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The Spectrum

Mich Agricultural College.

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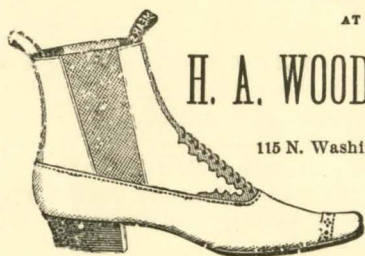
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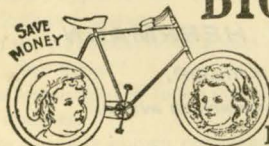
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College Days.

(Poem delivered before the alumni reunion.)

Well, old friend, we're here together, why, it works
out like a story,
When the good boys and the bad boys all come
home, like you and me,
Grown weary in our hunting after butter, bread and
glory,
Back we come for a vacation to our good old
mother's knee,
And you call on me for poetry, some grand and stately
measure,
But my muse will disappoint you, she is trained in
other ways,
She can only pick a nugget from the store of memory's
treasure,
Just a simple heartfelt tribute to the good old col-
lege days.
'Neath the happiness of meeting there is still a vein
of sadness
That would hold the tongue to silence—there's a
deeper, truer note
Of pathos in the college song that used to bring us
gladness,
There's a tugging at the heart-strings, there's a big
lump in the throat,
For it all comes back, old fellow—all the boyish,
happy fancies,
All the castles that we builded in our nest in Wil-
liams Hall;
How we bolstered up the future, and accepted all the
chances,
Caring nothing if ambition, love and health are still
on call.
We have seen our last good dollar roll into old "Sec's"
possession,
For the State demanded solid cash for boarding
guarantee.
What an appetite we worked up as we joined the
long procession
Of the eight-cent labor giants cutting dock in "num-
ber three."
How we trudged off to the city in all sorts of wind and
weather,
For our only known conveyance in those days was
"Shanke's mare,"
Now they make the trip by lightning at the price of
old shoe-leather—
'T is enough to make the spirit of the old time col-
lege stare.

'T was a life but rudely fashioned, though we did our
best to tone it,
But the polish only came to us through long and
bitter years,
All too poor to have a sweetheart and too full of pride
to own it.
How old visions crowd about us as the mist of mem-
ory clears,
That was foresight, now old mem'ry comes with
criticising finger
Punching air-holes in the castles that we bragged
about so much,
For the years have reached and stung us, and old
dreams can never linger
When the world has learned ambition so it needs
must bear a cru ch.
All those big ideas of boyhood time and labor have
been shearing,
Cutting remnants without mercy from our hearts
and brains and souls,
Life has cut away the poetry—the hope and dream
endearing,
Now we come to pick it up again and fit it to the
holes,
But we can't fit in the pieces for we find there's
something lacking,
We old boys are waiting, wishing for old Prexy's
kindly face.
Where are Jack and Tom and Harry? How their ab-
sence knocks the packing
From the core of tender memories we had grouped
around the place.
No, old friend, we've got to own it, through the years
we have been drifting,
And the winds of time have blown us from our
anchorage away,
But, thank God, through all the floating and the tack-
ing and the shifting
We have never snapped the golden cord that brings
us here to-day.
We have had our share of fighting, in rude service
we've been drafted,
But the heat of competition, and life's rudest, hard-
est knock,
Still has left untouched the grafting wax with which
our mother grafted
Buds of solid college culture on our half rebellious
stock.
They were manly men who taught us, there was love
and inspiration
In their words; though cursed by poverty we
learned from them to find,

A pathway through the obstacles that hid a noble station.
 We were taught to know that muscle must be made the slave of mind.
 Life has taught this mighty lesson, burned it in past all forgetting,
 That the truest end of living is to act a noble part.
 From the freshman to the graduate, whose sun of life is setting,
 Would God that I could drive that thought deep down in every heart.
 But away with dismal preaching, 'tis the time for fun and laughter;
 Both are lying next to tears within your hearts and naught between.
 Let's sing the good old college song until we loose a rafter.
 Look hopefully ahead, old friend, away with "might have been."
 Though we hardly know our mother fixed up in her fancy dresses,
 Still beneath her fuss and feathers there is honest sense to spare;
 There are brains beneath the hair-oil she has plastered on her tresses.
 We may safely send our children to the good old mother's care.
 Seems to me the labor system has been changed to labor-killing
 And the college course is rapid where it once was grave and slow,
 And we get a bit bewildered at this military drilling,
 I am glad I knew my mother ere she had a chance to grow,
 It is ours to criticise a fault whene're we see one sticking
 For we are all back numbers and privileged to fuss
 To help the good old mother with our influence and kicking
 And raise another crop of boys, that's job enough for us.
 They will keep her future sacred, but to us the past is given
 With its holy recollections of a time when life was young.
 Standing like some stately mountain, into sudden splendor driven,
 When from off its face the loving wind the darkened clouds have flung.
 Then here's "College Days Forever!" may the vision never leave us,
 May it rest within your heart, old friend, as long as memory stays,
 And above the cares that trouble and the sorrows that may grieve us
 May the finger still point backward to the good old college days.

H. W. COLLINGWOOD,
 Class of '83.

Buddhism and its Influence.

BY WAHEY MATSURA, HESPERIAN SOCIETY.

Foolish is the man who concludes Christianity to be a kind of heathenism by looking at those Catholic people bowing down before an image. So far as Buddhism is concerned, no matter how degraded the priests and followers are, the doctrine of Buddha has given holy inspiration to the very hearts of the people. Indeed, its power and sublimity should be estimated by its influence and not by its interpreters. The wonderful faith which has existed for more than twenty-four centuries, and in which over four hundred and seventy millions of mankind live and die with their firm belief in the tenets of Shaka-Muni, was taught by our great sage, Siddhartha. He was born in his father's palace, surrounded with the splendor of a luxurious court, in the City of Kapilvatsu, in the year 1030 B. C. Twelve years of such environment deepened his grief that mankind is inevitably subject to the sufferings of sickness and death, and that all life can offer is only vanity. He secretly escaped one night from his palace into the deep mountain to seek the path by which he should be able to get rid of those sufferings and attain perfect emancipation. His six years' rigorous meditation and asceticism were unable to satisfy him, so he retired to the shade of the Bodhi tree. He was deserted by his disciples, he underwent fierce temptations; but his clear perception of the true nature of mind, and attainment of the perfect enlightenment, kept him from diversion, and henceforward he was "Shaka-Muni."

Shaka's teachings are extensive and numerous, but all can be included in the "Hinayana" and "Mahayana." The doctrine of "Hinayana" teaches us how to arrive at Nirvana by renouncing the miseries of birth and death; hence it is called "the doctrine of how to attain enlightenment through the perception of misery." Ignorance is the ultimate cause

of existence and so, with the removal of ignorance, existence and misery would be cut off at their source. The punishment of death, therefore, has no terror for Buddhists and is sometimes coveted as an honor. Fearlessness is the source of courage and courage brings up every vigorous vitality against all difficulties and opposition. The spontaneous activity attending this vigor makes them a pleasure instead of a pain. The purpose of Buddha's teaching was indeed to bring all sentient beings into the light of the permanent truth and reveal the root of all sufferings and lead them to the path of the perfect emancipation by breaking through their delusions and enabling them to benefit all sorts of men through this achievement of wisdom and felicity. This precious path, therefore, brings out every beauty of virtue and enlightens all classes of men. The real foundation of morality in the present Japan is the gift of this wonderful influence of "Hinayana" planted in the very bottom of the hearts of the people.

In "Mahayana," birth and death are taken to be one, and its aim is to cultivate the great wisdom to bear the fruits of Buddhahood. It is therefore called "the doctrine of how to attain enlightenment by perceiving the non-existence of all things." Those who are not well acquainted with the teachings of Buddha, often stick to one corner and neglect to even listen to it, and hold perverted and heretical views contrary to the true aspect of the perfect emancipation. Religion, however excellent; learning, however profound, are not in accordance with the path of emancipation if they are stained with the least prejudice. All things in the Universe, whether absolute or concrete, are governed by the law of cause and effect. Where there is a cause, there is an effect, as the echo follows the sound. So, to produce a good effect, a good cause must precede. Without understanding this wonderful law, the truth of non-individuality can not be comprehended, for by this law only good conducts are called forth, and the results of such teaching

upon the sentient being bring all possible virtues and every sense of responsibility belonging to the human nature, such as loyalty to the master, obedience to the parents, true friendship, love, truth and so forth. The theory of the transmigration of souls is only another form of this wonderful law. Might there be some discussions about the transmigration of souls, however the concatenation of cause and effect cannot be denied. When the monarch is benevolent the subject is loyal, and when the father is affectionate the son is obedient; thus all virtues appear according to the essence of mind, for the true essence of mind is originally pure. Harmony with the essence of mind, therefore, brings all good effects. Least virtues must be praised and the least vices should be blamed. Those who scorn the sages and scandalize the pure without knowing them are never said to be noble-minded. The influence of "Mahayana" and "Hinayana" is great in human souls and they are boundless in their virtue, but all things are vanity; they are only the clouds arising on the mysterious sky of the human mind. There is nothing but mysterious mind. So let us try to unveil the true essence of mind by practicing all possible virtues and goodness; this was the way our Shaka-Muni and all other Buddhas attained the perfect enlightenment.

"As long as a man's heart stray
No step from his road of right
He may pray, or forbear to pray,
But is dear in the *Kami's* sight."

The Negro Voter in Southern Cities.

BY F. H. YAPLE, DELTA TAU DELTA FRATERNITY.

There is a cut in a recent cartoon paper of a Texas politician, who hands a negro a ten dollar bill as pay for his vote. Immediately after he votes he finds that the politician had a string tied to the bill and it had disappeared from his pocket; although it appears as a joke, it is, nevertheless, true in a great many instances. The Southern negro is the tool of the Southern politician.

There are at least a million old "befo' de wah" negroes that are as ignorant of a spelling-book or newspaper as they are of life in Greenland.

A group known as the South-central States are legislated over by officers many of whom have little more education than the negroes. Fifteen per cent of them can neither read nor write. It is impossible for a negro to hold an office of any capacity, as he is totally disregarded socially, and is looked upon only as a minion of the white man.

A man engaged in a business may employ a hundred negroes. When it comes to election time, he can direct their voting, and through their influence half as many others. Occasionally a phenomenal negro brain springs up, such as the Harriet Beecher Stowe description, and the Hon. Fred Douglas, who tried to remedy the ignorance of his race. But they are quickly disposed of by the politicians, and occasionally by the lynching process.

There is a tendency on the part of the plantation negroes, because of a prevalent idea that they can get a living in the cities with less exertion, to move into town; that most of them find it different on actual trial does not discourage the others from doing the same, and in order to keep the wolf, or rather Southern "wild-cat," from the door, they are willing to sell their votes for a nominal price.

The capitals of the States named are typical illustrations of Southern corruption. Birmingham, Alabama, at the time of its boom, was in the hands of northern capitalists, who made the ignorant negro believe that if he offered his labor cheap it would promote the city's growth, thereby increasing the valuation of what little property he might own. This management was of course beneficial to one side only. The capitalists got wealth and the negroes got experience. The cheap labor of England was not to be compared. Capitalists of Birmingham, Eng., were made jealous by the growth of Birmingham, Alabama. But soon the negro labor leaders demanded a voice in the city gov-

ernment, and also higher wages. For their pains they got appointments as janitors and policemen, and there was a temporary increase in the wages paid to them. When the negro's confidence was restored, the whites again began to oppress them, and at present they are in no better circumstances than they were ten years ago.

It would be supposed that in communities where the negroes greatly outnumber the whites that they could carry the polls to their liking, as is done in the southwest, particularly in New Mexico and Arizona where the Mexicans and Spaniards outnumber the whites. But their old slavery discipline comes useful to the white man. In a certain sense they have the same fear of the present politician as they had of their old masters. And a useful aid in preserving this state of affairs is the negro's ignorance of the value of his vote, and of the numerical strength of his race.

One way in which the politician gets control over the negro body and so much of his soul as controls his morals is by a system of crop mortgages, a scheme by which these dictators virtually gain control of the negro stomachs. The white leaders furnish meal and bacon for the negroes to live on during the year, i. e., from one harvest to the next, and in return takes an extravagant mortgage on the next crop. And he answers them that if he is elected to whatever office he may be a candidate for that he will not exact the full payment of the mortgage. These negroes will, of course, vote for him. At the end of the year when the capitalist counts his profits, the negroes have nothing to show for their work, except that they have had a fairly good living.

The territory in which negroes predominate is a strip three hundred miles wide reaching from Texas to Virginia. This embraces many large cities and the historical country "From Atlanta to the Sea," that was devastated during the Rebellion, but of late years has attracted capital to its rescue, and is now progressing.

I have gathered my ideas of the negro voter in the Southern cities mainly from observation and talks with people who have lived among the negroes and who do not think from any prejudiced opinions. We must look forward with a hope that something better than the present condition of affairs awaits these people. That before another generation the political corruptions of Southern cities will be so revolutionized as to lay the term "Ignorant South" on the shelves of history.

Some Biographical Sketches.

C. J. FOREMAN.

When the board decided that the librarian needed an assistant it began casting around for a competent person to fill the position. The position was evidently thought to be a good one as there were several applications, but when the choice fell upon Mr. C. J. Foreman of the class of '94 it was everywhere conceded that he was the right man for the place.

Clarence J. Foreman is a native of Ionia county, having been born there in 1871. When he was four years old his parents removed to the northern part of the state, where they settled upon a farm. Mr. Foreman received all the advantages of a country school education until at the age of sixteen he entered the High School at Harbor Springs. He graduated at eighteen. He then taught school a term and started to master pharmacy. He soon gave this up and entered the college with the class of '94.

At college Mr. Foreman immediately became recognized as a leading student. At the end of his course he ranked one of the first students of his class and was chosen as one of the commencement orators. For several terms he was employed in the library during his spare hours and the excellent character of the work which he did proved valuable to him in obtaining his present position. Mr. Foreman is a member of the Union Literary Society, and has always been prominent in its work.

V. V. NEWELL.

Not often do we see a student change from one course to another, but we think he is either fickle minded or, perhaps, shifting about trying to find an easier or a shorter path through college. But such a change has proven a highly commendable action on the part of Mr. V. V. Newell, class '94, who was recently appointed to fill the vacancy left by the resignation of W. D. Grosbeck, foreman of the machine shop. Mr. Newell entered the M. A. C. in the fall of '85, choosing the agricultural course, but was obliged to leave before finishing the term. He again entered in the fall of '91, this time choosing the mechanical course.

Mr. Newell was born in Adams Co., Ill., and at an early age moved to Wisconsin. He afterwards moved to Benton Harbor where he remained until he was ten years of age. Here he attended the village schools until another removal of the family. On account of the occupation of his father, that of a Methodist preacher, his residence in any one town was rather brief. From Benton Harbor they went to Cadillac, then a town of a few log shanties, situated in a pine clearing made about two years previous to their arrival. The pine woods afforded less opportunity for school education and consequently much of Mr. Newell's time was spent at various occupations during the summer months and in the winter he attended school in a log school house. At about fourteen years of age he worked on an old dam at Williamsburg where he earned his first day's wages. He farmed some and taught one term of school previous to his entry at the M. A. C.

At the age of seventeen he entered this college for less than a term. During his absence from college between the ages of seventeen and twenty-three he spent much of his time working in the woods; he taught some in both district and village schools and spent one summer at a Normal school at Alma, Mich.

At twenty-three he entered the mechanical course of the M. A. C. and soon

became identified as one of the best students of his class. He was a member of the Olympic Society, also of the honorary fraternity, Tau Beta Pi. He was always a familiar and highly respected member of the Students' Organization, in sustaining what he thought to be right, no matter if all others were opposed to him, and in forwarding any movement for the benefit of the student body and in maintaining the good name of the students as a self-governing body.

Mr. Newell was chosen to fill the position he now holds in the mechanical department before he had finished his labors as a student, but he was enabled to graduate with his class. He took up his work in the shops with an unusual interest and the record he has already made proves his fitness for the responsibilities entrusted to his care.

C. C. PASHBY.

Two graduates from the mechanical course, Class of '94, have received appointments as instructors at the M. A. C. Besides the appointment of Mr. Newell, the State Board of Agriculture, at its August meeting, decided upon C. C. Pashby for the position of instructor in mathematics, left vacant by the resignation of Mr. J. N. Hatch.

Mr. Pashby was born in St. Joseph Co. Mich., in 1868. During his boyhood days he lived with his father on a farm, and attended the district school. At the age of nineteen he entered the Constantine Union Schools, and graduated on his twenty-first birthday. He then went west for a year, where he was engaged most of the time in teaching.

In the fall of '90, Mr. Pashby entered the mechanical course at M. A. C. His college life was a most active one. Mr. Pashby once said: "During my college course, I have used my faculties more for the benefit of others, than I have for my own benefit." He was vice-president of the Students' Boarding Club Association, for one year, and did much in revising and perfecting the present constitution of that body. He also held the stewardship

of one of the boarding clubs for two terms. He was an Olympic Society man, and represented that society on the SPECULUM board, in the capacity of editor of athletic column, and in the '93 Oratorical contest. During his junior year, Mr. Pashby was elected to a membership in the honorary fraternity, Tau Beta Pi. Near the close of his senior year he ranked eighth in class work, and was one of three chosen from the first eight to deliver an oration at commencement. He taught school during two of his winter vacations, and was enabled by means of his industrious habits, to largely support himself.

The department of mathematics in securing the services of Mr. Pashby has obtained an earnest student, and a man whose genial manner will win the good will of both faculty and students.

SCIENTIFIC.

College Light and Power Plant.

The spring of '94 found the college in the possession of an arc light dynamo, rated at forty horse power, together with an engine with an estimated horse power of less than twenty. The armature of the arc light machine had a measured capacity of 16 amperes while the field would carry only 10 amperes. The resistance of the field was found to be about twenty ohms. Since the generator was to be used both for light and power it was decided to operate the dynamo at 500 volts. To magnetize the field the ends were separated and are excited in parallel from the 65 volt circuit. 150 lamps of 100 volts each were arranged to work five in series as in street car lighting. The circuit is found to work very satisfactorily. The generator gives at the switch board 16 amperes at 500 volts.

16×500 equals 8,000 watts.

If we allow a loss in the amature of 10 per cent, for friction of amature and belt 10 per cent, for actual losses in engine 10 per cent, we have 8,000 watts, which is

73 per cent of total energy as shown by indicated horse power.

Hence 10,960 watts is an equivalent of electrical energy required.

$$\frac{10,960}{746} = 14.7 \text{ horse power,}$$

which corresponds with observation by indication cards of horse power required at full load.

The armature loss can be reduced by magnetizing the field to somewhere near the saturation point. Because of the low current taken by the field being equivalent to $6\frac{1}{2}$ amperes, there is very great distortion and excessive sparking. As the outfit stands nothing has been expended upon either exciter or generator. The voltage is controlled by a low resistance coil in the exciter circuit. The maximum taken by the field is 13 amperes at 65 volts, equal to 845 watts or 1.1+ horse power.

The generator will always be a good machine to operate motors. For such work and for lighting its capacity could easily be doubled. By raising the exciting current so that approximately 10 amperes would flow through each field coil, then soldering each alternate armature coil making the length of active wire one-half what it is at present. The output of the machine would then be 300 lights, the voltage remaining 300. The only reason why 300 lights cannot be used on short notice is lack of engine power. 150 additional lights would be enough to place a lamp in every student's room in the dormitories.

One of the surprising things is the cheapness with which the college can operate the lights owing to our peculiar conditions. From actual boiler and engine tests made on the college boiler plant by Prof. Weil, I have taken the following figures: Pounds of water evaporated at 60 pounds pressure by one pound of coal, 6 pounds. Amount of water taken by engine per horse power per hour, 36. Hence 6 pounds of coal is required per horse power per hour. The generator requires 14.7 HP. and the exciter 1.5,

making a total of 16.2 HP. making a generous allowance of $16\frac{2}{3}$ horse power; just 100 pounds of coal will be required per hour to run the whole plant. The coal the college uses at the boiler house costs less than \$3.00 per ton delivered, and 100 pounds costs 15 cents. Since no more help is used at the boiler house than formerly, the total cost of operation of the plant under full load (150 lamps) is less than 15 cents per hour. The cost of lamp renewals is about 1-04 of 1 cent per hour per lamp. If students were to furnish their own lamps the college could furnish the current at 1-10th of 1 cent per hour.

PHILIP B. WOODWORTH.

Notes on Hot Water Heating.

In many of the technical schools of this and other countries, at the present day, the engineering student—either civil or mechanical,—as well as the student of architecture, is required to devote a portion of his time to the study of questions relating to heating and ventilation.

No such work as the foregoing is included in the M. A. C. program, nevertheless at few institutions of a similar nature, has the student a better opportunity to study two of the principal methods of heating now in vogue, viz.: hot water heating and steam heating.

In arranging a hot water heating system some one of the three following errors is often made.

1 The use of insufficient "radiation," or radiating surface.

2 The introduction of excessive resistance, due either to using too small pipe or an excessive number of bends and turns, or both.

3 Unequal distribution of resistance in the system.

Sometimes two or all three of these errors are found to have been made in arranging a system.

When estimating the amount of radiating surface required any attempt at close adherence to empirical formulæ is almost certain to lead to errors. The necessary

amount of radiating surface depends chiefly upon the maximum cooling effect caused by the exposed surfaces and, therefore, upon the area and nature of the exposed surfaces. Empirical formulæ which make the amount of radiating surface depend in the main upon the cubical contents of the room to be heated should not be used.

The second named error is more likely to be caused by the introduction of many turns and bends in the piping than in the selection of size of pipe; theory and practice combined furnish reliable data for the calculation of the latter item.

The third named error is to be particularly avoided in arranging a hot water system; there is much liability that such a system will fail to give satisfaction because of unequal resistance in the pipe circuits causing "short circuits."

An examination of the present heating system in Abbot Hall, at the college, will show how a system can be so designed that the water, passing from the boiler to the different radiators and back to the boiler, must, in each case, travel along paths offering practically equal resistance to the flow. This plant also illustrates the facility with which "equal resistance" may be secured by using the so called "over head" system.

While there are many other considerations to be made in designing a hot water system that of equal resistance in the circuits is of prime importance, and its neglect is sure to lead to failure even when the amount of radiation is ample, piping of low resistance, and use made of a boiler properly designed and constructed for the work.

C. L. W.

Reports of Society Meetings.

The Michigan Academy of Science will meet at Lansing in the pioneer room of the Capitol, at 2 P. M., Dec. 26, standard time. The call is made in connection with the State Teachers' Association and the object of the meeting will be to hear a miscellaneous program and perfect organization. It will be remem-

bered that Dr. Beal is president of the association and Professor Barrows a member of the executive committee.

At the meeting of the Natural History Society held Sept. 7, Prof. Frank Kedzie gave a very entertaining talk on "Cream Tartar and its Manufacture." He had lately visited a plant in the east, which covered two and one-half acres and made 5,000 pounds of cream tartar a day. The substance from which it is manufactured is called Argol, and is a product of grape juice. Eighty-five per cent of the output of this one firm is used by the Royal Baking Powder Company. The industry is comparatively a new one in this country, though above 4,000,000 dollars worth of the crude material is annually exported from Italy alone.

Prof. Barrows spoke afterwards on "Protective Coloration in Birds," bringing to mind many familiar examples of such, as in the Bittern, Partridge and Whippoorwill. One notable illustration of protective coloration is the Ptarmigen or Willow Grouse of the Arctic regions, which is brown in summer but turns to a pure white in winter. A box of smaller birds was shown, which plainly illustrated the topic, for in nearly every case, the back of the bird was clothed with brownish, subdued, colored plumage to lessen the danger of discovery by hawks, and other enemies, while the breast contained bright and gay feathers for ornament. So also, the female bird whose duty is at home and on the nest so much of the time is invariably less brilliant and striking in her coloration than the male, who is amply able to care for himself.

Mr. U. P. Hedrick then showed a remarkable bunch of plums from Morris, Mich. The branch was three feet long, weighed nine pounds and contained 148 plums. It was of the Lombard variety.

Among other interesting things at the last meeting of the Botanical Club, Mr. Wheeler read a letter from S. P. Orth,

"with '9" which we published in part below. Many will recollect recent newspaper accounts of the scientific expedition of Dr. Cook to the far north, which ended so disastrously to the adventurous scientists in the loss of their ship and personal belongings as well as of all their specimens. Mr. Orth was botanist to the expedition. He graphically describes some events connected with the trip:

"I assure you, I had a very profitable time, although we did not succeed in going nearly as far north as we expected, yet we had a wonderful trip and I cannot recommend a better country for grandeur and interest than Greenland. I had what Dr. Cook was pleased to call the largest collection of Greenland plants ever made. I lost about 6,000 to 8,000 individual specimens. My work was greatly hampered by the shortness of our stay and the great inclemency of the weather. It is so wet and chilly the most of the time that your patience is below par.

"The *flora* is exceedingly interesting; the tints are superb and forms beautiful. I, of course, knew but a few of them. I could place the genus of nearly all, but the species were too northern for me.

"I made a set of experiments as best I could on the temperature of soil and water, but they were not as extensive as I would wish. It is a great country. As for geology, it's the ice age in object lesson. I climbed a great glacier and saw the inland ice-sea, crossed by but one man, Nansen, in its entire breadth. I saw great mountains, lonely fjords and the most interesting natives. I also passed through all the dangers and accidents sea-faring people usually run across. We were delayed everywhere; broke our compass, struck on iceberg, encountered innumerable fogs, the ship was twice on fire, struck a sunken reef, were surrounded with floe ice and had to abandon our ship, were camped fifteen days on a little schooner, living on two poor meals a day, had a storm, were becalmed and had terrible fogs in the dreaded straits of Belle Isle, and at last had the terrible disaster of cutting a three masted

schooner in twain and seeing four men out of a crew of five, drown.

"I assure you the quiet of home is very peculiar to me, and the landscape also. For three months, nearly, I did not see a respectable tree. In Cape Breton and Newfoundland they have poor excuses for trees, only spruces and poplars, and they are not very large. The sturdy oak and stout hickory are very welcome sights. Give my regrets to the Botanical Club, that I could not present them with some very fine posies from the north."

[Mr. Orth has since returned to Oberlin college. We hope in the near future to present an article from his pen dealing more particularly with scientific facts and points of interest observed by him during the journey.]

From the Laboratories.

Tests on the horticultural department of sub-irrigation by the use of tile placed at the depth of a foot have been so successful that the same system will be used in the forcing house with a variety of crops. Last winter this system was used for carnations and other plants. It gave an increased yield of 25%. With the first crop there was a marked gain in maturity. One great advantage of the plan is that it avoids in a large degree harmful loss from evaporation and so requires much less water per acre. Also the ground does not become hard and baked, as is likely to occur with surface irrigation. About 1,000 barrels to the acre are required for each application.

The treatment of potatoes with corrosive sublimate has again shown itself to be entirely successful as a remedy for "scab," and reports from the parts of the state where it has been tried uniformly show good results even where seed used was "scabby."

The arrangements by which the blower for the cupola in the foundry may be driven are quite ingenious. The blower is placed in the experimental laboratory

from which a seven-inch pipe carries the blast directly to the cupola which is situated in an alcove off the south side of the foundry. It is necessary after the heat in the cupola is once started that the blast shall continue without interference. For this purpose the blower can be connected in turn with a rope drive or water motor, and, as an illustration of its use, the electric motor recently constructed by the department has also been placed in the laboratory in condition to be used. The rope drive, attached to the main shaft in the wood shop, furnishes the power ordinarily, but in case any accident should happen to the rope the power may be supplied by either the electric or water motor, thus reducing to a minimum the danger of interrupting the blast. Some experiments are being made by the Senior class to determine the H. P. used by the blower at different drafts. For this purpose a Morin dynamometer of transmission built by the students is used. Some results of their work may be given later.

Mr. McGee has some results from an experiment with corn smut, from which he furnishes the following data. The object was to locate the place of infection of the smut. He baked some soil five hours, moistened it with boiled water, and placed it in pasteboard boxes under glass. In it, seeds that had been treated to kill corn smut, were planted and grown until the shoots were six inches high. They were then transplanted to the open field like cabbage plants would be. When the corn matured, however, as much or more smut was found than if no preventative measures had been taken. This shows that the place of infection cannot be in the roots, but, that the smut comes from spores which float in the air.

The Russian Thistle, *Salsola Kali-tragus*, D. C. This weed has lately made its appearance in Michigan, and the Experiment Station has published the following bulletin on the subject:

This pest, which is not a thistle, but a

first cousin to our common lambs' quarters, or pig weed, has crossed Lake Michigan and landed at Charlevoix. Yesterday, Mr. H. D. Thompson, Botanist to the fish commission party now encamped at Charlevoix, sent the consulting botanist to the Experiment Station at the Agricultural College, three or four young plants of the true Russian thistle, establishing, beyond a doubt, the fact of its appearance in our State. This weed is an annual, growing from one to three feet high, branching profusely, and when full grown, forming a dense, bushy plant, from two to six feet in diameter. Since the publication of this bulletin, Aug. 25, the pest has been found at Escanaba, Detroit, Caro, Perry and Bowne.

When young it is very juicy and tender, covered with small, narrow leaves. Late in the summer the stems grow rapidly, branching in all directions and in place of leaves bear spines, one-fourth to one-half an inch long. At the base of each cluster of spines is a soft, papery flower about one-eighth of an inch in diameter, ripening a single, small seed. The home of this plant is in eastern Europe, or western Asia, and it has a bad reputation in Russian wheat fields. It was introduced into South Dakota about seventeen years ago, and at present is spreading rapidly in half a dozen neighboring states. This pest flourishes best on high land but will make itself at home in all sorts of soil, flourishing best in dry seasons, when growing crops cannot crowd it out. Spring plowing is favorable to the growth of the Russian thistle, because it spends a part of July and August in getting established, for flowering and seeding. Sheep are said to eat this plant until it becomes coarse and woody. Plowing in August and early September, before the plant ripens its seed will tend to check it. The large harbors on the east shore of Lake Michigan will be the first points to be watched in attempts made to prevent the landing of this pest. A knowledge of the enemy and of the best means of fighting it must be made known at

once. Small patches may be best destroyed by hand pulling, and burning every plant.

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AGRICULTURAL COLLEGE, OCT. 15, 1894.

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The business management has found it necessary to require all subscriptions to be paid in advance hereafter. If you are in arrears with your subscription please attend to the matter at once, otherwise your name will be dropped from our subscription list. Address all business communications to

M. W. FULTON,
Business Manager.

WE are indebted to Mr. Chace Newman for the sketches of Messrs. Newell and Pashby, which appear in this issue of the SPECULUM.

WE present in this issue a paper on Buddhism and its Influence by Mr. Mat-

suru, a student from Japan. Mr. Matsura is a graduate of Union College, Tokio, and has spent some time in various engineering schools of this country. As his early life was surrounded by Buddhist influences, he is eminently qualified to speak on this subject. We hope that the SPECULUM may hear from him again in the future.

THE College barns are being equipped with electric lights, but two hundred students are still obliged to fight their way to the heights of learning through an atmosphere composed principally of lamp-smoke, and to risk their lives by burning kerosene in buildings absolutely destitute of any means of escape in case of fire. The ways of the wise are indeed mysterious.

THE SPECULUM appreciates the action of the faculty in recommending that the members of the Editorial and Managing Board be excused from farm and shop labor two days per month for the purpose of gathering material and mailing. Formerly, as all members of old boards well know, the work has often been done at the expense of considerable time which should have been spent in study. As a partial recompense for the kindness of the faculty, we hope to show a marked improvement in THE SPEC.

WHILE we may be encroaching upon the territory of our athletic department, yet we cannot forbear a word of encouragement to those who are trying to introduce foot-ball as one of the sports of the college. Whatever may be said to the contrary, foot-ball is undoubtedly the American college game and it has come to stay. It is a game that is especially suited to the average American young man. It is rough, but because it is rough it is not necessarily brutal. The training which it requires of those who participate is unexcelled both as a moral and a physical measure. Daily practice for months before the foot-ball season opens is requisite to all players. During this

time there must be total abstinence of intoxicants or stimulants, especially in the use of tobacco. Only the plainest food can be eaten, all cake, pastry or highly spiced dishes being strictly prohibited. Early hours both of rising and retiring are required. It is essentially a training which forms regular habits, prevents carousing or dissipating, and builds up and exercises every muscle in the body. With such advantages it should be encouraged by all who admire the strong body, the healthy mind.

WE wish to call the attention of THE SPECULUM readers to the revised constitution of the Students' Government, a notice of which appears in another column. The necessity of revising the constitution was demonstrated last summer when an affair occurred which rendered a trial necessary but under the old constitution the trial was little better than a farce. Its weak points lay in the double duty of the jury to render the verdict and pronounce the sentence, and in the inability of the prosecution to obtain sufficient evidence for conviction. It was the aim of the legal board of the Students' Organization in revising the constitution to correct these defects, whether they succeeded or not only a fair trial of the system can reveal. One thing is certain however and that is that this or any other system of student government can succeed only when it has the support and sympathy of the student body. A certain degree of order is necessary to the successful pursuit of study and if, by the co-operation of those interested, such a decree can be obtained it should be done. The code of penalties is not designed as a reform but simply as a protection to those who come to college for work.

COLLEGE NEWS.

PROCEEDINGS OF THE BOARD.

President Wells was appointed as additional delegate to Washington.

Permission to purchase two wagons was granted to the Farm Department.

The purchase of a small stock scales for the Farm Department was authorized.

It was resolved that the fee for the Dairy Course be \$2.50 for each student.

The furnishing of rooms in Agricultural Laboratory was referred to Mr. Chamberlain.

Prof. P. M. Chamberlain was granted leave of absence from the college during the winter vacation.

At the meeting of the State Board on Sept. 13, leave of absence for the winter vacation was granted to Prof. G. C. Davis.

The Professor of Agriculture, with the advice of the president, was authorized to employ an assistant in dairy work.

The purchase of a flour tester at a cost of \$80 was authorized for the experiment station of the Chemical Department.

Oct. 8, President Gorton reported repairs at Abbot Hall completed. Also reported the action of the faculty regarding suspended students.

It was resolved that the Physical Department be allowed to purchase a Milli-Ampere Meter at a cost of \$20. Also to rent an electric clock at a cost of \$30.

Messrs. Garfield and Moore with President Gorton as chairman, were appointed as the committee on athletics provided for by resolution of July 19.

Hon. Charles W. Garfield was elected as delegate from the college, and President L. G. Gorton was elected as delegate from the Experiment Station to attend the meeting of the Association of Agricultural Colleges and Experiment Stations to be held in Washington, D. C., on Nov. 13.

FARM DEPARTMENT.

The rail fences north of the Grand Trunk railroad are being replaced by wire fences.

The Farm Department has submitted for publication a bulletin giving results of lamb feeding last winter.

The farm barns are wired and are ready to be lighted with electricity, thus dispensing with the use of kerosene lanterns.

Two bulletins will soon be issued, one is by Prof. A. A. Crozier on "Millet," the other is by Prof. C. D. Smith on "The Dairy."

In his feeding experiment with pigs, B. A. Bowditch has demonstrated that with pork worth five cents per pound wheat is worth ninety cents per bushel for feeding purposes.

The list of applicants for the dairy school this winter has increased to forty-two. Fifty will be the limit, twenty-five working in the forenoon and twenty-five in the afternoon.

At the State fair the short horn cattle from the college took about all the prizes there were to be taken. The brown Swiss cattle exhibited were the only cattle of that breed at the fair. The dairy exhibit was ac-

knowledgeed to be the best and most interesting exhibit at the fair. It was valuable to the college in that it showed the practical work done here in that line.

MECHANICAL DEPARTMENT.

Working drawings for a hydraulic hoist are about completed.

Hereafter the electric lights will be turned on at the farm barn at 4:45 A. M.

Several wood lathes which have been under process of construction have been placed in the wood shop.

A new Beach jig saw has been purchased and set up in the wood shop. Negotiations are on for a new saw table.

The department has just completed a four and one-half horse power electric motor to be used in the Experiment Laboratory. They also have a new tempering forge of novel design.

IN THE LIBRARY.

The library has grown so rapidly that the gallery built last winter is nearly full and more shelf room will soon be needed. The lighting has been greatly improved of late, but we would suggest that the lights be turned on earlier, as the room becomes quite dark before 6 P. M.

At a recent meeting of the State Board it was ordered that the department books be catalogued in the library. The work is being pushed as rapidly as possible, and when completed the library catalogue will contain a list of all books owned by the college. The number of bound volumes is at present about 18,000.

COLLEGE SUNDAY SCHOOL.

It is as discreditable to a man to be ignorant of biblical facts, narratives and quotations, as it is not to know when America was discovered, or who General George Washington was. Yet by investigation it has been discovered that some of the most elementary facts connected with or contained in the Bible are unknown or forgotten, or hazy, dim, and unreal to some of our students. It is, therefore, a good move to offer instruction in the Bible on Sunday, and the organization of a Sunday School in our chapel is heartily welcomed. The time set at present is from 1:30 to 2:30 P. M. There are classes for children and for students. As now organized the students are divided according to the four college classes, and the teachers are Dr. Kedzie and Professors Smith, Barrows, and Hedrick. There should, however, be enough attendants from each class to require several teachers for each of the four classes and good teachers will be forthcoming if only the attendance demands them. We give our hearty sympathy and encouragement to the movement. In no better way can an hour on Sunday be spent than in talking over a part of the Bible with competently interested men. No news will be more welcome at home than the news that the mother's boy is attending a Bible class. "With all our getting, let us get wisdom."

ABOUT THE CAMPUS.

The greenhouse is receiving a coat of paint.

There has lately been a family reunion at the home of Lieutenant Lewis.

The Y. M. C. A. Sunday meeting has been changed from 7 P. M. to 12:30 P. M.

Miss Lilian Wheeler started for Claremont, California, on Monday, Oct. 1.

Dr. and Mrs. Ella Kedzie attended the funeral of Prof. Estabrook at Olivet.

Mr. Holdsworth of Grand Traverse is visiting his son, Professor Holdsworth.

There has been only one case of serious sickness at the college during the past year.

Mr. B. F. Hedrick of Harbor Springs visited his sons at the college last week.

Superintendent Andrew Spencer of the Indian school at Mt. Pleasant visited the college recently.

The "kid academy" has been discontinued, all of the older "faculty kids" now attend school in Lansing.

President Gorton is giving a course of lectures on pedagogy to those of the students who are interested in teaching.

President Gorton spoke on "Education as Related to Agriculture," at the St. John's fair on teachers' and pupils' day, Oct. 3.

One of the members of the faculty has suggested that the Literary Societies unite and hold a Holmes Memorial Night in the chapel.

The dairy students and others who work at the college during the winter must room off the grounds, as none of the dormitories will be heated.

The present enrollment at the college is 260. This is the largest number of regular students enrolled during any one term for several years.

Mr. Gunson has been suffering intense pain from what is supposed to be the effect of some vegetable poison, his face being the part most afflicted.

A good specimen of the Green Heron (*Ardea Virescens*), was shot by E. H. Sedgwick '97, on Sept. 1, and its skin preserved for the collection of the zoological department.

Professor Taft visited the West Michigan Fair at Grand Rapids, Sept. 24-28, and acted as one of the judges of fruits. At the State Fair the professor acted as sole judge of fruits and vegetables.

Prof. C. D. Smith spoke at the Washtenaw county fair held at Ann Arbor, Sept. 27 and 28, on "What Shall the Farmer Do," and "Dairies," explaining methods of buttermaking as taught at M. A. C.

It was not deemed advisable to light the drive between the armory and the president's house, because the estimated cost of ten lamps there would more than equal the installation of any seventy lamps on the grounds.

The Agricultural Seniors, "chaperoned" by Profes-

sor Gladden, visited the Gladden peach farm recently. This is the best fruit farm in the vicinity and the boys received many practical hints on fruit farming to say nothing of pecks of delicious peaches.

Mr. G. W. Rose, who is doing special electrical work, is now trying to operate a gong on College Hall to strike the hours. The gong is controlled by the striking arrangement on an ordinary eight day clock. Mr. Rose begs leave to announce that his time is not official.

Specimens of the Russian thistle have lately been received by the botanist of the Experiment Station from six localities within the State; namely—Escanaba, Delta Co.; Charlevoix, Charlevoix Co.; Caro, Tuscola Co.; Bowne, Kent Co.; Perry, Shiawassee Co.; and Detroit, Wayne Co.

Some form of entertainment in the chapel is now provided for each Friday evening. Two weeks ago Russell A. Ostrander of Lansing read a paper on "Some Curious Things in English History." Last week Justice Robert M. Montgomery of Lansing delivered a lecture on the "Virginia and Kentucky Resolutions."

The appointment of the commissioned officers of the battalion according to rank is as follows: major, M. G. Kains; captains, C. P. Close, H. F. Lake, A. C. McKinnon, W. C. Bagley; adjutant, W. J. Goodenough; quarter master, C. H. Robison; lieutenants, W. A. Ansorge, H. E. Ward, W. C. Stebbins, G. L. Stewart, J. S. Mitchell, F. P. Normington.

During the great Maccabee gathering at Lansing last month, a large number of the Maccabees took occasion to visit the college. But few of them seemed to understand that visitors may enter all college laboratories, so they obtained only a superficial view of the college. Would it not be a good plan for the faculty to appoint a force of student guides for such occasions?

Among a small lot of bird skins recently sent to the Zoological Department for identification, by L. Whitney Watkins, '93, was a fine specimen of Cory's Least Bittern (*Bolaurus Neoxenus*), taken on Mr. Watkins' farm at Manchester, Mich., on Aug. 24, 1894. This is not only a new bird to the Michigan fauna, but one previously known in the U. S., only from Southern Florida. Its presence in Michigan at any season can be regarded only as the merest accident.

Mr. O. C. Simons, manager of Groveland Cemetery in Chicago, spent a short time at the college about Sept. 20. Mr. Simons has made a great reputation for his good taste and skill in making use of wild shrubs and herbaceous plants in ornamenting parks and cemeteries. Among the things he especially admired during his very brief visit, were the wild asters, golden rods, sunflowers, narrow-leaved cattail flag, boltonia, ferns and the American ivy on the trees at the botanic garden.

The constitution of the Students' Government has been amended so as to provide a new system for

trials. The principal changes lie, first in the establishment of a grand jury to investigate complaints against order and prefer indictments if the evidence is sufficient; secondly, in the limiting of the jury to members of the Senior and Junior classes; thirdly, in the establishment of a code of laws providing a definite number of marks for each offence. The measure has been approved by the faculty.

At a recent meeting of the faculty the following was adopted: *Resolved*, That from this date, October 1, all articles, such as orations, poems, prophecies, histories, and so-called papers, together with any pictorial illustrations accompanying any such articles, and designed for presentation on any public occasion, such as class days, union exercises of the societies, or any exercise for which the college is responsible, held either at the college or in Lansing, shall be presented to the head of the English Department for criticism and revision.

In the elections in the Tau Beta Pi Fraternity at the opening of the year the honors fell to Harrie R. Parrish, of Allen, Hillsdale County, who remained of the eligible quota of the Senior class, and Earnest D. Partridge, of Grove City, Utah, who ranks highest among attendant mechanical members of the Junior class. Prof. W. S. Holdsworth of '78 was received into honorary membership. The candidates elect were tendered a reception and banquet on Thursday evening, October 4, at the new and comfortably furnished rooms of the Fraternity in the tower of the mechanical building.

The Chemical Department has received from Prof. Jago of Brighton, England, his Viscometer for testing the viscosity or the strength of different kinds of wheat flour when made up into dough. From Kunis of Leipzig, Germany, the department received a Farinometer or apparatus for testing the strength of flour when made into a dough with a definite quantity of water. Six kinds can be tested at the same time. The department also has an Aleurometer from Paris, for measuring the strength of the gluten of flour, and Porter's Apparatus, the best in the country for testing flour. These instruments are recognized as standard in England, France, Germany, and the United States, and will be used in the very thorough examination of the flour from the experimental wheats that have been introduced into Michigan and are now growing on the college farm.

Since astronomy was stricken from the curriculum the observatory has been practically an unknown quantity in the college equipment. Many students and some of the teaching force have not even known the location of the building. It promises, however, to have a more conspicuous existence hereafter, for a cinder walk is being laid to the building and several evergreens that have entirely hidden it and obstructed observations have been removed or trimmed. The exterior of the building will probably be painted white, that being a popular color for observatories. The interior will be painted a dark color, perhaps

black, to avoid reflection. The mountings of the telescope, and the driving clock and connections have been thoroughly cleaned, repaired and adjusted by members of the Mathematical Department without expense to the college. With everything in good order we may now expect that some work will be done at the observatory and that some practical observations will be made.

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.

Judging from the number of marriages, this fall seems to be especially adapted to the union of souls and fortunes. The SPECULUM extends to all M. A. C. boys who have become Benedicts, its heartiest congratulations, and wishes them long, happy and successful lives.

'73.

B. F. Halsted and wife recently spent a few days at the college. They have a son in the Sophomore class.

WITH '74.

N. J. Baker, of Carson City, recently visited his son, who is a member of the class of '97.

WITH '76.

Samuel B. Long didn't graduate, yet he became one of the auditors of Wayne county at a salary of \$3,500.

'78.

Prof. Eugene Davenport called at the college Oct. 2d.

E. O. Ladd has been nominated by the Republicans of Grand Traverse county for Register of Deeds. His election is certain, and the pay about \$2,000 a year.

'79.

A. A. Crozier has nearly completed an extensive bulletin on millet.

'85.

D. J. Stryker and E. A. Bartmess are local managers for the Standard Oil Co.

'86.

William R. Rummler and Robert W. McCulloch of '87, have formed a co-partnership for general law practice, with offices in the Ogden Building, corner Lake and Clark streets, Chicago, Ill.

'87.

C. E. St. John, Ph. D., Harvard, '94, is now at Heidelberg, and expects to spend the winter at the University of Berlin.

A. A. Abbott, E. M., Michigan Mining School, '94, has been employed at that institution as Instructor in Mining Engineering. He paid the college a visit Sept. 25.

"Corp" Himebaugh, of the Pension Bureau, has been detailed for field work for nearly a year past, with headquarters at Indianapolis, Indiana.

'88.

Charles L. Lawton is Mining Supt. at Bessemer, Ala.

T. H. Hall has had a raise in salary as stated in the last issue, but instead of being a clerk in the War Department, as there stated, he is bibliographer in the office of experiment stations in the U. S. Department of Agriculture.

W. A. Taylor returns to Washington this week after a month's vacation spent in western Michigan and Chicago. As assistant pomologist he will have more peaches and grapes to handle than even a moonlight rambling sophomore could dream of.

L. H. Dewey is looking after the Russian thistle and other weeds, and obtaining exercise and amusement after office hours by taking Grace Marguerite riding on his bicycle.

D. A. Smith made a call upon friends at the college during the Maccabee convention.

'89.

R. S. Baker while at Hammond, Ind., during the recent strikes, was attracted by a large crowd, and being curious to know the cause of the gathering gradually worked himself towards the center. Just at that time the Indiana militia opened fire and seriously wounded a man who stood next to Mr. Baker. The usual luck accompanying M. A. C. men saved him from disaster.

Married, at the residence of the bride's parents, Prof. John W. Earle of Albion, and Miss Millie Schwab of Wawaka, Indiana.

'90.

William Petrie and Hattie E. Shurtz were married Thursday, Sept. 13.

E. J. Rowley is teaching at Harvard, Mich., and works at electricity during spare moments.

'91.

Howard Baker has entered the U. of M. medical department.

V. S. Hillyer is doing a flourishing business as mechanical engineer in Grand Rapids. Bridge contracts and drafting are his specialties.

Miss Grace Fuller and Miss Jennie Cowley of '93 are teaching in the city schools of Lansing.

Mr. G. E. Hancorne and Miss Jennie VanTyle were married Aug. 24. They will be at home in Washua, Iowa, after Sept. 1.

'92.

W. E. Palmer travels for a wholesale grocery house

of Chicago. We learn from a man who is in the trade that the price of sugar in the various cities of the United States is dictated by the Sugar Trust. A merchant who sells below this price is fined \$250.

L. C. Brooks is teaching school in Onekama, near Manistee, Mich.

D. W. Trine has been engaged as assistant florist at the college.

Mr. G. H. Hicks has been on a two weeks' trip looking up the subject of clover seed in Indiana and Ohio.

WITH '92.

Mr. W. F. Davis of Lansing and Miss Nellie B. Davis of Saginaw were married at the home of the bride's parents, Sept. 19. They will reside at 312 St. Joseph street, Lansing, Mich.

'93.

W. W. Parker, who is taking post graduate work at Ann Arbor, was at the college Sept. 7th, to test some "hop pop" in the interests of Eaton county outraged prohibitionists.

Miss Lilian Wheeler left for California Oct. 1st. She and Miss Katie Cook will take special work at a famous school in Pomona.

L. J. Briggs, enroute for Ann Arbor, and Albert B. Cook, of Owosso, were visitors at the college Oct. 1st.

Married, Oct. 1st, Mr. H. F. Palmer and Miss May Stimson. They will be at home after Oct. 1st at 118 Antoine St., Detroit, Mich. Mr. Palmer plied the "SPECULUM pen" during '92-'93.

Miss Daisy Champion has received the principalship of the Bingham Street School, Lansing, Mich.

F. J. Porter is teaching school in South Barre, New York.

E. M. McElroy is teaching for the second year in the Niles high school.

E. B. Hale was a delegate to the Maccabee convention at Lansing, and spent some of the time in visiting his Alma Mater.

WITH '93.

W. G. Merritt has been successful in a law suit that involved all his property in Battle Creek.

'94.

Mr. F. R. Poss and Miss Ida Simons of Lansing were married Sept. 6. They are located at Caseville, Mich., where Mr. Poss has taken charge of his father's hotel and farm.

S. F. Scott paid the college a flying visit while on his way to Louisiana, Mo., where he has secured work in the Stark Brothers nursery.

D. D. McArthur has entered the State Normal School to take a twenty-weeks course provided for college graduates. This secures the degree of B. Pd. and gives a life certificate.

R. S. Welsh, formerly our business manager, is assistant principal of the Edinburg schools in Mississippi. He writes of excellent health, a delightful

climate and agreeable work, and says, "I am teaching almost everything from A, B, C's, to geometry and military tactics."

WITH '94.

Guy Mitchell is farming at Herndon, Virginia, in a region where the roads are too abominably bad for high speed on a bicycle.

E. A. Hayden is employed in a printing office at Union City, Mich.

WITH '95.

D. G. Smith called upon friends and classmates Oct. 6th.

W. W. Smith has entered Purdue University, taking the Civil Engineering Course. He expects to graduate this year.

Mr. G. H. Swift's failure to return to college is explained by the fact that he was recently married to Miss Winnie Coleman of Harbor Springs.

C. J. Combs has entered the U. of M. Medical Department.

WITH '96.

Joe Beauvais recently stopped at the college while on his way to the New York School of Ship Building. He informs us that it was his father who was lately married, and not he, as was stated in the August SPECULUM.

R. A. Latting has taken up the regular work in the U. of M. Law Department.

WITH '97.

C. B. Laitner, who was obliged to leave college early this term on account of his eye, has recently had it removed. The operation was entirely successful and he will return in the spring to graduate with his class.

S. C. Griggs & Co., of Chicago, announce for early publication an authorized translation, by Elias J. MacEwan, M. A., for ten years professor of English Literature at M. A. C., of Dr. Gustav Freytag's great work, "The Technique of the Drama." An important feature of the work is its critical examination of the plan, motive, and characters in the principal dramas of Sophocles, Shakespeare, Lessing, Goethe and Schiller. Great honor is due Professor MacEwan, since this is the first English translation of the work, and will thus supply a long-felt want in the literary world.

ATHLETICS.

The local field day September 29 was a decided success, and it is the wish of all that we may have many more like it. There were seventeen events besides the base ball and tennis games.

Following is the list of sports and the winners:

Standing Broad Jump—

Won by Cole '98,	-	-	10 ft.
Second, Partridge '96,	-	-	9 ft. 8½ in.

One Mile Run—		
Won by Tracy '96,	- - -	time 5:10.
Second, Stone.		
100 Yards Dash—		
Won by Gaudern '95,	- - -	time 11 sec.
Second, Pond '97.		
One Mile Walk—		
Won by Vanderhoof '96,	- - -	time 10:19.
Second, Reynolds '95.		
Running High Jump—		
This was a tie between Ansonge and Cole at 5 ft. Ansonge '95, won the toss.		
Running Broad Jump—		
Won by Cole,	- - -	18 ft. 3 in.
Second, Bateson '96,	- - -	18 ft. 2 in.
Pole Vault—		
Won by Ansonge,	- - -	7 ft. 11 in.
Second, Pond '97,	- - -	7 ft. 9 in.
Half-Mile Run—		
Won by Nellist '96,	- - -	time 2:51 1-5
Second, Rider '96,		
Running Hop, Step and Jump—		
Won by Cole,	- - -	39 ft 4 in.
Second, Bateson	- - -	37 ft. 5½ in.
Putting shot—		
Won by Fisher,	- - -	34 ft.
Second, Normington,	- - -	27 ft. 9¼ in.
220 Yards Dash—		
Won by Rider '96,	- - -	time 30 sec.
Second, Gandern.		
Hammer Throw—		
Won by Cole,	- - -	77 ft.
Second, Fisher '95,	- - -	66 ft. 8½ in.
Mile Bicycle—		
Won by Thompson '96,	- - -	time 3:15 2-5
Second, Rork,		
Quarter-Mile Bicycle—		
Won by Bierce '97,	- - -	time 58 sec.
Second, Thompson '96.		
440 Yards Run—		
Won by Normington,	- - -	time 1:03
Second, Gaudern.		

The 120 and 220 yards hurdle races were omitted on account of lack of hurdles.

The relay race was forfeited to '96, no team appearing against them.

Cole won the all-round medal, having 16 points to his credit, out of a possible 27.

'96 won the class trophy, a silver water service, given by Mr. Brackett, the jeweler.

The medals are to hang in the library with the winners' names and records underneath them. There is some dissatisfaction among the athletes concerning this, as there is no provision made for their ever becoming the permanent property of any one. If a man or class wins a prize, say three times in succession, it seems no more than right that it should become their property.

The base ball and tennis games will probably be played during the coming week.

The Sophomores and Juniors played a game of ball on Sept. 22, which resulted in a victory for the Sophomores, by a score of 20 to 19 in 10 innings.

The Sophomores are now organizing a foot-ball team. There is plenty of good material in the class, and '96 is waiting to meet some good team. If the rumor is true, that the State Board has forbidden the Junior eleven playing outside the college, we should have at least two teams, in order to keep foot-ball interest alive at the college.

Since writing the last, '96 has met a good eleven. They pretended to be from the Ann Arbor High School, but it is certain that two or three of them were not or else they had been in the high school longer than the average student stays there. In response to an inquiry as to whether or not they were all in the high school, the answer was made that they were "all taking chemistry there." If the defeat does not discourage '96 too much, by practice they can remedy their weak points and put up a better game next time.

COLLEGES AND EXCHANGES.

Of the 452 students enrolled this year at the Kansas Agricultural College 286 are boys and 166 girls.—*The Industrialist*.

In regard to the inter-collegiate records for the thirteen principal track and field events, it is interesting to note that Yale, Harvard, Princeton and U. of P. each hold three, while the thirteenth was made by a Washington 'man by a jump of 23 feet 6 inches.—*The Polytechnic*.

In the Notre Dame *Scholastic* of Sept. 29, there appears a symposium by the literature class on "Which is the more conceited, man or woman?" Of the ten contributors, all agreed that man was the more conceited, but woman the more vain.

Albion is about to get a soap factory. It will be known as the Albion Electric Soap Co. We hope they can get the article down low enough so the boys can bring some over with them when they play Olivet foot ball, and not be compelled to "fake" all that we have.—*Olivet Optic*.

The University of Wisconsin has begun the publication of a series of bulletins giving the fruits of original research by its students.—*Thielensian*.

The entire under-graduate body of Princeton met in a mass meeting and voted to abolish the custom of hazing. This action was in response to the appeal made by J. W. Alexander of New York at the opening exercises at the beginning of the term. Gordon Johnson voiced the sentiment of the upper classmen when he said: "The fair name of Princeton has long been disgraced by this brutal and cowardly custom, and it has become our duty as friends of our Alma Mater to abolish it once and for all."—*Ex*.

There are over four hundred institutions in the United States that claim the title of university or college.—*Hillsdale College Herald*.

Earlham College has abandoned the practice of having two papers, one by the young men the other by the young women. Both papers have united now under the name of the *Earlhamite*. The young men and young women have an equal responsibility in its management, and thus the paper becomes what neither was before, an exponent of every phase of college life.

The great Columbian organ is now being erected in University Hall, Ann Arbor. Some of the pipes are three feet in diameter. The instrument will be dedicated at a great concert.—*Hillsdale College Herald*.

The faculty of Massachusetts Agricultural College have voted that a student dropped into a succeeding class shall pass all examinations taken by that class, whether or not he may have been examined in those subjects in the class from which he has been dropped and received a mark of 65 or more.

It is said that the University of Chicago intends to publish a magazine similar to the *Century*, which will be a rival to that periodical. It is to be called the *Lakeside Magazine*.—*Aggie Life*.

A winning smile, a pleasant smile,
A feather.

A tiny talk, a pleasant walk,
Together.

A little doubt, a playful pout,
Capricious.

A merry kiss, a stolen kiss,
Delicious.

You ask mamma, you consult papa,
With pleasure.

And both repent, each rash event,
At leisure.

—*Ex.*

An annual prize of \$60 is to be given to the member of the Athletic Association at Dartmouth who stands highest in his studies.—*Ex.*

The faculty of Boston University has voted to allow work on the college paper to count as work in the regular course.—*Ex.*

For fifty years no smoker has graduated from Harvard with the honors of his class.—*Aggie Life*.

The first record we have of tennis is found in the Bible in the following words: "Joseph served into Pharaoh's court and Israel returned out of Egypt.—*Ex.*

Nothing it seems to me, will bestead a student more at the outset than a habit of telling the truth to himself. For this will beget in him a helpful self knowledge, and assure him against that overweening conceit put on with youth and the panoply of learning.

No less in importance is a love of labor.

Talent without industry is barren and unprofitable.

Of old the scribe wrote, "There is no genius like the genius of hard work," and his words have not lost

their significance even in our day. It is the silent, stubborn worker that pushes forward and achieves success.—*Notre Dame Scholastic*.

HUMOROUS HAPPENINGS.

The humorous editor realizes the gravity of the situation in which he is placed, and hopes he will be granted the privileges of the court fool of old. If he makes any blunders he is very patriotic and is willing to be laughed at even if you cannot laugh at his jokes.

(Professor to hopeful senior who reports for work.)
Mr. ——— you may run the new potato digger to day. Try to learn how it is managed. (The boss five minutes later to the senior,) I can run the machine alone, you can take that hook and scratch them out behind me.

(Student thinking—as he goes into a fifteen cent show and sees Dr. ——— and Prof. ——— in the front row) I wonder if Dr. ——— meant all he said about wasting time and money on second class affairs or is this a first class show.

One of the boys was in a barber shop when an Italian band struck up. He remarked: "There goes the high school cadets." The barber became excited, at once, ran to the door and looking up and down the street asked, "Where? Where? I don't see them!"

While the Ann Arbor High School foot-ball team was rubbing '96 into the ground, one of their professors remarked to the President: "You can't train your boys very well?" It was evident that there were university men playing in the high school team and the President retorted with: "We train them intellectually so that they get out of the high school before they become bald-headed."

One of the seniors, while studying botany the other morning, managed to get a little bunch of air cornered up by itself under a cover glass and thought that he had discovered something new.

The next fellow who goes out in the plum orchard with his satchel had better fasten it to himself so that he won't drop it. If it don't come to anything else, it will save the fellows who run him out the trouble of carrying the satchel back to him.

J. F. (who has been to church once, and is going again, to Prexy)—There is nothing like attending two services the same day.

Prexy—Especially if a fellow needs to.

World's Fair Souvenir.

The admission tickets to the World's Fair are a work of art and a valuable souvenir, which, in a short time, will command a high premium like rare coins and postage stamps. I have a few complete sets which I will mail, post-paid, to any address upon receipt of only \$1.00. Only one set will be sold to one party. Order at once, before they are all sold. Address

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7.00 "	11.30 "	3.30 "	7.00 "
8.00 "	12.00 m.	4.00 "	7.30 "
8.30 "	12.30 p. m.	4.30 "	8.00 "
9.00 "	1.00 "	5.00 "	8.30 "
9.30 "	1.30 "	5.30 "	9.00 "
10.00 "	2.00 "	6.00 "	10.00 "
10.30 "	2.30 "		

Cars Leave College.—Standard Time.

6.30 a. m.	11.30 a. m.	3.30 p. m.	7.00 p. m.
7.30 "	12.00 m.	4.00 "	7.30 "
8.30 "	12.30 p. m.	4.30 "	8.00 "
9.00 "	1.00 "	5.00 "	8.30 "
9.30 "	1.30 "	5.30 "	9.00 "
10.00 "	2.00 "	6.00 "	9.30 "
10.30 "	2.30 "	6.30 "	10.30 "
11.00 "	3.00 "		

Last car leaves the City Saturday and Sunday nights at 11 o'clock. Leaves the College at 11:30.

Arrangements for special cars at other times should be made with H. A. Burton, superintendent, at the company's office.
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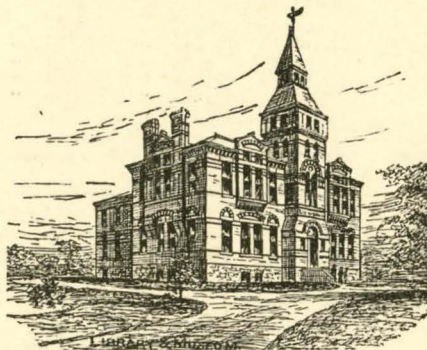
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CALENDAR FOR THE YEAR 1894-5.

Monday, August 20, College year begins at 8 P. M., the first week continuing through Saturday.

1895—Monday, February 18, Spring term begins at 8 p. m., the first week continuing through Saturday.

For catalogue apply to I. H. BUTTERFIELD, Secretary.