophy and logic—all bearing directly upon the science and art of teaching. With no great addition to this line of work, we are sure that the State Board of Education would gladly approve our course of study, and place the Agricultural College on the list with other colleges of the State who are now enjoying the provisions of this wise bill. The faculty of the college would not be placed in an embarrassing position by reason of the graduation of men not competent to teach, for it remains with them, after a student graduates, to say whether they deem him qualified to teach or not (graduates from the "Normal" are licensed whether they are competent or not). The State Board of Education is given the right in Sec. III (not quoted) of this bill to inform any college when its graduates, granted certificates, are not doing credit to the profession.

Why, then, should not M. A. C. avail herself of that which is her right by law, and by justice? As it is now, our fellows have nothing that will admit them to any profession under the sun, when they have completed their four years' course, except their brains. That these do admit them to the highest esteem of professional men, in the most of cases, we will allow, but if our graduates are entitled to State teachers' certificates, they should be given them, that they might avail themselves of any advantages that these might bring. It is hardly necessary for us to say that this would at once and forever do away with the question, "Why don't more come?" Were this action taken, within a single year there would be such an influx of students to this college that there would not be room enough to contain them. And why will any man be so narrow minded as to say "It is n't the

business of the Agricultural College to turn out teachers?" This college is turning out teachers. It will continue to turn out teachers, and if it avails itself of the provisions of this bill, it will turn out more, and better, teachers, and more, and better farmers. THE SPECULUM invites correspondence on this subject from interested parties.

COLLEGE NEWS.

Professor Taft rides a wheel.

President Wells of the Board was on the grounds Friday, April 27.

The next meeting of the State Board will be held at Grayling, May 15.

The Olympic Society entertained their lady friends Friday evening, May 4.

The State Board has recently granted the degree of M. S. to Prof. F. B. Mumford.

Mr. Bryant Walker, of Detroit, was here April 27, studying the collection of shells.

Electric lights for the grounds and the street railway are still among the possibilities.

Students will be granted reduced rates to all points in Michigan during the spring vacation.

A new supplementary catalogue will be issued soon, indicating the changes in the course of study.

The seniors celebrated Arbor Day by planting a class tree. May it thrive and produce persimmons in plenty.

The price of board this term has been as follows: Club A, \$2.60; Club B, \$2.60; Club C, \$2.59; Club D, \$2.70; Club E, \$2.45.

On account of the large demand for spraying calendars an edition of 5,000 copies of a special spraying bulletin has been issued.

The faculty has passed resolutions expressing the hope that the State Board will make some arrangements for the teaching of women.

The Seniors have recently made two ten hour boiler tests, one of the boilers in the Physical Laboratory and the other of one of the boilers in the Boiler House.

Our athletic editor became exceedingly elated over the result of the ball game with Olivet, and sprained his ankle in a vain attempt to kick the bottom out of a tin pail.

The commencement orators of the class of '94 are as follows: C. B. Smith, C. J. Foreman, S. F. Scott, L. A. Wilson, R. S. Campbell, G. E. Simmons, J. W. Perrigo and C. C. Pashby.

While working in the shops not long ago Mr. F. B. Phillips had the misfortune to catch the little finger of his left hand in the gearing of one of the lathes. The finger was so badly injured that amputation was necessary.

Nine long institutes will be held in various parts of the State the coming winter. They will be more in the nature of schools of instruction than heretofore, that is, there will be regular classes which will meet each day.

Ground has been broken for the poultry house. It will be located just west of the experiment station barn. The first bird in the department is a parrot. It is busily engaged in adding the college terms to its vocabulary.

The Farm Department has recently received several additions to its experimental fence. Among the samples received lately are the Homer Steel Fence, the Hartman, Smith Iron Fence, and the Alfred Ide Wire Fence.

Say "Hello boys" to that Senior and that Junior who were out taking an afternoon stroll a short time ago. That is what the parrot said to them. The boys couldn't see the lady anywhere, but when the salutation was repeated, they raised their hats just the same.

The Mechanical Department has purchased a grinding machine from the Leland, Faulconer and Norton Co., of Detroit. The new engine, built by the students is now used in running the shops. The old engine has been placed in the Boiler House to be used in running the dynamo.

The Foundry is used once a week. Since it has started ten forges for the blacksmith shop have been cast, a large number of castings for use in the shop and some castings for the college wire fence have been made. All necessary tools for use in the foundry have been purchased.

Dr. Grange has recently issued a bulletin upon the External Conformation of the Horse. This has been bound with Professor Mumford's bulletin on Fattening Lambs, and two issued by the Horticultural Department, on "Potatoes and Potato Scab" and "Variety Tests of Vegetables."

The officers of the senior class for the remainder of the year are as follows: President, L. B. Plummer; Vice-Pres., A. J. Beese; Secretary, F. R. Poss; Treasurer, E. V. Johnson. Literary officers: Orator, R. S. Welsh; Poet, D. D. McArthur; Historian, J. W. Rittenger; Prophet, M. P. Carney; Editor of class paper, V. V. Newell; Toastmaster, F. W. Lewis.

Mr. T. V. Munson, of Texas, has probably given more attention to the study of grapes than has any other man. Professor Bailey, of Cornell, purchased a set of these grapes for test and ex-study. By exchange for materials in the botanic garden, Prof. Bailey has furnished the Botanical Department with a complete set of the grapes, which proved hardy at Ithaca, N. Y., numbering about twenty species.

The lecture Friday evening, April 27, was delivered by Hon. C. W. Garfield, upon the "Observations of Arbor Day." Friday evening, May 5, the Tau Beta Pi Fraternity gave an entertainment. The program consisted of Presidents address by G. E. Simmons, who

stated the objects and work of the society and the qualifications for membership. He was followed by Prof. Woodworth whose subject was "Wires up to the Present Time." The next article was by H. F. Lake, "What Mathematics has made Possible." The program was closed by Mr. Groesbeck, upon the "Evolution of Machine Tools."

The officers of the societies and fraternities for the coming term are as follows: Of the Union Literary Society, Pres., C. J. Foreman; Vice-Pres., C. H. Robison; Sec., J. T. Berry; Treas., E. C. Calkins. Of the Eclectic Society, Pres., F. W. Lewis; Vice-Pres., E. J. Heck; Sec., B. H. Davis; Treas., W. C. Stebbins. Of the Olympic Society, Pres., J. P. Churchill; Vice-Pres., H. E. Ward; Sec., N. M. Morse; Treas., W. E. Finch. Of the Hesperian Society, Pres., C. J. Barnum; Vice-Pres., H. F. Lake; Sec., L. P. Fimple; Treas., H. W. Lawson. Of the Columbian Literary Society, Pres., E. C. Crawford; Vice-Pres., H. R. Parish; Sec., S. H. Fulton; Treas., F. Johnson. Of the Delta Tau Delta Fraternity, Pres., J. W. Perrigo; Vice-Pres., H. L. Chamberlain; Sec., A. B. Robertson; Treas., B. H. Halstead. Of the Phi Delta Theta Fraternity, Pres., J. H. Kimball; Vice-Pres., W. G. Amos; Sec., C. Chapin; Treas., B. A. Bowditch. Of the Tau Beta Pi Fraternity, Pres., G. E. Simmons; Recording Sec., C. C. Pashby; Corresponding Sec., J. D. Nies; Treas., V. V. Newell.

The union musicale held April 13 was a complete success. The entertainment was a surprise to many, as they were expecting no such musical treat as was given. It is to be hoped the entertainment will be followed by others of a similar nature. The following is the program which was delivered:

Opening Glee.	- - - - -	- - - - -
Piano Solo,	- - - - -	A. LaDue
Solo, "Love's Sorrow,"	- - - - -	Geo. A. Fisher
"Pirates of Penzance,"	- - - - -	Eclectic Orchestra
Piano Solo,	- - - - -	Miss Loa Renner
Quartette, "Now Silence Keep,"	- - - - -	J. L. Horne,
	- - - - -	E. D. Partridge, G. J. Rhodes, C. H. Robison
Violin Solo,	- - - - -	F. J. Jahn
Piano Duet,	- - - - -	H. F. Lake, A. La Due
"Waves of the Danube,"	- - - - -	U. L. S. Mandolin Club
Duet, "See the Pale Moon,"	- - - - -	- - - - -
	- - - - -	C. J. Barnum, Geo. A. Fisher
Piano Solo,	- - - - -	W. A. Rider
Quartette, "Love's Old Sweet Song,"	- - - - -	R. L. Clute,
	- - - - -	H. M. Howe, W. W. Taylor, J. F. Merkel
"Fedora Waltzes,"	- - - - -	Combined Orchestra

The junior hop, which was given Friday evening, April 20, was a success in every respect, with the exception, perhaps, of the weather. Some are so unkind as to blame the juniors for this, saying that they worked so hard preparing for the hop that the atmosphere became saturated with moisture, causing the rain of that evening. Owing to hard and efficient work, under the direction of Mr. Kimball and other members of the decorating committee, the armory was in excellent shape. The floor was planed and was very smooth, as some few found to their sorrow. The decorations were pronounced by all to be the finest ever seen in the armory. The music

was excellent, being furnished by the Battle Creek orchestra. About eighty couples were present, a number being from various parts of the State and from other States. At 8:30 hacks and other conveyances began to arrive, and at 9:30 the grand march started. It was something unique and was led by Professors Chamberlain and Vedder. At 12:30 refreshments were served by the various societies, after which dancing continued until 4 A. M. All were well pleased, and the affair was pronounced one of the pleasantest ever given at the College.

The committee on courses of study has spent considerable time re-arranging especially the agricultural course. Beginning with the class of '97, many changes will be made. Military law and fortifications have been dropped from the course, and, instead, all seniors will be required to drill after this year. The arrangement of some of these classes will be much more philosophical than it has been for several years past; for example, students have heretofore been taught stock feeding before chemistry or animal physiology. To remedy this, beginning with the present freshmen, elementary chemistry will be taken in the spring term, and organic, analytic and agricultural chemistry, will come, respectively, a term earlier than at present. They will begin anatomy and physiology in the summer term of the sophomore year and continue in the spring term of the junior year. This arrangement will give the students one and one-half terms of anatomy and three terms of chemistry before they begin stock feeding. In the summer term of the junior year is added a half term of horticulture, and with it the half term of landscape gardening, which has come earlier heretofore. The sophomores, in the fall term, will have systematic botany. During the summer term of the sophomore year they will devote three days a week to the study of trees and shrubs, as a preparation for landscape gardening. In the summer term of the junior year four weeks will be given to the study of ordinary farm crops, four weeks to weeds and seeds, and four weeks to grasses and clovers. Next term the present sophomores will study weeds and seeds, and grasses and clovers, each a half term. Agriculture will be required in the first term of the senior year, and beginning with the class of '95, all students will be required to write a thesis upon some special topic. This will make the agriculture required in the course five and one-half terms, aside from the afternoon work. The course, as arranged, will require of the agricultural students nineteen or twenty exercises per week. The course of study adopted by those in authority when the college was founded, in 1857, has apparently exerted a good deal of influence upon succeeding members of the board and faculty. Since that time chemistry has advanced and changed amazingly. Horticulture has been much extended and animal physiology and economic entomology have opened up new worlds. At that time scarcely anything was known with regard to parasitic fungi, and no students any where in the world were furnished with compound microscopes or other instruments for the study of plant physiology and histology. Very little thorough work had been done in agriculture. These departments were first marked out by the old course. They have grown until they seem to require more time than can well be given.

PERSONALS.

We desire the earnest co-operation of every person who has ever been connected with the college in trying to make this department an interesting one. Let every alumnus and every person who has been with classes here send in news to the editor of the department, often, thus making his work much easier and the department more interesting to all.

WITH '59.

Captain George W. Haigh, who left college to enter the army in 1861, and who now resides in Minnesota, spent a portion of May with his father, Richard Haigh, at the family homestead in Dearborn. The latter, now in his eighty-fourth year, has the distinction of having sent all of his children—five in number—to the Agricultural College. They are as follows: Geo. W. Haigh, with '61, Thomas Haigh, with '63, Richard Haigh, Jr., '69, Henry A. Haigh, '74, and Bessie W. Haigh, afterward Mrs. F. A. Gulley, with '81.

WITH '68.

W. P. Wilson occupies a chair in the University of Pennsylvania.

WITH '70.

J. E. Blanchard has been principal of the Fulsom Public Schools, Fulsom, Cal., for the past ten years. More recently he has acted as a member of the Sacramento county Board of Education. He also owns and operates a large ranch near his home.

WITH '73.

Edwin Wood recently removed from Mount Pleasant to Lake City, Mich.

'74.

Donald McPherson, attorney-at-law, 923 F. St. N. W., Washington, D. C., is presiding officer of an M. A. C. alumni society in that city.

WITH '74.

H. A. Taylor is a successful farmer at Nunica, Ottawa Co., Mich. Boyd Skeeton follows the same calling at Littleton, Col.

Dr. D. P. Cronk is in the weather office at Baltimore, Md.

WITH '75.

James S. Boyd is treasurer of Oakland County. John T. Brown practices law and sells real estate in Chicago.

'78.

Prof. W. S. Holdsworth has returned from an extended trip through the south. He is much improved in health.

F. E. Skeels, '78, is chairman of the Board of Supervisors of Grand Rapids.

WITH '78.

Cass E. Herrington is a lawyer in Denver, Col.

'79.

Prof. L. G. Carpenter of the Colorado Agricultural College has been elected president of the American Society of Irrigation Engineers.

WITH '79.

Willis Everett is a successful merchant at Ypsilanti. H. M. Moorman pulls teeth at Grand Rapids.

'80.

A circular of the State Preparatory School, a branch of the Colorado State University, is at hand. Upon the list of teachers we notice the name of W. W. Remington as head of the Department of Science and Mathematics.

Prof. F. A. Gulley, Director of the Arizona Station, is engaged in completing elaborate experiments in the production of Canagre, a succulent root, the juice of which possesses the valuable astringent qualities of tannin. It is believed that this product will take the place of hemlock and oak bark in the tanning business.

WITH '81.

J. B. Sherman is proprietor of a general store at Ludington, Mich.

WITH '82.

W. M. Babcock is farming at Wellington, N. Y.

W. S. Launstein is shipping clerk for Fuller, Stowell & Company, Milwaukee, Wisconsin.

George A. Young is a farmer of Eaton Rapids.

'83.

O. C. Howe insures the lives and property of Buchanan, Mich., residents.

WITH '83.

Otis G. Harding is making a specialty of breeding imported sheep at Buchanan, Mich.

'85.

E. T. Gardner writes from Arcadia, Neb., as follows: "I am now a farmer and proud of my vocation. It took some years after graduation to get back on the farm, but I am there with good prospects of staying."

WITH '87.

Benjamin Judd is farming near Flushing, Mich.

WITH '88.

B. B. Smith is owner and proprietor of a shingle mill at Aberdeen, Wash.

H. W. B. Taylor is a bookkeeper at Alameda, Cal.

D. L. Davidson is engaged in onyx manufacture at Sullivan, Missouri.

'89.

The March number of the *Pacific Tree and Vine* contains an interesting account of one of the seed gardens of C. C. Morse & Co., of Santa Clara, Cal. In it we find the following item:

"On the Hayward place on Union avenue, are situated the experiment grounds, the greenhouse and the grounds where the smaller and more delicate flower-seeds are raised. These experiment and testing grounds are in charge of Mr. Waldo E. Rohnert, a young man educated in the State Agricultural College of Michigan and for a time connected with the experiment station and testing grounds of a large eastern house."

WITH '89.

G. L. Foot is teaching at Albion, Indiana.

'90.

A. L. Watters has accepted a position with a lead and zinc mining company of Chatanooga, Tenn.

WITH '90.

James W. Campbell is inspector of customs at the port of San Francisco.

'92.

H. Arnold White visited the college April 27. He is still with the Grand Rapids agency of the New York Life Insurance Company.

D. W. Trine, at present assistant in Horticulture of the Maine State College, expects to return to M. A. C. soon to prepare for a master's degree.

'93.

A. B. Chase is cashier of the Globeville bank.

E. C. Peters has gone into the printing and publishing business with his father at Saginaw.

C. B. Chapin has entered the Medical Department of the U. of M.

R. C. Bristol attended the junior hop, April 20. He is engaged in business at Marlette, Mich.

Fred P. Clark is studying law at Kalamazoo.

W. Paddock is an assistant at the New York Agricultural Experiment Station at Geneva, N. Y. His work is in the line of Botany. During the winter he made a trip to Washington where he met all the M. A. C. alumni in that city. He also expects to return to the college in a year or two for an M. S.

WITH '93.

A. K. Myers is in New Brunswick studying music. He expects to return "across the line" during the summer and take up his residence within Uncle Sam's domains once more.

M. S. Gregory has decided to remain another year as principal of the Thompsonville school.

H. M. Rich is teaching at Middleville, Mich.

The family of E. H. Polhemus was recently enlarged by the arrival of a baby boy.

WITH '94.

C. S. Goodwin visited friends at the college recently.

George White has entered the U. of M.

J. C. Patrick has left the Michigan Mining School and entered the Colorado School of Mines, Holton, Col.

S. D. Peper is looking after his orange groves at Leesburg, Florida.

W. F. Wight is taking in the California Midwinter Exposition. He intends to make an extended tour through the northwest before returning to Michigan.

A. W. Chase is employed in the office of the D. M. Ferry Seed Co., Detroit.

WITH '95.

John A. Lee is farming at Bangor, Mich.

Harry D. Baker has resumed the management of the Cushing Land Agency of St. Croix Falls, Wis.

WITH '96.

S. W. Monroe is in the office of Boltwood & Boltwood, attorneys, Grand Rapids, Mich.

G. W. Bradfield and J. A. Clark have entered Purdue University.

Kuyohide Kuroda is at his home in Japan. He expects to return to America next year and complete his education.

N. C. Johnson is traveling for a Chicago firm.

ATHLETICS.

Everything in the athletic world with M. A. C. is coming on swimmingly. All who will train regularly for any event at field day are excused from military drill. This action of the faculty has given an impetus to the work that has never before been noticed in the memory of the present students. The entries promise to be nearly full in all events, and the all-around medal will be hotly contested for.

Much interest centers this year on the relay race, which has been forfeited two years to M. A. C. It is not likely that the action will be repeated. If the cup is to remain in our library next year it must be kept there by hard work. We have the speed and endurance to win the race, and it remains only for the team to get to work.

Base ball promises to be the strongest feature, as usual, of field day. Albion is doing good work, and made a strong showing at times in the game on the home grounds April 28. However we do not regard the team as the chief antagonist in the deciding game. Olivet made an able appearance and did remarkable work for their first matched game of the season, played here April 30. Our home team is far superior to that of one year ago. Ansonge improves with each year. West promises to hold things level in the box; the fielding is beyond reproach, and the double plays, Davis, Ansonge, Rittinger, cannot fail to win the respect of all opposing teams. Our batting averages promise to rise several per cent this season over previous records. In fact, if present prospects are not deluding, success will be ours when success is not looked on as being a "last year's bird's nest."

Three matched games have been played this season, one at Albion, and two on the home grounds. On April 14th the team made a record for activity that is characteristic of our students. Albion was reached at noon, and the train was boarded again at 3:30 P. M. The intervening time was devoted to dinner, two changes of raiment, two trips over way to the quite distant field, and to seven innings of ball recorded below:

	M. A. C.						
	A. B.	R.	I B.	2 B.	P. O.	A.	E.
Ansorge, 2b,	4	1	1	1	2	3	0
Simmons, c,	5	2	0	1	1	5	2
Rittinger, 1b,	4	2	0	1	14	1	1
Fisher, 3b,	5	3	1	1	0	1	2
Hurley, p,	4	2	0	1	0	3	0
West, c f,	5	2	2	1	2	3	1
McKinnon, 1 f,	4	3	3	0	2	0	0
Davis, s s,	4	0	1	0	0	1	2
Bateson, r f,	3	0	0	0	0	0	0
Total,	38	15	8	6	21	17	8

ALBION.

	A. B.	R.	IB.	2B.	P. O.	A.	E.
Buck, c,	5	2	3	0	2	2	3
Mulholland, 1 f,	5	0	0	0	0	0	0
Phelps, s s,	4	1	1	0	0	3	3
White, 3b,	4	1	0	0	0	0	0
Fox, c f,	4	1	0	0	0	0	1
Jacobs, C. 2b,	4	1	1	1	3	2	1
Kulps, r f,	3	1	0	0	0	0	1
Jacobs, p,	4	1	1	0	0	6	0
Narrin, 1b,	4	2	1	0	16	1	4
Totals,	37	10	7	1	21	14	13
M. A. C.	1	2	3	4	5	6	7
Albion,	2	0	4	0	4	5	0-15
	0	0	1	4	1	4	0-10

Earned runs, M. A. C., 5; Albion, 2. Two-base-hits, McKinnon, West, Jacobs, C. Jacobs. Three-base-hits, Phelps, Buck. Bases stolen by M. A. C., 6; by Albion, 1. First base on balls, Jacobs, 4; Hurley, 0. Struck out by Jacobs, 8; by Hurley, 4; West, 1. Passed balls, Simmons, 1. Hit by pitcher, Jacobs, 4. Umpire for M. A. C., Poss; for Albion, Anderson.

April 28 Albion came up for the return game, which was scheduled for 1:30 P. M. The threatening sky soon began to shed moisture on the scene. In the sixth inning the ball became too wet to handle well and Albion tied the score. Rain and hail came down and dispersed the crowd before the seventh inning could be finished, leaving M. A. C. one run in the lead. Gorenflo's work in centerfield, putting out three men on different flies, was a noticeable feature of the game.

M. A. C.

	A. B.	R.	IB.	2B.	P. O.	A.	E.
Ansorge, 2b,	2	3	1	1	0	1	1
Simmons, c,	4	2	1	2	7	1	3
Rittenger, 1b,	2	1	1	1	6	0	1
West, p,	4	0	1	1	1	11	1
McKinnon, 1f,	4	0	0	0	0	0	0
Gorenflo, cf,	3	1	0	0	3	0	0
Hurley, 3b,	3	0	1	0	1	2	0
Davis, ss,	3	1	1	0	0	0	1
Goodenough, rf,	3	0	1	0	0	0	1
Total,	28	6	7	5	18	15	8

ALBION.

	A. B.	R.	IB.	2. B.	P. O.	A.	E.
Beck, c,	4	1	2	1	5	2	3
Mulholland, 1f,	2	1	1	0	1	0	0
Phelps, ss,	3	1	1	1	0	2	2
White, 3b,	1	1	0	1	2	1	1
Fox, cf,	3	0	0	0	0	0	0
Shultz, rf,	3	0	0	1	0	1	0
Narrin, 1b,	2	1	0	0	9	2	1
C. Jacobs, 2b	2	1	0	1	0	0	0
Cogshall, p,	3	0	0	0	1	7	3
Total,	23	6	4	5	18	15	10

Two-base-hits, Rittenger. Bases stolen, Abion, Buck, Phelps, White, C. Jacobs; M. A. C., Ansorge, West, Simmons, Rittenger. Given base on balls, Albion, 5; M. A. C., 5. Hit by pitcher, Ansorge. Struck out by Cogshall, 2; Jacobs, 3; West, 9. Passed balls, Albion, 5; M. A. C., 2. Wild pitches by Albion, 5. Time of game, 1:30. Umpires, M. A. C., Poss; Albion, Loud.

The finest game played at this place since Olivet

lost the cup to M. A. C., by a score of 2 to 1, two years ago, was witnessed April 30th. The sky was slightly too bright for players, but the day was perfection for spectators, and the attendance was large. Olivet is an antagonist worthy of our players' best efforts. The absence of Archer, the veteran left fielder of the visiting team, was noted by many who have come to know him on the diamond.

OLIVET.

	A. B.	R.	IB.	S. B.	P. O.	A.	E.
Wright, 2b,	5	0	0	0	4	3	0
Smith, ss,	4	0	0	0	0	2	2
Cadwallader, c,	4	1	3	2	7	1	2
Moore, 1b,	4	1	0	0	11	0	0
Mackay, cf,	4	0	1	0	2	2	0
Foster, rf,	4	0	0	0	1	0	0
Davidson, 3b,	4	0	0	0	0	0	1
Hinkley, p,	4	0	0	0	0	0	2
Hamilton, 1f,	4	1	2	0	1	1	1
Totals,	37	3	6	2	27	18	8

M. A. C.

	A. B.	R.	IB.	S. B.	P. O.	A.	E.
West, p,	5	1	2	0	1	15	0
Ansorge, 2b,	5	1	1	0	3	6	0
Simmons, c,	4	1	2	0	9	0	0
Rittenger, 1b,	4	1	2	1	15	0	0
Fisher, 3b,	4	0	0	0	1	1	3
Gorenflo, cf,	4	0	1	0	0	0	1
Hurley, rf,	3	0	0	1	0	1	0
Davis, ss,	4	0	0	0	1	4	1
McKinnon, 1f,	4	0	0	0	0	0	0
Totals,	37	4	8	2	30	27	5

Olivet,	1	2	3	4	5	6	7	8	9	10
M. A. C.,	0	0	0	0	0	0	2	1	0	0-3
	2	0	0	0	0	0	1	0	0	1-4

Earned Runs—M. A. C. 2.
 Stolen Bases—Olivet 2, M. A. C. 2.
 Double Plays—Olivet 1, M. A. C. 3.
 Given Bases on Balls—M. A. C. 2.
 Struck out—by West 9, by Hinkley 6.
 Passed Balls—Olivet 1.
 Time of Game—Two hours.
 Umpire—For M. A. C. Poss, for Olivet McKay.

A feature of the game played here by the regular team has been the sale of score cards. These little mementos of the game placed in the hands of hustling students are a source of revenue that is pleasing. The last two named games very nearly paid expenses, more than that we do not ask for. Lansing visitors come out in quite large numbers and are reported by the "hustlers" as mighty poor pay. College students never expect, never get anything free in the city in the way of entertainment and are righteously indignant when cigaretted dandies, men of more sober estate, and street gammins in troops come out to sponge an afternoon of sport at the college.

No tax has been levied as yet for the support of any department of athletics. An extra effort has been made to get in the unpaid assessments of last year amounting to nearly one hundred dollars. Little remains to be done in that direction at present. The sale of score cards has netted about forty dollars and the collected subscriptions of the faculty have amounted to about fifty dollars.

The faculty have been very liberal in the matter of

contributions. Heads of departments have generally subscribed \$5, assistants \$3.50 and instructors \$2.50.

A great deal of work has been done this season by the Directors of the M. I. A. A. in choosing the place for field day and in regulating the affairs connected therewith. The Jackson people have given very good terms and the annual meeting will be held on the fair grounds and in the opera house at that place.

The remaining event in tennis of field day a year ago was set for April 30 at M. A. C. Olivet was represented at the appointed time and place by Luther and Hale. Ypsilanti failed to appear and forfeited the medal to Olivet.

Incidental mention may be made of two games which the Lansing high school has played here in the last few weeks, first with the freshmen and followed April 17th by a game with the sophomores. The first game was very evenly contested throughout and resulted in favor of '97 by score of 24 to 21.

In the second game better ball was played by both sides although it was the first game of the season for the sophomores.

The runs by innings in the second game were:

	1	2	3	4	5	6	7	8	9
Lansing,	3	1	0	0	1	1	3	1	1—11
Class of '96,	0	1	0	0	0	0	0	3	0—4

At the present writing rain prohibits the events of local field day which had been set for May 5, P. M. Contests are to take place to determine who shall represent the college in the different sports at field day. The chief interest is in the bicycle race and the mile run. Several are training in each sport and spirited preliminaries will decide who shall fill the limited number of entries.

COLLEGES AND EXCHANGES.

St. Peter—"Halt!" New Spirit—"Can I come in?"
St. Peter—"I'd rather you wouldn't. You are just out of college, and we don't want any advice about running the universe.—*Ex.*

New York State, with a taxable valuation of \$6,500,000,000, has given during the year just \$50,000 to the state university under the shadow of millions given by private benefactors.—*Index.*

Small Boy—"Papa isn't the *Exchange* a funny paper?"

His father—"Why, my son?"

Small boy—"All the funny jokes in our paper are taken from the *Exchange*; at least, that's what they put after them."—*Grove City Collegian.*

Miss P. (in History class)—"What were the attractions at the universities in the Middle Ages?" William (promptly)—"Girls."—*Magnet.*

The Americans, years before the Revolution, knew the value of college training. Besides Harvard and Yale, the following institutions were founded at a comparatively early date: College of New Jersey, Princeton, N. J., opened 1746; Washington and Lee University, Lexington, Va., 1749; University of Pennsylvania,

Philadelphia, 1753; Columbia College, New York, 1754; Brown University, Providence, R. I. 1765; Rutgers College, New Brunswick, N. J., 1770; Hampden Sidney College, Hampden Sidney, Va., 1776.—*Ex.*

The college man who has no public spirit while in college seldom acquires any. On the other hand, the student who takes a living interest in class spirit, societies, college publications, and organizations, will, with reasonable certainty, be the same leader in political, social and religious life, after leaving the university.—*Ex.*

One thing which leads some students to be careless about their work is the fact that they do not realize their position. The world has a right to expect more of a college graduate than of a man who has not had such advantages. The college-bred man must ever show that he is such, not by an overbearing manner and a constant parading of that fact, but by a moderate and honest life showing himself master of himself and able to deal sensibly with the practical problems of life. He will take delight in those things which tend to elevate man, and will frown down those things which debase him. The man who has taken a college course and has not some such principles to govern his conduct, has either been to a miserably poor institution or he has failed to avail himself of his opportunities. The student owes it to himself, to his friends, to the world, to do his work conscientiously.—*Thielensian.*



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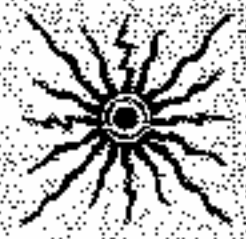
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