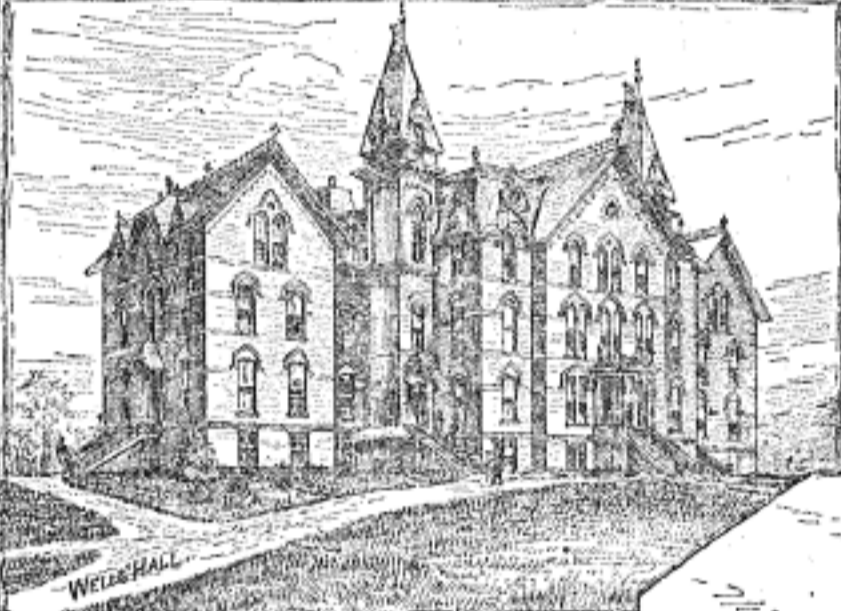


OCTOBER 1, 1885.

COLLEGE

SPECULUM.



AGRICULTURAL COLLEGE, MICH.



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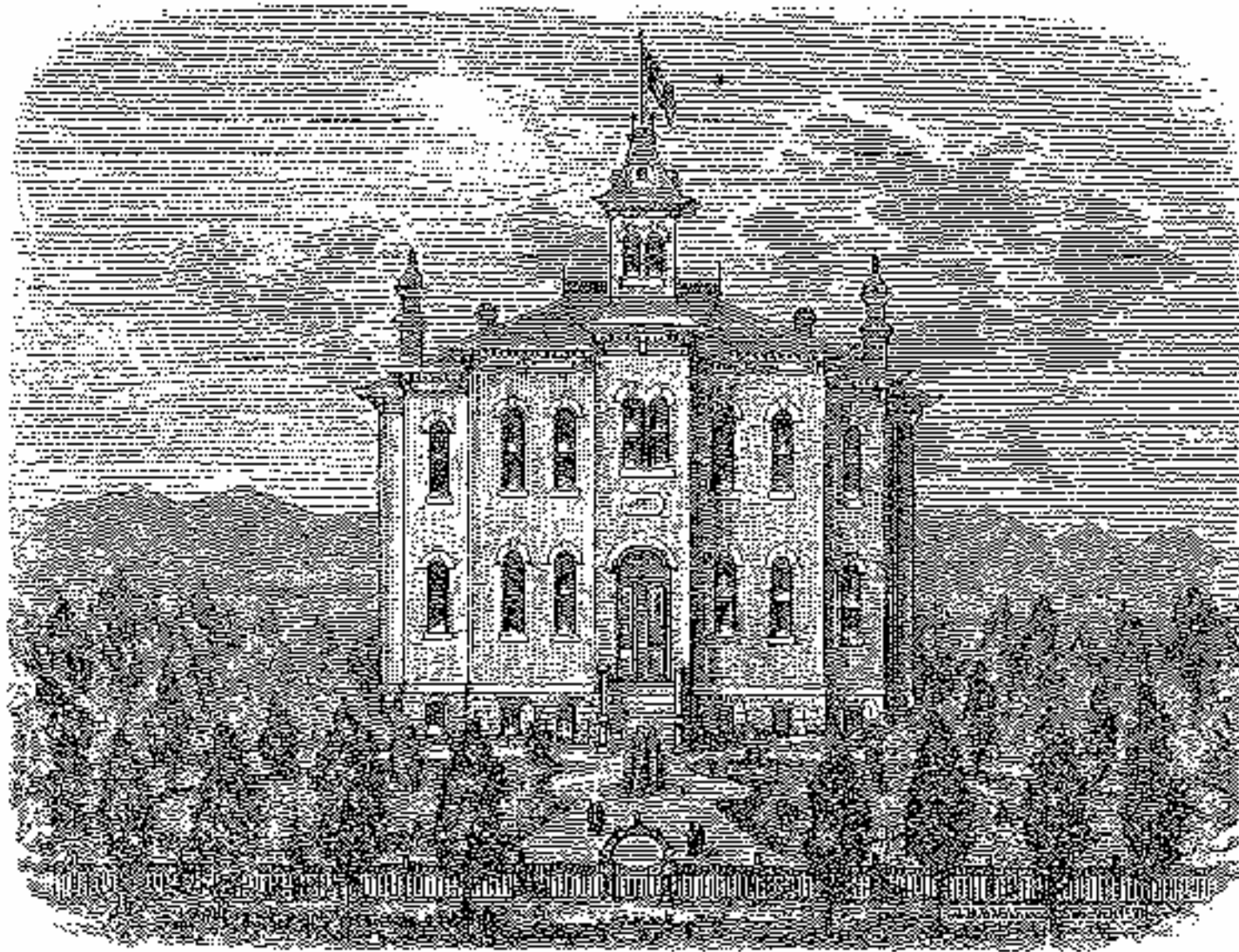
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THE COLLEGE SPECULUM.

Vol. V.—No. 2.

AGRICULTURAL COLLEGE, MICH., OCT. 1, 1885.

WHOLE No. 18.



COLORADO AGRICULTURAL COLLEGE.

An opportunity was afforded one of the editors of the *SPECULUM* to visit this youngest of the Agricultural colleges and spend a couple of months there the past winter. From the fact that it is largely modeled after our own institution, and has had from its organization a representative of our alumni in its faculty and now in the chair of president, it is well worth a short description.

The college, with its farm of 240 acres, is located in the southern outskirts of Fort Collins, an enterprising city of 3,000 inhabitants, about 80 miles north of Denver and close to the foothills of the Rocky Mountains. Though not opened for students until Sept., 1879, it has already made a good start in the way of buildings, and more are urgently needed. The main college building as it appears from the east is shown in the cut at the head of this column. This contains recitation rooms, chapel, museum, library, and the president's office. Besides this there is a dormitory of about the same size located to the north, a conservatory 26x50 feet, a chemical laboratory, and a shop 25x56 feet, two stories in height, with an addition 20x62 feet. The upper floor is fitted up for wood work of all kinds with tables, benches, and necessary tools. Saws and lathes are run by a steam engine. The lower floor is for iron working and foundry. This course is modeled after one in the Massachusetts Institute of Technology, and is in charge of one of their graduates. Wash rooms are provided in the work shop.

The course in its general features is very similar to ours. In its management of the mechanic shop it differs from any other college. This work comes in the regular course and every student is required to take it. While the boys are working at wood or iron

work, the girls are engaged in wood carving. Some very creditable pieces have been done by them. While a division of the students is busy in the mechanic shop, every other student is at work in the laboratory or on the farm or garden. It is intended to have every student at work at the same time, and to give no opportunity for an idle student to annoy others at work. All work, two hours daily, receiving ten cents an hour on the farm or garden, but nothing for educational labor. Saturday is turned to account by the boys in making something for themselves or for sale. The students drill for twenty minutes daily.

First opened to students in Sept., 1879, it has had two graduating classes, the first last year of three, and the second this year of seven. The students number about 85, and form as bright a class of young men and women as one would wish to see. Over one-half are girls. Most of the students from lack of dormitory room, board in town.

Besides the president the faculty consists of professors of chemistry, agriculture, horticulture, veterinary, mechanics, engineering, and instructors in music and rhetoric. The professor of veterinary is State veterinarian. F. J. Annis, class of '75 of our institution, was the first professor of chemistry, and had much to do with organizing the institution, but he finally resigned to enter a lucrative law practice. His successor, C. F. Davis, '80, is working hard and unselfishly to build up the college and his department. He is one of the most influential men in the college. In the chair of horticulture is Prof. James Cassiday, who was so long and favorably known to us while connected with this college. He is proving very successful as a teacher, is popular among the students and towns people, and is doing good work.

Most of the advance of the college dates from the time when Prof. C. L. Ingersoll, of '74, took charge of it. In the three years since, he has revived it, won the support of the agricultural and stock men, raised its standard until now it is outranked by no college in the State.

The college was unfortunately crippled this spring, together with other educational institutions, by the Legislature reaching the constitutional limit of taxation before educational needs were considered. As it receives, however, annually a tax of one-tenth mill, it will be enabled to maintain its rank, though it can enter upon no new enterprises. Its land from the U. S. government has been partially selected, but is as yet not in the market.

Their field of work in that country is quite different from ours. With a rainfall of less than fifteen inches all crops must be raised by irrigation, and from the high altitude and the rare and dry atmosphere, cloudless sunshine, and sudden changes of temperature, experiments on crops in other regions need to be tried here under these conditions.

The college has done and is doing good work in these lines and in aiding in the development of the State, and is proving a credit to our own college and her Alumni connected with it, as well as to the State of Colorado.

Alumni Reunion.

The eighth triennial reunion of the alumni of the Michigan Agricultural College, was held at the College, Sept. 20th, 1885. There were present 150 of the alumni, many of whom were accompanied by their wives, children, and friends.

The first meeting, according to the program, assembled at 9 o'clock A. M., in the lecture room of the Chemical Laboratory, and was called to order by the president of the association, S. M. Millard, '64, with R. C. Carpenter, '73, as secretary. After listening to the treasurer's report, on motion the chair appointed the following committees:

Committee on Nominations:

O. E. ANGSTMAN, '75.
S. M. TRACY, '68.
JAMES SATTERLEE, '69.
ROSWELL LILLIE, '70.
W. A. ROWE, '73.

Committee on Resolutions:

C. M. WEED, '83.
J. E. TAYLOR, '76.
W. C. LATTI, '77.

On motion of O. Clute, '62, Dr. T. C. Abbot was invited to address the alumni at the close of the literary exercises.

On motion President Edwin Willits addressed the meeting, in which he stated clearly his policy in regard to the future of the college; his firm faith in the labor system, and his determination to maintain it inviolate. His remarks were received with marked approval.

Adjourned to meet at 3 o'clock P. M.

LITERARY EXERCISES.

The literary exercises were held at 10 o'clock A. M., in the large tent provided for the exercises during commencement week. The program was opened by prayer by Rev. O. Clute, '62, after which came the

HISTORY.

By Eugene Davenport, '78.

In the years that are gone, we met here, labored together, then parted; scattering to as many places and

as far distant as were those places from which we gathered. With the pride attendant upon the completion of a good work, we felt equal to almost any task—almost any achievement. So buckling on his armor—our diplomas—each of us went his way.

In younger days we had been led to believe that the pathway of life was up a steep and slippery grade, at the summit of which was the kingdom of *success*, a stern and valiant old warrior, but who, if boldly attacked, would eventually yield us a portion of his domain. It was to stir up this fabled individual that we set out, little doubting that ere long we should become possessors of a portion of his real estate.

How different is the reality! We find that the pathway is not even well defined, showing that there must be more than one. It is not always ascending, but often hurries us along a descent so steep that we are impelled to check ourselves lest we stumble. We are beset with difficulties we little suspected,—no doubt the scouts of the old warrior at the summit sent out to harrass our progress. We have passed through pleasant valleys and fair plains that one might suppose lay on the outskirts of the dominion we are seeking to conquer. But these give way to disappointment, until we find our journey beset with so much that is strange, so much that is sweet, and so much that is bitter, that anon the desire creeps over us to know how it is with our old associates. We turn our steps towards our Alma Mater, and almost the first question after the handclasp is, "How goes the battle, my brother." So has it become a habit among us to dedicate one day in three years to our fostering mother here, and to each other. For this purpose we are gathered, and your historian invites your attention for a little time to a brief review of what has happened us since we met before.

We are reminded that there is ever with us upon our journey a silent companion, of whose presence we are scarcely conscious till a brother falters and falls by the wayside. This is our common enemy, the Death Angel. He has claimed for his own some of our fairest and best. We halt a moment, drop a tear on each new made grave and pass on, not knowing but we ourselves may be the next whose work will be called finished. It seems but fitting that, at this time as we meet and greet the living, we should pay tribute of honor and of love to the weary ones who have gone to rest. We speak of the lives of our dead brothers, and of their loss with deep feelings of sorrow. We loved them when they were with us, we miss them now that they are gone.

The last history was one long list of the dead; a roll containing some of the brightest of our number. It told us of ten who had crossed over since the meeting before. That period was startling in its fatality. Years ago, two of our number met the enemy on the battle field, and but two more were called till near the close of '79. With fearful havoc death visited our numbers then, and in the next thirty months he gathered his dark harvest of ten. Since that time five more have obeyed the summons that will come to each of us and but once. Again some of the brightest have gone, and it is but justice to do for them what will sometime be done for us—grant them a line in the history, and a niche in the memory.

The last death on our records was that of Robert Kedzie, February 13, 1882. Our number remained unbroken till one year from the next May, which was saddened by the death of Chas. E. Bush, of the class of '81.

He was born at Mott's Corners, New York, April 27, 1861, and died at his old home in Lansing, on May 6, 1883, being but a few days over twenty-two years of age.

At the age of eight he removed with his parents to Lansing, Michigan. Here he commenced study in a select school, whence he entered the city schools, where he remained till the age of sixteen. At this age he enlisted his interests and sympathies with the class of '81, of this college, with which he graduated. During all his school life he never missed a term or failed to receive the regular promotions due the faithful student. He always preferred activity to idleness, and his vacations were employed in teaching, or in assisting at the store or bank.

Immediately after graduating he assumed control of a lumbering and manufacturing establishment at Pentwater, founded for him by his father. During the brief time he conducted the business fortune smiled upon his labors, but in March of '82, he was prostrated by hemorrhage of the lungs, an attack upon his health from which he never recovered. He was forced to abandon his business, and passed the summer in northern Michigan. In September he went South to spend the winter in a warmer climate. Even while we were listening to the long death roll in our last history, he was there seeking that most difficult of all things to find—lost health. All that money and love could do was done for him, but to no avail; and, hopeless of recovery, he returned to his home on May 1, 1883. On the beautiful Sunday morning of May 6, he closed his eyes on the scenes of his brief life. He was conscious to the last, and his final words were, "I am happy now." His death was a blow to his family, and a loss to the many friends who had been drawn toward him by his estimable qualities. We mourn him as a kind brother who gave promise of much good. He lived his short life well.

Even now has disease fastened upon another,—our lamented friend, Albert M. Bamber. Not naturally robust, he was taken with malarial fever almost the very day that Charley Bush came home to die. His disease developed into typhoid, from which he was supposed to be recovering, but he suffered a sudden relapse from which he died on the evening of June 1, 1883. He would have graduated in August if he had lived, and in the records, under his name, I find this foot note, "Degree conferred because of rare ability and merit." Mr. Bamber was born at Highland, Oakland county, Michigan, on February 18, 1860, on the farm his grandfather settled as a pioneer. His early life was spent much after the fashion of most boys on the farm. District school afforded his only privilege for learning till his twentieth year, when he attended the neighboring village school at Milford, and in the fall of the same year entered our college with the class of '83.

We are informed that he never evinced much liking for books, but we know he was an exceptionally fine student. His health was delicate, and being very ambitious, he frequently over-taxed his strength. It was this that opened the way for the slow fever that terminated so fatally on that June evening in '83.

His remains were accompanied to his home in Highland by delegations of students from each of the societies of which he was a member. A memorial address was delivered by the president of the college. Resolutions of regret and of sympathy with the friends of the deceased were passed by the various societies, and every possible mark of respect and of love was observed on the sad occasion. His simple patient life leaves its lesson with us, and, brief though it was, it could not have been in vain. We do not question, only regret that it should have been finished so soon, and that fullness of years might not have crowned a life so noble.

But ere this the fell destroyer has marked another victim, in the person of Joseph A. Briggs. He was born October 13, 1857, in Whiteford, Monroe county, Michigan, and died at the same place on January 20, 1884. His early education was received at the common schools of his home. He entered college February, 1875, and graduated with the class of '79. He literally worked his way through college, and was one of the kind who labored quietly but faithfully. He was perhaps the recipient of rather more than the usual number of class honors, and was prominent in the founding of the Eclectic society. He was a steady, honest student, faithful to his duties, and respected by all. Always to be found on the side of right he was an especial enemy of intemperance.

In the fall of '81, he entered the law department of the University, taking the two years' course in a single year. He was admitted to the bar of Monroe county in 1882. Here it was that close confinement and hard work proved too much for a naturally somewhat feeble body. With failing health he traveled in Minnesota, Colorado, and, as a last resort, in southern California. Sinking gradually, he returned to his home in September of '83, and died in January following.

All this is soon told. The story is not unlike that of many others, but to us who knew him, and to his family who loved him, it has a peculiar meaning. To us it is the record of a sadly brief life of a lost brother; to his family who fondly doted on his life and its promises, it comes as a knell of buried hopes. We can give him our best tribute of respect by saying that in him was lost an earnest worker, an honest and useful citizen.

We turn the leaf of this history of the dead, but to open a sadder chapter of the same sad story. Violent death has visited our brothers before. Dickey and Benham died in the army. Eaton met his death at the hands of ruthless savages. Henderson's was a sad ending. Save these, death has come as quietly and as gently as our great enemy could have come. Knowing he was taking from among the brightest and fairest, it would seem that, almost repenting the choice he had made, tenderly came the message, "Thy work is done." To poor Sleeper and Jones this privilege was denied. The demon insanity was sent to tempt. Hamlet like, they questioned whether it were better to be or not to be. Their insanity was but too real, and they embarked to that "undiscovered country from whose bourne no traveler returns."

Frank Story Sleeper, of the class of '68, was born on the farm on which he died, near Galesburg, Michigan, June 5, 1847, and died March 25, 1884. Between the ages of two and fourteen, he lived in Kalamazoo, where his father resided as Judge of Probate. We suppose it was here that he received his first schooling. After their return to the farm in 1861, he had no other advantages for learning than were afforded by an ordinary district school. He entered college in 1865, and graduated with '68. He is the only one of the five not personally known to the historian, but such facts and estimates as have been gathered will be given here.

He was a good student, unusually quiet and retired, almost reticent, but well liked by his classmates. There were no societies then, and class ties were perhaps stronger than at present. He taught successfully during and after his course; but soon after graduating, he took charge of the home farm. Then he brought all his energy and ability to bear. His mother writes that he carried his business along successfully, and under great

difficulties. He never married, but lived alone with his mother. He was sometimes censured for staying so closely at home and not mixing more with his fellow men. We are informed, however, that he loved his books, and enjoyed the society of the cultivated and refined. If he did not often leave his home, he may have had good reasons that we know nothing of. He made entomology his avocation, becoming very proficient. At odd times he had gathered and classified a large collection of specimens which he willed to this college,—an institution for which he had a warm regard. He was of a uniform, cheerful temperament, and careful of the comfort of his mother.

In the autumn of '83 he sustained a serious fall, striking on the back of his head. He fell a long distance, but it seemed to cause no permanent injury save an occasional pain in the head. He gave no warning of his deranged condition till four days before his death in March, when he said to his mother, "I have never before had any disposition to injure any one or to destroy property." He afterwards planned to burn the buildings, which, however, he did not accomplish. The day before his death, he told his mother that he had been tempted to take his own life. She persuaded him from the notion for the time, but the next day he went to a straw-stack in a field and shot himself. In some way the straw became ignited and the body was nearly consumed. He seemed to have had a suspicion that he was becoming deranged, for at one time he said to his mother, "Whatever happens remember that God is guiding me, and that I am a Christian. I don't know but I am insane. If so it would not be so bad, for I should go to the asylum, associate with the better class of patients and tend flowers." He had an idea that he might be taken to prison to be with the vilest of the vile.

To us it comes as a shock that our number should be broken in such a manner, but to the friends, how deeply they lament his hard fate none of us may ever know.

Morse W. Jones was born at Richland, Kalamazoo county, Michigan, November 1, 1859, and died at the same place on May 15, 1885. In his boyhood he attended the district school, and afterward the seminary at Richland. In the year 1876 he entered this college and graduated in 1880. "He was all wrapped up in his college brothers and their societies," writes his father. He taught during his course, but the next summer after graduating, he entered the law office of Edwards and Stewart of Kalamazoo. In August of the same year he changed to the office of Otis and Otis of St. Paul, Minnesota, and in a short time was their head clerk. They say of him that he was the best student they ever had. He loved the law with all the ardor of his ambitious nature. He had refused a professorship in the Mississippi Agricultural college to pursue its study. In addition to his reading and office duties he took upon himself the keeping of the books for two business firms of the place. This employed him till late at night, and proved too much for his constitution to bear. He had been troubled for some years with nervous dyspepsia, and his nerves gave way under the fearful strain. He returned to his home within a year, harassed with his disease, worn out with his work, and weakened by a general breaking down of the nervous system. He was in that condition in which he could not control his thoughts, nor at times express his ideas. He was living what to him was a blank existence.

Quiet and rest, however, partially restored his health, and he went to assist his brother in a store in Minneapolis. This was in November, 1882, and in July, 1883,

he returned worse than ever. The two years between this and his death was a succession of his various tortments, till with blasted hopes and defeated ambition, tortured in body and tantalized in mind with the knowledge that he must forever give up the high prospects he had worked for and hoped to attain, what wonder that the enfeebled mind gave way.

It first took the form of despondency and moody insanity. It was a question whether he suffered most in body or in mind. At times he said he could hardly endure it, but for three years he bore his sufferings patiently. One of the keenest of all was the certainty that even if health should in a measure return he must forever relinquish his high aspirations, once so promising of fulfillment, now so dead.

He came to loathe his books, and had no inclination to study. The last two months of his life he suffered beyond account. When for a time his nerves were quiet he was almost too weak to walk, but this would give place to nervous spells, during which he did everything upon the impulse of the moment. Two days before his death he told his mother that the Devil had gained complete mastery over him, and that he could no longer control himself. On May 15, he yielded to his last impulse, and going into his mother's room shot himself. Death was instantaneous, and his sufferings were ended.

Of his life those who knew him need not be told; ardent, generous, cheerful, a universal favorite. His was a rare nature, seldom met with, always loved. His prospects were brilliant, and the writer feels no hesitation in saying that Morse W. Jones had few equals. His short life was a promise unfulfilled, a struggle without its reward. Yet his kind nature had its influence, and it is not for us to say that his life was without effects.

So much for the lives of these two brothers, what should be said of their death?

Let not the fact that they took their own lives mar our memory of their goodness. Let judgment be left to Him who "doeth all things well." What distorted thoughts, what fearful visions distracted their minds! What strong impulses arose with no strong mind to repel and put them down. How fearful when the mind feeds on its own decay! Who of us would have done differently? Who of us may not sometime do the same? In honor to their lives, in justice to their friendship, in sympathy with their afflictions, I implore you remember them as you would had this not been. Exercise the same charity we may sometime need, and our dead brothers will suffer nothing in our memory. None of the five were married, and all but one died in the morning of life, while yet it held nothing but promises. The loss of our brothers teaches us that while ambition is laudable, it should go hand in hand with judgment and moderation, lest we destroy what we are seeking to develop.

Death has entered the families of some, how many the historian does not know. W. W. Daniels lost a little daughter in 1884. Ray Sessions lost his wife by death within a year after their marriage, and Charley Parker lost the wife of his choice only the day after the death of a little son of six.

But I am reminded this should be a history of the living rather than of the dead. The historian's information concerning individuals is very meagre. It is difficult to ascertain. The most successful are very reticent, and it would be unfair to give detailed mention of those who happen to be personally known to the writer. There is much worthy of mention in the lives of the living. Many have reputations widespread and enviable. About these the historian is no better prepared to speak than is

almost any other member of the alumni. What is said will, therefore, be in general terms, concerning the mass and not the individual.

We number now 361. Nineteen are dead, and 342 are living. Of these twenty-nine were added yesterday. We welcome them with the hand of brotherhood, and expect them to do battle manfully. Their mettle is yet to be tried; we trust they will not be found wanting. Year by year the course broadens and deepens, until it is probably no exaggeration to state that no other class has had the advantages enjoyed by that of '85. Eighty-nine have been added since our last meeting. One of our lost ones is of this number. '81 is still the largest class, numbering thirty-three.

In loss by death the classes of '70 and '71 have each three; '61, '69, and '83, each two; '64, '68, '78, '79, '80, '81, and '83, each one. '79, '81, '82, '83, and '84, have each a lady member.

Fifty-five have taken the degree of M. S., an increase of fourteen since the last meeting. (Two were granted yesterday in addition to these numbers.) Forty have taken various degrees from other institutions. But two degrees were taken from other colleges till by the class of '70. There are some in every class thereafter excepting '84. '75 is the only class till '81 with no M. S. Four of this class have taken LL. B. The class of '76, with seventeen members, has but one M. S., and one LL. B. Every member of '62 took M. S. in '65, and the class of '64 each took M. S. in '67—the only classes in which each has a second degree of any kind. The first to take M. S. was A. N. Prentiss of '61. The greatest number of second degrees held by any class is nine by '77.

In point of residence we are scattered over twenty-five States and territories, and two foreign countries, Oregon, Montana, Washington, Idaho, Utah, Texas, Kentucky, Florida, Germany and Japan, each has one; Louisiana, two; Minnesota, Mississippi, and Wisconsin, each three; California, Nebraska, and Missouri, each four; Kansas, five; Colorado, Ohio, and New York, each six; Dakota, seven; District of Columbia, Indiana, and Illinois, each eight; Iowa, nine; Michigan, 217; and 125 are in the state of matrimony, governed by 148 little rulers—the children. They are very unevenly divided among us, ranging from none to six.

We are engaged in twenty-two occupations, the majority of which are in direct sympathy with the teachings of the college. 115 or 37 per cent are farmers, while 161 or 52 per cent are directly in the line of work the college teaches. This is exclusive of the class of '85, not yet employed. The bulk of the remainder is about evenly divided between merchants, teachers, lawyers, and physicians.

69 of us have changed our occupation since we met before, and 91 have changed residence, while 52 of them changed both. The business of some of us is of such a nature as not to admit of a permanent residence, and that of the younger graduates is more or less unsettled and liable to change. The total number of changes of either occupation or of residence for the last three years is 106,—the exact total number for the three years previous. Considering the increased number of graduates, we are comparatively more steady and settled than heretofore.

Far be it from the purpose of the historian to hold up these figures as indicative of fickleness or want of success. It may be true in some instances, but very many of the changes have been among our most successful members. Teachers and professors are liable to changes. A simple

growth and expansion of one's business often changes its name more than its nature. Such as these are indicative of progress and fixity of purpose rather than of fickleness. If we have any who are drifting along, aimlessly trying this thing and that, hoping for lucky fortune to overtake them, we may say to such that fortune always travels ahead of its man, never behind; and that, while we wait for it to come up to us, it is but getting farther from us. The historian can say truthfully he believes we have few if any such. The time since our last meeting has been one of depression in all branches of business, and every natural inducement to change has been developed. This tendency is noticeable among all classes. The farmer has had but meagre returns for the sweat of his brow; the lawyer finds that people cannot often afford the luxury of a lawsuit; and the physician is persuaded that in these hard times they positively refuse to be sick if they can avoid it.

The fact seems to be that the whole country is settling down to a solid basis of industry, economy, and thrift. The sooner we conform our notions to this condition of things the better for us; and I predict that among the first to appreciate this state of affairs will be the alumni of the Michigan Agricultural College.

The question is often asked, "Why are not more of you farmers?" We answer, "As great a percentage of our graduates follow the line of work taught in our college as do those of any technical institution follow theirs." Not all graduates of law schools are lawyers, not all medical graduates are physicians; further, the Michigan Agricultural College was not founded, nor has it been conducted with the special end in view of grinding out an annual grist of farmers. It is a scientific institution, teaching the sciences especially concerned in agriculture, and no more. It is not technical. A large number choose their profession after entering college. It is not supposable, nor is it desirable that all should favor the same calling. As a rule our graduates are in hearty sympathy with the agricultural class. All the world begins to look to mother earth as the great supporter of the race, and to feel the loss of the crops as a public calamity.

There is another and substantial reason why many more of our alumni are not farmers. A large proportion of our students are wholly or in part self-supporting. What shall such a one do who finds himself the next day after graduating with no earthly possession but his diploma? He does not own a foot of land, nor anything with which to purchase. In the world of business diplomas and class standings are not legal tender. They are not quoted in the markets of the world. Is it any wonder that he does not immediately become an extensive and successful farmer? The farm requires a comparatively large capital at the outset. The business cannot be opened on a small scale and increased at will. It is expensive starting and money and results follow slowly, and after a period of years. Is it strange then that he, for a time at least, turns to some other calling requiring less capital and affording earlier results? The great West has offered many opportunities, and not a few have availed themselves of the chance to secure cheap lands.

Many of our alumni catalogued among the various professions, own and operate extensive farms. These are among our older graduates, showing a love for the farm, even if engaged in other pursuits. We are proud of them. Their influence is both good and great; may their numbers increase.

So much then for our history. It is more a history of

the dead than of the living, but what other distinction than of death would warrant us in dwelling upon individual excellence? Many there are among the living upon whom the writer would be proud to bestow fitting praise; but this would leave without mention many others fully as worthy, whose achievements are not personally known to the writer. Many have attained marked success, and many more will yet be added to the list that the world delights to honor. We shall hear of them all in good time.

In the countless vicissitudes of our life journey, this history shows, and our experience proves, that the road we set out upon with all confidence has not been especially prepared for our comfort; and that success does not so much resemble a stern old warrior who is to be valiantly assailed, as it does a coy maiden, ever leading us onward, fleet of foot and shy to be caught. Sometimes she seems almost within our reach; suddenly she is lost to view, and when next we see her it is on some distant hill-top, beckoning us onward. Over hill and through valley she leads us a will-o-the-wisp chase, until we doubt if she possesses a kingdom or a country, but roams at will over the wide world.

Reviewing our journey we see many crooked paths made by our uncertain footsteps. But when comes the "summit of life," when we have reached the last eminence, I imagine that each of us looking back through the hazy twilight can discern his whole pathway, crooked though it may be; sometimes over a bright eminence, often along a dark valley, but here and there along its whole length will be written, even if dimly in the shadows, the word *success*. It may be only to our own vision for most of us, but I predict that there be those of our number whose pathway will be often illuminated by that magic word written in letters of gold that all the world may read. I imagine that, as the years flow by, we all shall learn that success is not at the end of the journey, but lies all along the way.

The poem,

AN EPIC OF '61,

was delivered by O. E. Augstman, '75.

The President's address,

HIGHER EDUCATION,

By S. M. Millard, '64.

GENTLEMEN OF THE ALUMNI:—Allow me to greet you once again and welcome you to another reunion, the 8th in the series. We meet under circumstances full of hope and encouragement for the institution we cherish. We do not meet for games of strength and skill, for recitation, philosophic discussion of abstract questions, or classic orations, as did the Greeks, but rather as humble representatives of a modern institution of learning, devoted to the liberal practical education of men according to the necessities of the present age.

The day of our dependence on the old methods of education and mental discipline is past; our apprenticeship to foreign lands and ancient learning is gradually coming to a close. The millions who are daily becoming partners in society and state cannot subsist on the sere remains of a foreign harvest.

Within the last twenty-five years most of us have been spectators before the rapid transformation scene in education. Our comparisons must necessarily be between the old and the new. The regime of the ancient Greeks founded on slavery cannot be suited to modern society which is based upon a system of labor and individual effort. True, we must never forget Greece or what our age owes to her learning; the most ardent student of the

past can but admire the wonderful results of a people once possessed of a marvelous system of education, so developing simultaneously the faculties of the mind and the body as to produce types of human greatness whose deeds and sayings will be engraven on the memory of men so long as civilization lasts.

The principle of the common law under and by which our society and government is regulated originated in the dim past—under social conditions entirely foreign to those in which we live. Still those same principles form the foundation stone of our common law to-day. But if we were to attempt to apply that law as it was applied in the early centuries of English History we would find it entirely unsuited to our present wants. It is only those underlying grand principles to the origin of which the memory of man runneth not back that have left their everlasting impress upon modern society. So we may measure the education of the Greeks and the Renaissance. It is the impress their learning has left upon our age. During the Mediaeval Era the "Revival of Learning" brought up from the tombs all that has made Grecian life learned and great; at that period there was little by the way of literature, except the ancient authors.

The age of Dante, Petrarch, and Chaucer received their inspiration for learning from the Greeks. The monk was the scholar. The Church governed the State. The achievements in literature were chiefly in the province of logic and philosophy, which were utilized in the department of theology and ethics. We are, however, living in an age abounding in literature in the modern languages. Consign all the Greek and Latin books in existence to the flames and you still have the whole literary firmament studded with the Lessings, Goethes, Wordsworths, and the Miltons, and the whole galaxy of the German, French, and English authors. Our age may have inherited much that came from ancient learning, but the soil to which we are indigenous demands different nourishment. The oft quoted argument that all our civilization was saved during the dark ages in the literature of the ancients was pithily answered by Macaulay, who said: "If ancient literature was the ark in which all the civilization of the world was preserved during the deluge of barbarism, still we do not read 'that Noah thought himself bound to live in the ark after the deluge had subsided.'" Before science became a recognized part of our existence, the old way and system of learning was all there was. In these latter days a knowledge of the natural and physical laws is a necessity. The study of man is the study of nature. No one can be called an educated person who neglects this requirement. To use Huxley's metaphor, If it were perfectly certain that the life and fortune of every one of us would one day depend upon the winning or losing a game of chess, we should all consider it to be a primary duty to learn at least the names and the moves of the pieces, and we should look with disapprobation amounting to scorn upon the father who allowed his son or the State which allowed its members to grow up without knowing a pawn from a knight. Yet the life, the fortune, and the happiness of every one of us and those connected with us depends upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. Education is the learning of the rules of this mighty game. It is learning the primary principles of harmony, for all the laws of nature teach harmony. Harmony in their forces as they affect men and control their love for harmony in human action, for men's passions, their likes and dislikes, their energy or want of energy, their patriotism and reverence, their superstition

and intelligence all depend upon natural surroundings and natural forces.

Climate stimulates or enervates. The necessities of a populace in a temperate zone demand intelligent labor, and activity to supply its wants, while the torrid clime enervates; its population wants but little and nature supplies that want without forcing man into activity.

With the advance of the sciences has grown the idea of liberty in human government; when governments were administered on the community plan, the head or king directed the body or subjects. The governing powers did the thinking while the populace blindly obeyed. So long as the masses were ignorant of a possible better condition in life, they were content. The development of science, however, opened up new ideas of life and consequently of government. Milton, himself a model classical scholar, defined a complete and generous education "as that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war." The present century has elevated society to a new plain of life, as it were, and surrounded it by new means of existence and new applications of old phenomena.

The state, recognizing the advantages to the individual arising from the invention of means to apply natural laws or principles and utilize them, made enactments of protection and rewards; protection for the inventor in wise patent laws, for the manufacturer that he might utilize the invention; rewards for those who would develop the natural resources and bring them within the economic use of mankind. Thus far, however, legislation has been prompt mainly to aid known results. While the State has generously fostered the Common School, the College and the University have mainly grown from the conviction of the scholar and the generosity of the individual. Slow, indeed, has been the growth of a knowledge that higher education, such as can be obtained in that institution which not alone instructs, but explores, is a necessary adjunct to civilization which must be fostered not for the benefit of the few, but for the good of the masses.

The knowledge of the common and primary school lays the foundation for intelligence and morality, while the college carries the mind into the higher realms of thought, investigation, and usefulness, which directly contributes to the State, enriching society as well in intelligence as in material prosperity.

Let us then consider the subject in the light of the benefits to be derived by, and the duty of, the State, in the cause of higher education.

The fundamental idea of State aid in education is not for the sake of education in the abstract. There is a higher purpose recognized, a principle of social unity and healthful influence. The old maxim was: "It is better to educate the youth than to support him in the penitentiary." That was purely a selfish reason for education; as society has progressed and men have prospered there has grown up a feeling that the rising generation have a claim upon us? The parent desires to leave his children a heritage, either wealth, education, or a good name. The State in the aggregate has come to the same conclusion. The parent feels a responsibility for the household; the State for the whole body of its people. The State is a social organization for the protection of each member. The greatest good to the greatest number is the object and end of municipal organization, and it has become a recognized principle of State policy to educate the citizen as a surer means of making him moral, useful, and progressive, and it is this conviction which

permeates the masses and stimulates the State to extend the hand of benevolence to posterity and forget in some measure the selfishness of to-day.

The common school has been so earnestly fostered that it has become a part of the family circle, so cherished that it is next to the church in every neighborhood, while in centers of population it has sought out grades until a systematic education leads from the primary on through grades to the high school graduates; but the common school cannot in itself complete the cycle of higher education; hence the necessity of the college, the university, with its doors open to the graduate of the common school, inviting the student to the higher realm of study and knowledge, thereby enabling him to gain that higher development so necessary to complete the man.

The necessity for institutions of higher education is fast becoming a recognized fact in every civilized community, and the only feasible and practical way to establish such institutions is by State aid. But what does State aid, or endowment, be it private or public, indicate? First, it is that higher education shall be furnished cheaper than private enterprise could do. If colleges and universities were to exact fees which should compensate the cost of apparatus and teacher, none but the wealthy student could enjoy their benefits. The great mass of men now in college would be shut out. Any system of education which will exclude all but the rich would be merely to establish a caste line. To those above it, education and aristocracy; to those below it, ignorance and servitude. The genius of our government and our political methods must ever forbid such a distinction. Among no people under any form of government can be found so many men of prominence in society, in politics, and in public life, in church or in State, who can boast of humble parentage, of hardships and privation in early life, of successes and heroic struggles, as in this republican form of government; and why? Because the common school has reached down to the fireside of poverty, and fanned the breath of inspiration for higher truths and noble aspirations into the youth whose mind poverty has clouded with a veil of circumstances which under older forms of social administrations would have remained unenlightened for all time. The whole tendency of our educational system is to invite, to encourage, the youth, without money, yea, even without friends, to avail himself of the cheapness and the advantages of the public schools. What more touching spectacle is there than the sight of a youth fired with ambition, looking up from and beyond the plane of his existence for something higher, better, and nobler, but chained by poverty to the lower round of the ladder. He pines for the liberty, the opportunity to climb upward, but the inexorable law of circumstances fetters him and dwarfs his mind as his body matures until he reaches manhood, ever after to lament his ill-luck in life. Each one of us can recall such instances, especially within the short limit of a generation past, and when we contemplate them we cannot doubt the duty of the State. As the quicksilver selects the finest particles of gold from the rock and earth, and lets pass the dross in which the gold was formerly imbedded, so the common school and the college selects from the masses, and brightens and builds into larger and nobler manhood the sparks of intellect that pass through its benign and elevating influences, constantly sending forth stronger and better men and women to swell the ranks of intelligent manhood.

Second, But there is a higher ground why the State should aid and educate its youth. It was a son of Illinois,

himself the most brilliant product of the common school, who struck the key-note of our national existence in that modern oration that has passed into the enduring history of the world's literature as a model for all time; standing on the battle-field of Gettysburg he declared that the union soldiers gave up their lives in order that "a government of the people, by the people, and for the people," might not perish from the face of the earth. That government is your government and my government. It is alike a government for the high and the low; the strong and the weak; the rich and the poor. The humblest may, and often do, become participants in the councils of the nation, while many of the most important functions of society are performed by scholars and thinkers who seldom acquire a national reputation. There are hundreds of avenues for distinction and for power in our social organization, aside from the single duty of administration. It has become a recognized fact that the best scholars and greatest thinkers eschew politics and public duties because they cannot conform to the politician's methods and because they can better accomplish development and reform in seclusion.

The literature of our day does not come from statesmen or members of congress, but from scholars like Edward Everett Hale, Wendell Phillips, Emerson, Bryant, and Whittier.

Science, which is the leaven of modern progress and the laboratory in which facts are analyzed and truth ascertained, does not seek the office-holder or the legislator as its patron, but such men as Tyndall, Spencer, Darwin and our own Winchells and Youmans. But we cannot develop wise counselors, scholars, or scientists without higher education, and in order that higher education may be accessible to the poor and the wealthy alike, the State must furnish it, not merely on account of the poor and gifted scholar himself, but because it is best for society and for government. We need all the trained minds we can have, strong, well balanced and well furnished minds. It is by such minds that our natural resources are developed, our material prosperity enhanced, our mental and moral natures elevated and the relations of mankind in society and good government harmonize; without such minds the wealth of treasure in the bosom of our earth would forever remain unknown and undeveloped, as it did for the ages during which the aborigine roamed the forest and slept all unconscious over the richest mines of gold. With such minds barren hills and desert lands may be made fertile, prosperous, and invincible.

It is by higher education that the poor youth is developed into the man. Genius does not germinate in the cradle of the rich alone; the rarest gems are often found in the humblest settings.

In a clay built cottage two miles from Ayr, Burns was born of parents of the poorest peasant class, yet from him arose the sweetest song that ever echoed from the Scottish hills.

Faraday was the son of a smith and apprenticed to a book-binder.

Franklin enjoyed those early privations which seem to foster greatness. His father was a dyer and afterwards a tallow chandler and soap boiler.

John Marshall, the greatest of American jurists, was of a family of fifteen children, limited in means and educational facilities; his schooling was principally under his father's tuition.

Webster was born in a sparsely settled frontier neighborhood and laid the foundation for his education in the common school.

Horace Mann, the American statesman and educator, was born of farmer parents with limited means. His life and career is one of the brightest examples of the benefits of the common school and the university; educated in the district school his scholarly taste and perseverance enabled him to graduate in Brown university, from whence he entered upon his useful life, and to him education in America owes a debt that the present and coming generations may acknowledge but can never re-pay.

It is to Abraham Lincoln whose ancestry is almost unknown that we owe the final obliteration of slavery from our government.

No nation can afford to shun the help such minds give it. No nation is rich enough to ignore the seeds of genius which fall in the obscurest homes.

It is from such germs that some of our greatest elements of civilization spring.

When Eli Whitney took his degree from Yale, the south was languishing and its inhabitants emigrating for want of some occupation to employ their industry. Cotton was the great staple, but it could not be cleaned with profit. In 1793, and within a year from the time he graduated, Whitney had invented a cotton gin. Immediately the whole country became active. Individuals who had been sunk in poverty and idleness, suddenly became prosperous and wealthy. In that invention the history of America was changed, and not only in our government, but in all the world. That cotton became, and still is, king, may be readily recognized when we read that in the year before Whitney arrived in Georgia the total export of cotton from the United States was sixty-four bags of three hundred pounds each, while our annual product at the present time is estimated at about six millions of bales. This invention and all its consequences owes nothing to statesmanship or to administration. Its results were inevitable. The social and commercial relations of the world were so changed by it, that statesmanship has been exercised for a century to adjust them so they shall keep pace with the current which had its source in Eli Whitney's genius. And this treasure was the gift of a boy born in a farming town in Worcester county, Massachusetts, a boy whose genius urged him on to acquire knowledge by application—who took his bachelor's degree at Yale, and with the advantage which a higher education gave him, soon gave to America and to the world his invention which revolutionized society.

It is to such men as Fitch, Stevens, and Fulton, who, if not always educated in the universities, received aid in the higher schools of technology, that the great west of America owes its present development; without the invention that applies steam to water and land navigation, the great territories, now teeming with millions and producing from mine and soil a marvelous wealth, would be wild and barren.

When Napoleon sold Louisiana to the United States in 1803, Livingston, the American Minister, discouraged the purchase as useless and wrote to Jefferson: "I have told them that we have more land than we can use. I have told them we shall not send an emigrant west of the Mississippi in a century."

In settling the boundary line west of the lakes in 1814, John Quincy Adams and our representatives were so indifferent as to the territory now forming Wisconsin, Minnesota, Iowa, and Dakota, that the English negotiators were informed that we considered these lands of so little value and the period so remote when they would be settled that we were perfectly willing that the boundary

line should remain excluding us from such territory. It could not be foreseen at that early day that steam would be applied on land and water to such an extent that all of this spurned territory would become the homes of millions and the heart of the nation.

These gifts and inventions did not come to the country from the plans of statesmen; in fact, as these two instances illustrate, statesmanship was wholly unable to grasp the possibilities of a near future, the germs of which were then planted by Whitney and Fulton. We do not argue that genius or education has no place in statesmanship, but rather to show that the underlying influences of society at times come from a source not even suspected by statesmen. Genius is often dormant—like a latent bud springs into leaf and flower when least expected. It is often the thought which is matured in the brain of the obscure scholar that grows and enlarges until it sweeps down through civilization, changing all and elevating mankind, oftentimes perhaps unrecognized, yet nevertheless potent.

Third, True statesmanship recognizes the university and higher education. India a few years since was a vast continent crowded with ignorant millions. For commercial as well as philanthropic reasons the British Government fostered education and encouraged Christian workers among the natives. Their progress has been slow, but these higher influences have been working, and to-day there exists in that empire an educated Christian class of native Indians; officers and judges are selected from them for the government, and the English parliament has recently entertained a bill to give this class of natives the same rights enjoyed by residents of India of English birth.

The British Government, acting upon the knowledge that where ignorance disappears the wants of a higher civilization will manifest themselves, grasped the true theory of social elevation. The controlling motives in their case may have been with a view to produce material results. Yet the fact remains that when the State fosters and supports education the best results oftentimes grow from the smallest promise.

The Emperor Nicholas of Russia during his reign prostrated the National Universities; originally they were organized after the German model, but the Czar took away their independence by imperial decree, placed them under rigid police regulations; favoritism and even bribery became the channel to professorships, and education became impossible to any but sons of nobles. It was decreed that the Bureau "should restrain the unbridled impulse of the young people of the lower classes toward a higher education, through which they would only be sure to pass out of their original and proper condition without benefit to the State."

Slavic civilization was the ambition of Nicholas. He especially denounced the western idea of mental and moral independence and individuality; a pure monarchy was the model sought, and the boast of his followers was "That an all directing aristocracy was the only means of preserving national greatness." This idea of national unity led, as it inevitably must, to a want of cohesion among the members of society; spontaneous action, and individual responsibilities were suppressed, the soldier and the civilian alike became a mere automaton. The links in the national chain lacked moral force to bear the strain of the whole. The Crimean war was the fire which tried the metal of the two civilizations. This was a contest between western civilization founded on individualism, on the one hand, and the oriental idea that the unit of society is the community, on the other.

The results of that war taught all Russia a humiliating lesson. Of Nicholas's policy, says an eminent writer: "The administrative fetters which had cramped both universities and schools and had been effective in suppressing every spontaneous movement had wholly failed to fulfill the purpose for which they had been forged."

For half a century the rest of Europe had been advancing in civilization and power, while Russia had been standing still. When Alexander the Second came to the throne, profiting by the experience of his predecessor, he at once began the work of reform. He abolished rank as the sole merit to be obtained in a university. He caused a new code to be prepared. He placed merit and intelligence in power, increased the number of teachers, endowed the university liberally, established scholarships and encouraged students of superior talent to attend foreign universities, and even pensioned her scholars for long service as such. Industry and independence were encouraged, standards in studies were raised; the German school was again made the model for the whole Russian system of education.

Under Nicholas the nation had learned through bitter experience her weakness. Under his successor she returned to the spirit of Peter the Great and Alexander the First to regain by independence in culture through her schools and universities what she had lost by her neglect. To-day Russia supports as a government policy a net-work of common and grammar schools, numerous gymnasiums, and eight universities, each university receiving from the national treasury about \$300,000 per annum.

As a part of this reform she has emancipated her serfs and established the seeds of local representative institutions which will sooner or later lead, even under her iron clad monarchical heredity, to a liberal if not a universal suffrage.

We are not without a striking illustration of the influence of State supervision and government aid in public education in the history of our own country.

As early as 1649 the colony of Massachusetts established a system of free schools in order, as recited in the preamble, "That learning may not be buried in the grave of our fathers." Throughout New England schools of all grades became the care of the States. This policy grew and extended itself into the government of the northwest. In the ordinance of 1787 it was enacted that "religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools, and the means of education shall forever be encouraged."

The common and higher school of the northern States is but the outgrowth, a branch, as it were, of the tree of liberty, of progress and enlightened civilization, whose roots draw its nourishment from the principles embodied in that ordinance, and with its fibers extending back into those enactments which had their origin among the colonists in Massachusetts.

When these Northwestern territories withdrew from the fostering care of the general government, Congress had bequeathed to them the common school and the college as its most sacred heritage. The common and higher education were henceforth to go hand in hand. They were inwrought into the very conception of the State and have from the beginning formed a part of its life, growing as it grew, strengthening with its strength, until both common and higher education are so interwoven that neither can exist without the other.

But while early in the 17th century New England was sowing these seeds of public education, the south adopted an entirely different policy. The spirit of the southern

colonies early partook of the old autocratic idea of civilization. It is written that an early governor of Virginia publicly thanked God that Virginia had neither free press nor a free school. The colonial history of the south partook largely of the spirit which was opposed to the general education of the masses, and throughout the history of these States down to the close of the civil war there can be said to have been no change of policy.

All the life labor of Thomas Jefferson to found in the south a broad and comprehensive system of public education amounted almost to a failure. He succeeded in establishing the University of Virginia, but was unable to secure a system of common and primary schools, so necessary to the success of such a higher institution. The university without the common school is like the pyramid in the desert, majestic in design, but without appreciation among the dwellers on the barren plain at its base.

The characteristics of civilization in the southern states was opposed to an education which would elevate and educate the middle and lower classes. Their idea of civilization did not rest upon the intelligence of the masses, hence any general system of education which would benefit all classes was repugnant to their theory of government. The wealthy or aristocratic citizen could educate his sons in private schools or send them to the north or to Europe. They had no desire to provide a system of education, the first effect of which would be to threaten their own predominance. The atmosphere of a slave-holding oligarchy could not endure the sunlight of intelligence which should shine alike on the high and low, on the slave as well as on the Brahmin. Hence that confusion and utter helplessness in the south when the civil war left them without the slave and without the intelligence among the masses upon which they could build a new civilization. Nearly a quarter of a century has passed and the first signs of returning prosperity to these people is accompanied with the common school founded by the State and the nation.

The general opinion of mankind in all Christian nations has been to foster, in some form, education. For eighteen centuries the church has held an open hand to men of high or low degree to enter her portals and imbibe a generous learning. She has with an eye single to her glory endowed her universities of learning, taught her followers to establish scholarships, persuaded her rich to endow her schools and universities, so that instruction might be open to all who would partake.

The rulers of every nation in Europe have cherished schools of learning; they have endowed them liberally and made them accessible alike to peasant and prince. kings have come and gone; dynasties have lived and perished, maps of Europe have been made and re-made, and yet her great Medieval schools, where for centuries scholars have trooped from all parts of the world, stand as imperishable monuments of civilization—perennial springs, fresh and perpetual as the youth who are constantly kneeling at their feet, imbibing of the waters of knowledge which flow as unceasing as the Danube and the Rhine.

It becomes all the more important in a government which fosters invention and research that the State should endeavor to give direction as well as facilities to the intelligence and genius of her youth. Whenever any element in political economy becomes a factor of sufficient importance, legislation comes forward to appropriate and utilize it. Equally so is it important that legislation should recognize and utilize the mental development of the young men and women of the country. This is eminently a government by the people as well as for the

people, and when our councilors fail to recognize mental development as one of the most important adjuncts to a good government, they allow the foundations of their political organization to crumble and sooner or later decay. Wise legislation which promotes higher education is the highest form of statesmanship. The power of colleges and higher institutions of learning as generation after generation of men pass through them is more potent than any instrument of civilization known to society.

It is a common saying among modern Englishmen that England owes her greatness to her younger sons. By the law of primogeniture in England the exclusive right of inheritance belongs to the eldest son (or daughter), consequently the younger sons are educated and prepared for active life, while no more is expected of the elder son than that he shall stand sponsor, as it were, for the estate of his father.

So, likewise, it is the men who have gone out into the world from Harvard, Yale, Brown, Andover, and Michigan University, and who are going forth from our western and newer universities, that shape the growth and greatness of our nation. The men who preside over and shape the destinies of our colleges and universities are daily wielding an influence and power which permeates the land. The lives of such men as Wayland, Dwight, Woolsey, Everett, and Walker have shaped the minds and lives of thousands of young men who afterwards became moving forces in our government. They sent out teachers, preachers, lawyers, judges, doctors, men of science, and manufacturers; such men to enter and mingle with the masses of a people who were building a nation, became the leaven of those masses; every man of them knew that mind should rule the body. It was from such men the orators, the preachers, the inventors, and the statesmen came. They were the men who builded the influences which controlled our country.

Not one of these presidents of colleges ever became famous as an administrator in the government halls, but their services have been and are eternal. The principles which they taught were absorbed by the youth under them and by that youth applied to practical life; the circumference cannot be described which shall limit the influence of a great scholar and teacher. None the less is this grand work progressing to-day; our eminent scholars and college workers are at present as faithfully and eternally performing like services. What has been accomplished for the limited in number, by the Everetts, the Woolseys and the Waylands in times past, has been and is now being done in a broader field and a more universal method by the Porters and the Eliots of the older institutions, and by the Angells, the Bascoms, the Peabodys, and lastly, but not least, within these walls, by one whom we honor and revere, an Abbot.

It is the duty of the State to foster and encourage higher education. It is a duty the State owes to its children as human beings. It is one of the first aims of society to help men and women make the most of themselves. It is a duty which the whole municipal body owes to its constituent parts. It is an obligation due to the poor as well as the rich, the genius and intelligence, whether found in the hut, the farm-house, or the mansion.

Dr. T. C. Abbot, president of the college for nearly a quarter of a century, made a closing speech to the alumni.

At 3 o'clock the business meeting reassembled in the chemical laboratory and was called to order by President Millard, '84.

L. G. Carpenter, '79, called the attention of the alumni to the work of Ex-President Abbot in connection with the college, and asked their aid in promoting a project already started for procuring a portrait of Dr. Abbot, to be placed in the library. The movement was highly commended by H. A. Haigh, '74, and Eugene Davenport, '78, and on motion, H. A. Haigh, '74, L. G. Carpenter, '79, and A. J. Cook, '62, were appointed a committee to draft suitable resolutions in regard to Ex-President Abbot, and also to have in charge the question of procuring a portrait.

On joint motion of C. E. Hollister, '61, and H. A. Haigh, '74, the nominating committee were instructed to appoint a committee of five to take charge of all matters relating to college affairs, including legislation required for the best interests of the future of the college.

The committee on resolutions made the following report, which was adopted:

WHEREAS, After three years' absence from our Alma Mater, we again meet under circumstances of peculiar interest and enjoyment, marred only by the regret that Death has removed from among us familiar faces and loving voices that we would fain have seen and met again. Therefore

(1) *Resolved*, That to the families and friends of our dear departed we extend our sincere sympathy, and that the loss we feel in the ending of these young and noble lives extends to the college and the community at large.

(2) *Resolved*, That we have learned with sorrow of the enfeebled health which has compelled President Abbot to relinquish the duties he has so long and ably performed, and that we each and all feel that his simple, earnest life has been an important factor in guiding us in paths of truth and patriotism, and that our sincere hope is that he may be spared many years of health and activity to continue to exert his ennobling influence upon the youths who visit these halls of learning.

(3) *Resolved*, That we heartily welcome our new President, Hon. Edwin Willits, and that we fully endorse the sentiments he has expressed concerning the college and its future, and that we pledge him our earnest support and active sympathy.

(4) *Resolved*, That whereas it has pleased God in his infinite wisdom to call to higher fields of labor one who has earnestly labored with us, and for us, be it resolved that in the death of Secretary Robert G. Baird we suffer the loss of an efficient supporter of our college, a Christian gentleman, and good citizen, and that our deepest sympathies be extended to the mourning family.

(5) *Resolved*, That we are glad to see in the organization of the mechanical department the approaching fulfillment of the idea of the founders of the college, who believed that agriculture and the mechanic arts should be taught, and that mindful of the full benefits to be derived by a perfect mechanical course, we trust its growth may be made co-extensive with, not subversive of, the higher development of the purely agricultural features of the college.

(6) *Resolved*, That we witness with pleasure the progress as shown by the organization of the veterinary and military departments, the experimental work and the general efficiency in the other departments of work and study.

(7) *Resolved*, That we reaffirm our unabated faith in the labor-system of the college, and heartily endorse the views expressed by President Willits concerning it.

(8) *Resolved*, That we congratulate the State Board of Agriculture on the many evidences of progress visible everywhere, and that we recognize anew great efficiency in our Faculty as instructors as shown by the thorough literary and scientific work of the students in the commencement exercises of the college, bulletins, etc.

(9) *Resolved*, That we heartily endorse the action of the State Board of Agriculture in the appointment of an alumnus, Hon. H. G. Reynolds, as its secretary.

(10) *Resolved*, That we extend our hearty thanks to the State Board of Agriculture, the Faculty and the several committees, for their efforts in helping us to have a pleasant and profitable meeting.

R. C. Carpenter, '73, called attention of the alumni to the SPECULUM, and asked their hearty support.

O. Clute, '62, said that he considered it the best college paper published, and thought it ought to have the support of every alumnus.

Hon. C. J. Monroe, nearly four years with '61, was added to the number, receiving the degree of Master of

Science, Aug. 19, '85. He made a few welcome and appropriate remarks, in which he expressed his approval and hearty support of the labor system as being the means of instilling into our graduates a healthy and conscientious liking and respect for labor.

The nominating committee made the following report, which, on motion, was adopted:

Officers for the ensuing year:

President, E. M. Preston, '62.

Vice Presidents, A. C. Williamson, '72, R. Haigh, '69, Byron D. Halsted, '71.

Secretary and Treasurer, F. S. Kedzie, '77.

Orator, C. W. Garfield, '70; Alternate, F. E. Robson, '78.

Poet, H. W. Collingwood, '83; Alternate, W. W. Remington, '80.

Historian, Mrs. M. J. C. Merrell, '81; Alternate, C. C. Lillie, '84.

Executive Committee, C. W. Garfield, '70, Geo. A. Farr, '70, H. A. Haigh, '74, A. J. Cook, '62, C. E. Hollister, '61.

At 7 o'clock P. M. the Alumni assembled in the Botanical Museum for a reception, where each alumnus was presented to President Willits. The evening passed very pleasantly to all, and at 9 o'clock they descended to the first floor of the Botanical Laboratory and banqueted, followed by toasts, O. Clute, '62, officiating as toastmaster.

Taking every thing into consideration the reunion was a success, and thoroughly enjoyed and appreciated by all. Many of the Alumni who were expected to be present were not, and many were surprised at meeting friends and classmates wholly unexpected. As our numbers increase the meetings become more interesting and enjoyable, and it is hoped that in '88 an extra effort will be made by every alumnus to be present.

The music for all exercises during commencement week was furnished by Speil's orchestra, Detroit.

SCIENTIFIC.

The Influence of Climate on Plants.

A. A. CROZIER.

In the improvement of plants it is important to know the influence of the conditions under which they are grown, as well as to preserve any useful variations which appear.

Plants of the same kind vary in size, form, color, fruitfulness, hardiness, composition, and other respects, and these variations are more or less permanent. These variations are not always accidental or at random, and some of them at least are apparently due to definite natural causes. Modifications may arise in a given climate through the direct influence of the climate, or by a continued preservation of useful variations which have arisen there from other causes.

It seems to be established that plants removed from the locality of their greatest development toward their northern limit of existence, not only become dwarfed in habit but often become more fruitful, have brighter colors, a larger comparative leaf surface, a shorter period of development, and thrive at a lower temperature. These changes are probably all of them useful to the plant in northern latitudes, and there is considerable evidence to indicate that most of them may occur through the

direct influence of the climate, without the intervention of natural selection.

In determining the cause of any difference in growth observed between plants in different localities there are so many things to be considered that it is not surprising that little is known of the causes or conditions of variation. Since, besides the difficulty of distinguishing the influence of one element of a climate from that of the others, it is sometimes the case that a modification may be capable of being produced by more than one cause, as dwarfness by either cold or dryness. But a determination of the influences of the climates of special localities, even without knowing the particular elements of climate producing the changes, may be of use. Aside from general observations, however, I know of but three or four instances of experiments undertaken to observe the growth of seeds from the same source in different climates, and but one chemical analysis in such a case. Along any single line knowledge increases very slowly, and especially on the border between the scientific and the practical when most of all there is use for it. Meanwhile isolated observations, many of them directly useful, are being made, which may ultimately aid in determining general questions which will have a wider practical application.

For example, many observers have noticed in Europe a northward increase in the size and greenness of the foliage of many plants, but they do not agree as to the cause. Some consider the changes due to the amount and distribution of the light in high latitudes; but until we have a more exact knowledge of the function of chlorophyll speculations based only on the supposed relations of that element to light and the plant may be open to question. The general use of the leaf, however, in the economy of the plant is well known, and we can see the need of a greater leaf surface in a rigorous climate, where the course of vegetation requires to be completed as rapidly as possible; but pleasing as the idea of direct adaptation may be, there is no *a priori* reason to suppose that such a climate would of itself develop larger leaves.

Again, growers recognize a choice of localities for the production of many kinds of seed, and when the seed is not the part for which the plant is cultivated this is often a locality different from the one which produces the best crop. In the case of the onion for example, which thrives so well in Bermuda, it is necessary that the seed should be grown at the north. From other cases of this kind there seems no reason to suppose that efforts to produce home grown seed should in all cases give as good results as seed from some other locality. Corn for ensilage in this state gives the largest crops with seed from farther south, and I do not see why the same should not be true to some extent with the smaller grasses, though I have no observations on the subject.

A better knowledge of the influence of climate will aid in determining the success of plants in other countries, in adapting varieties to special localities, in the improvement of varieties, and in determining the best source for seed for particular purposes.

I cannot close these notes better than by quoting the words of Mr. Blodget on acclimation in *Chimatology of the United States*. He says: "The case of corn suggests new questions in regard to the acclimation of many plants of tropical origin, and new views of the modifications which climate alone may effect on all that we cultivate. It is possible that acclimation under these conditions may present transformations not less extraordinary with many

other species if pursued as an art with persistence enough to develop varieties differing as much among themselves as those of Indian corn differ."

Ann Arbor, July 20.

A New Phytoptus.

Probably many readers of the *Speculum* have noticed the teat-like galls on the upper side of the leaves of hard and soft maples, which have been likened in appearance to rows of nine pins. These are quite common in all the northern United States. They are produced by the irritating presence of some very minute mites, of the genus *Phytoptus*. *P. quadripes* attacks the soft maple, and *P. acericola* the leaves of the sugar maple. Our lindens and several other common trees are also made to contribute to the support of other species of these gall making mites. Prof. Cook has recently described a new species of these mites which infests the wild plum. These galls are reddish, and like other kindred galls open on the under side of the leaves. Within the galls are the minute mites which are so small that they are hardly visible to the unaided vision, but when viewed with a hand lens appear as minute white vital specks, as often they are seen in motion. These mites when viewed with the compound microscope are found to be spindle-shaped, largest about one-third the distance from the head to the opposite end of the body, and tapering gradually to the posterior end, and abruptly to the head. The mites all show segmented bodies, there being about sixty segments in the plum mite. These mites are very abnormal, in that they possess only two pairs of legs, while most mites have eight legs when fully matured. The mouth parts are quite fully developed, and several pairs of long hairs are discovered, the number and position varying with the species. The tip of the body opposite the mouth is sucker-like, and doubtless aids in locomotion. The strangest feature of these mites is the prodigious size of the eggs, which are two-thirds the diameter of the parent mite. These eggs are laid in the galls, and the nucleus and nucleolus are plainly visible while yet the eggs are within the mite. The oviduct opens on the ventral surface near the head.

That these mites are quite harmful to the trees is quite obvious, as will appear upon slight examination of a soft maple just west of the bee house. It is quite likely that the application of some insecticide just as the mites commence their attack in the spring might destroy them. It is certain that picking off affected leaves would stay their progress.

Sympathetic Nerves.

Dr. Gaskell has given in a recent number of the *Journal of Physiology* some very interesting facts as to the anatomy and physiology of the sympathetic system of nerves. Heretofore our physiologists in speaking of these nerves have stated that some of them are medullated and some non-medullated, these latter being referred to as gray nerves. Any reason for this difference has not been given. Dr. Gaskell finds that all nerves connecting the spinal cord with the sympathetic ganglia are medullated, but as the nerves leave the ganglia to pass to the involuntary muscles, whether to the vascular or visceral organs, he finds some medullated and some non-medullated. The non-medullated or gray nerves cause the muscles to contract when they act, while the medullated are nerves of inhibition or relaxation, hence their action causes dilation of the tubular organs, whether arteries or in-

testines. Each involuntary muscular fibre then has two nerves, one non-medullated, which induces contraction, the other medullated, which seems to call for a halt in the action of the non-medullated, and hence induce relaxation of the muscles. We thus have a definite knowledge of the histology and physiology of these nerves, and are no longer forced to state that some are medullated and some non-medullated, with no explanation or reason for the difference of structure. There is reason to believe that the medullated fibres come from the spinal cord, while the non-medullated arise from the ganglia of the sympathetic system; the first are tonic in their action, the other inhibitory.

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BY THE STUDENTS

— OF —

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AGRICULTURAL COLLEGE, MICH., OCT. 1, 1885.

WITH THIS number, the SPECULUM takes pleasure in greeting a new class of students, the largest that has entered for many years, now numbering about one hundred and six.

Freshmen, we give you a hearty welcome, and feel assured that you will profit much by spending four years in this institution, among the first in the State, and of its kind second to none in the country. With our numbers swelled to over two hundred one can imagine a more lively appearance here than for some time past, and such is the case. It is exhilarating to see the students streaming across the lawns every morning to fill the chapel to overflowing, and it is a pleasure to attend chapel with such an audience.

With the entrance of such a large class we congratulate ourselves upon the absence of hazing and disorderly conduct of any kind. Now and then an innocent appearing "freshie" receives a heavy precipitation of dew, which, though much disliked, has the desired effect. We despise hazing and the destruction

of property, with which our older students are acquainted.

With the appropriations granted the College last winter, and the liberal patronage it is now receiving from the people, we can but predict a rapid and successful growth of our Alma Mater.

But now that we are provided with means to teach more students we are not supplied with accommodations.

There are at present a few more empty rooms and others with but one occupant, but with the present indications these will soon be filled, and what will be done with other students who may come?

To be sure they can be crowded three into a room, but this will be a very unpleasant method, and one which will bring about results disastrous to study. We therefore look for a new dormitory in the near future, and with this must come other new buildings, for already are many of the class rooms becoming too small, to say nothing of the little space to spare in the chapel.

WE FEEL grateful toward the Alumni for their congratulations and praise expressed to us during commencement, and we only hope the SPECULUM merits the recognition thus received. While acknowledging your words of kindness, we are at the same time aware that there is room for criticism and for improvement. We endeavor to treat all matters justly; yet due bounds may occasionally be overstepped, and certain points may be given undue prominence, in consequence of which outsiders may receive wrong impressions. The facts are what we endeavor to give, for we do not believe in speaking of matters in such a way as to create a favorable impression not deserved, nor do we believe in belittling anything when it justly deserves praise. We recognize the fact that this paper was created by, and for, the students and Alumni of the college. Its columns are therefore open for you to voice your sentiments on any matter within our province, and we therefore invite correspondence from any of our subscribers, retaining, however, the right to reject any and all articles deemed by us objectionable. Having orally, as a body, expressed your appreciation of the SPECULUM, we now invite and petition every individual Alumnus who has not already done so, further to express his appreciation by promptly remitting his subscription for the ensuing year. We have succeeded in entering the SPECULUM as second class matter at the Agricultural College post-office, and now with the expectation that all subscriptions will be promptly paid in, and with a monthly issue in anticipation, we look for a successful future.

THE EXAMINATIONS of the lower classes happening during commencement was a considerable drawback to the enjoyment of the occasion by these students. It is rumored that hereafter the examinations will be finished before commencement week. This change the students will hail with delight.

COMMENCEMENT week began Sunday, Aug. 16, with the baccalaureate discourse of Pres. Willits. His subject was *Measure for Measure, Value for Value*.

The day was beautiful, and the chapel was filled to overflowing, by students and friends of the College, who listened with unabated attention to a discourse replete with grand and noble thoughts, and delivered with great earnestness and force.

The music for the afternoon was furnished by a male quartette from Lansing, adding greatly to the enjoyment of the occasion. Monday examinations of the lower classes began and continued till Wednesday. In the evening the fraternities and open societies held their banquets, and the festivities extended into the wee small hours. Tuesday found the majority of the students quite tired and sleepy, yet all were one as to the complete success of the previous evening.

Tuesday evening the class exercises of "'85" were held in a large tent erected for the week just in front of the large stone planted by the class of "'73." This tent was capable of holding one thousand, and on this occasion it was nearly filled.

The program of the evening was as follows: *History*, J. D. Towar; *Poem*, C. H. Hoyt; *Oration*, C. B. Collingwood; *Statistics*, P. G. Towar; *Prophecy*, R. M. Bates; *President's Address*, H. E. Thomas.

All the exercises were well written and well delivered; and nothing occurred to mar the pleasure of the evening.

Mr. Collingwood's oration, *The Pioneers of To-morrow*, was worthy the close attention which it received, and reflected much credit upon himself and his class.

Excellent music was furnished for the evening and the two following days by Speil's orchestra, from Detroit.

At the close of the class exercises the class banquet was given in the botanical laboratory, to which some over one hundred sat down.

After partaking of the bounties on a well spread table, the guests were treated to a number of short but entertaining toasts proposed by E. A. Bartmess and responded to by D. J. Stryker, J. R. Newton, E. T. Gardner, F. L. Chappell, E. S. Antisdale, and President Willits.

The speeches were interspersed with songs by the class. Wednesday brought as beautiful a day as could be asked for. At about 10 a. m. twenty-nine seniors took their seats on the platform in the tent to pay their last respects to their Alma Mater. The orators and their subjects were: R. M. Bates, *National Progress*; F. L. Chappell, *Science and Agriculture*; J. Y. Clark, *Culture in English Literature*; J. A. Dart, *Pleasure in Scientific Study*; H. T. French, *Socialism*; R. W. Hemphill, Jr., *Dixie at Present*; T. D. Himebaugh, *Evolution*; J. D. Towar, *Preparation, then Responsibility*.

After the orations were delivered the diplomas were presented by Pres. Willits, and the exercises closed with a benediction by Dr. Abbot.

In the afternoon a large audience assembled to lis-

ten to Pres. Willits's inaugural address. This address has been printed in pamphlet form and can be had on application to the President or Secretary of the College, so that favorable comment—and no other can be given—is here unnecessary.

At the close of the discourse the class of "'85" was addressed by the Honorable Russell A. Alger, Governor of the State of Michigan, in words fitly spoken, and words that will long linger in the memories of the graduating class.

In the evening the President held a reception at his house, which hundreds attended, to congratulate him who has come here to stay, to build up the institution, and place it at the head of all agricultural colleges.

The callers were greatly pleased to meet in company with the new President and Mrs. Willits, the Ex-President and Mrs. Abbot, whose genial countenances will long be remembered by all past and present members of the College.

Thursday was Alumni day, an account of which will be found in another column.

Thus has passed from these halls of learning another class of bright and promising young men who take with them the best wishes of all. Their last days may certainly be regarded as the happiest, and indeed all seem to look upon this commencement as the pleasantest that the College has ever witnessed.

AMONG THE beneficial results of military discipline, the habit of always being prompt is of no small importance. The trouble caused by tardiness is illustrated in the ordinary affairs of the business world, and need not be enumerated here. But we do hope to see the day when promptness will be the rule here and not the exception.

At present tardiness meets us on all sides. The bell on which we all depend for the correct time is today ahead of time, and to-morrow as much behind. As a result we are called to our meals either before they are ready or after they are too cold to be relished. Some professors, admired for punctuality, expect classes to be in their places by five minutes after bell time. Now if the bell is three to five minutes behind the correct time the students are very likely to be as many minutes late to their class. As a consequence they are put to much inconvenience, at the same time disturbing the rest of the class.

The fault of this tardiness cannot be imputed to the student, but there are cases in which the student directly is to blame. There are students among whose characteristics that of always being behind hand is most prominent. The annoyance to the class caused by one member being three minutes late is too well known to be described. But not only that, if the lecture be the first thing, the tardy student loses much of this, which he cannot obtain without much trouble to one or more persons.

The results of tardiness in these cases are experienced by but few. In the cases of weekly lectures and rhetorical exercises, and of Sunday services this an-

noyance is felt by a much larger number. It appears to be a regular thing to have a half dozen or more students string along into the chapel on these days after the exercises have commenced. The annoyance thus inflicted on the audience is too great to be tolerated, to say nothing of the embarrassment caused to the speaker.

At a recent lecture by our Lieutenant, a pause was made now and then to allow an intruder time to take his seat. This threw the attention of the audience to the intruder and seemed to embarrass him to a considerable extent. Now this embarrassment would indeed tend to make a modest youth more punctual, but to one who seeks to attract attention nothing could give more satisfaction.

The military officers are much troubled of late by privates reporting after the line has been formed, thus necessitating a repetition of much work, beside causing inconvenience to all. If some penalty could be inflicted upon tardy cadets the desired result would soon be reached.

However, we are happy to say that punctuality is more marked now than a few terms ago, and we do believe that by a constant attention to this matter by students and faculty, punctuality will soon be the rule and not the exception.

AT THE close of the last two or three terms the professors have experienced more or less trouble in fixing the time at which the various examinations are to be held. After the hours have once been set by the faculty, some of the students are dissatisfied, and then a desperate effort is made to change the time. These efforts begin to be made about three days before the examinations are to take place, and are continued until examinations are finished. The results are generally the same—no change in the time; but the time spent in classes and the fuss made is too considerable to be allowed every term.

With the classes mixed as they are, it is an impossibility to suit every member, but with care in the first place the hours can be so arranged as to suit the majority and then let it be understood that no farther change will be made. If the present term closes on the 25th, and examinations are continued up to noon of that day, many students will be unable to reach home in time to enjoy thanksgiving the next day. We therefore hope that examinations will be so arranged as to do away with any wrangling as heretofore.

THERE IS A prevailing sentiment among the students and Alumni that the SPECULUM should be changed from a bi-monthly to a monthly, that is, issued eight instead of four times a year. We have often thought of the matter, but have been waiting for others to make the move. There are some disadvantages to the change as well as several advantages.

Should the change be made the size would be cut down to nine pages of reading matter, and the subscription price remain the same.

The work of the business manager would be increased ten-fold by having to mail the same number of copies eight times instead of four. The editors would naturally have the matter on their minds continually instead of having a month of complete rest as at present. But this latter would be counterbalanced by the diminished amount of matter to be collected.

With a monthly issue the college news would be more fresh, particularly to the students. The personals also would be of more recent date, and what is of more importance they would tend to be more truthful. The editorials would dwell upon events or topics of the day, and not be made up of articles written six or eight weeks beforehand.

In general the interest taken in the paper would be much increased, for now the paper is almost forgotten between issues.

Yes, we favor the change, but we think it the duty of the students to order the change made. Therefore let them think it over and if deemed advisable vote for the change to take effect November first, or better the middle of next March, and let the paper continue to be issued on the middle of each succeeding month of the school year.

WE HAD the pleasure of entertaining at dinner Saturday, Aug. 12, Mr. P. C. Reynolds, editor of the American Rural Home, Rochester, N. Y., Mr. F. M. Hexamer, editor of the American Gardener, New Rochelle, N. Y., and Mr. C. A. Uber, of Falls Church, Va. These three gentlemen were on their way home from the Pomological meeting at Grand Rapids. They seemed to be well pleased with Michigan and her educational advantages. The papers they represent are among the first of agricultural papers in this country.

BEING CROWDED for space the poem by A. E. Angstman has been reserved for a subsequent issue.

COLLEGE NEWS.

Register.

Welcome, '89.

New Students.

Hot weather for September.

Ask Prof. McEwan if he is busy.

Did you taste the picnickers' pie?

About ninety students are drilling.

A ditch is being surveyed in No. 15.

Meek sophomores; noisy freshmen.

All students should take the SPECULUM.

Prof. McLouth now resides in his new house.

Prof. Cook attended the fair at Flint Sept. 24.

Call and pay that fifty cents toward the SPECULUM.

President Willits attended the fair at Flint Sept. 24.

Prof. Johnson attended the State fair at Kalamazoo.

Ensilage is made, and the average "soph." is happy.

Hiram T. French, of '85, is now foreman of the farm.

Corn is all out in Nos. 5 and 9. It was a very fair crop.

Ask Launstein if the people are all well around Owosso.

The chemical club now numbers eighteen active members.

Our new buildings are rapidly being pushed to completion.

Everybody goes to chapel—faculty, visitors, and students.

Sunday school picnic from DeWitt on the grounds Sept. 26.

Visitors on the Campus Sunday, Sept. 27—*somebody's swine*. Ask F. C. Davis and W. H. Clemons if they are surveying in No. 15.

Dr. Kedzie and F. S. Kedzie take turns in teaching *chemical physics*.

Our new mechanical course starts off in a very commendable manner.

"Ladies, would you like to visit the wild garden, or rather, the museum?"

The SPECULUM is now entered as second-class matter at our little postoffice.

Nearly all the new men who are taking military drill are procuring uniforms.

Have you met the freshman dude? Don't every freshman inquire, "Is it I?"

We are indebted to our efficient librarian, Mrs. Merrill, for the *Library Notes*.

The editor of the Detroit *Free Press*' son is now numbered among our ranks.

Mr. George W. Park has returned to college. He expects to graduate with old '86.

A large number of visitors have been noticed on the college grounds by your scribe.

Prof. Johnson reports that the sophomores are doing good work on the farm this term.

Secretary Reynolds and family are living in the house lately occupied by Secretary Baird.

President Willits will deliver one of a course of lectures to be given at Portland next winter.

Prof. Beal expects to have the popular part of his work on "Grasses" out by next winter.

The need of the English department for better quarters was never so evident as at present.

Our freshmen are nearly all city-going fellows. Lansing must be attractive. Yes, very (?).

Prof. Bailey has planted a large number of tamarack in the little swamp north of the Library building.

Mrs. MacEwan attended the re-union of the pupils of Dr. and Mrs. Stone in Kalamazoo, Sept. 23 and 24.

Visit the new summer house just east of Williams Hall. It is to have a thatched roof made of rye straw.

Dr. Abbot has returned somewhat improved in health; but yet he is unable to take charge of his classes.

The seniors who elect military have recitations in *tactics* every afternoon during school week at 5 o'clock.

Every room in our dormitories is occupied save the single exception of the dark room—one without windows.

Seventeen varieties of wheat have been sown on the farm this fall. Most of these varieties have been sown in small plots.

Fifty-six sophomores and forty-five freshmen delivered declamations before Prof. MacEwan from Sept. 22 to Sept. 26.

Rev. Washington Gladden, D. D., well known to the readers of the *Century* and *North American Review*, has a son with us.

The horticultural department furnishes labor for seventy-five students. The juniors are compelled to work only every other day.

The Horticultural department is rejoicing over a splendid crop of onions, the yield being 144 bushels to one-fourth of an acre.

Public speeches were delivered in the chapel Sept. 16, by Seniors Brown, Cotton, Clute, Everhard, French, and Hammond.

President Willits states that the College has many very warm friends up around Flint, and in fact throughout Northeastern Michigan.

Supt. Taylor, of the mechanical shops at the University, visited the College recently and was well pleased with what he saw here.

Have you noticed President Willits making his way through the different halls, stepping cautiously over apple cores and melon rinds?

At the picnic held here recently by the Sunday schools of De Witt, one of the young ladies remarked that she thought the College boys were so nice and genteel, especially the Clemons brothers.

Mr. Sudworth, of the University is here, drawing for Dr. Beal. The drawings are to be used as illustrations to the doctor's coming work on "Grasses." Mr. Sudworth has quite a reputation at the University for his skill in drawing, and was well recommended to Dr. Beal.

Our worthy editor-in-chief, T. A. Stanley, attended the meeting for the advancement of science at Ann Arbor, during our last vacation.

We are very much pleased to note that for the first time in the history of its existence our agricultural report has a decent and intelligent index.

The essays of the seniors for the term with Prof. MacEwan are on Wordsworth, Byron, Scott, Burns, Shelly, and Browning, and their works.

'88 has received quite an addition to her ranks from the new men who have entered. The junior class has received one new member, W. E. Smith.

Twenty seniors are taking *Chemical Physics*; twelve, *Psychology*; seven, *Agricultural Engineering*; nineteen, *Veterinary*; and twenty-three, *Zoology*.

There are 106 new students who attend the semi-weekly elocutionary exercises with Prof. MacEwan, and 97 of whom are in his classes in *Essentials of English*.

Mrs. Beal and daughter have gone to Louisville, Ky., on a visit. They will be gone several weeks. The doctor must keep bachelor's hall while they are gone.

Mr. O. G. White, with '88, of Purdue University, has entered our sophomore class. Mr. White comes to us well recommended, and with an honorable dismissal from Purdue.

The freshmen have elected their class officers as follows: President, —Bartmess; Vice President, W. S. Palmer; Secretary, O. G. Wilson; Treasurer, —Groesbeck.

Miss Tilton, the new preceptress of the Lansing high school, is a graduate of Colby Academy, N. H., of which Prof. MacEwan was president before coming to the M. A. C.

Young lady of city to College student as one of our boys, dressed in his military suit, passed by: "Why! dear—the *Reform School boys* must have changed their uniforms."

Our greenhouse is well appreciated, as shown by the flattering notices it has received from the State press. This surely reflects much credit on our efficient florist, Mr. Knapper.

Mr. W. C. Hall, of '87, teaches the special classes in Arithmetic, Geography, and Grammar. These classes are held in the afternoons, so as not to conflict with other college duties.

All new uniforms are to be bound with black braid—the coat with one-half inch and the pants along the outside seam with an inch braid. The chevrons of non-commissioned officers are to be of gilt.

Prof. L. H. Bailey, Jr., was awarded the Wilder bronze medal at the meeting of the Pomological Association, held at Grand Rapids on Sept. 9, for his very fine and valuable exhibition of wild fruits.

A goodly number of our students attended the last teachers' examination in Ingham and adjacent counties. We hear that some of them were very much fatigued by their long and wearisome ride.

Kizo Tamari, our Japanese student, works four hours daily at botany under Dr. Beal. He is now studying on the *ustilaginæ*, a family of fungi, which includes the smut of corn, oats, wheat, and other grasses.

President Willits has been doing some interesting work in *Ancient History*. Lately he had the class out measuring off on the grounds the sides of the *Pyramids*, and also the size of the *Temple of Karnak*.

Prof. Johnson has purchased a new Barlow rotary corn planter. It is made at Quincy, Ill., and has all the latest improvements in its favor. He also purchased a Thomas smoothing harrow at the recent State fair.

Threshing on the farm is finished. The yield in bushels is as follows: Wheat, 724; oats, 1238; and peas, 73. This is an average of twenty-five bushels of wheat to the acre, fifty-four of oats, and twenty-seven of peas.

Surely our College is on the broad road to prosperity, for have you not noticed what large families our new secretary and professor of mechanics have brought into our midst? "Faculty row" is no small colony by itself.

Our late arrivals have ceased smoking cigars and cigarettes on the campus. We presume they realized that "Prexy" meant business that morning in chapel, when he referred *gently* to the rules of the College in regard to smoking.

The juniors have, this term, essays on horticultural subjects with Prof. Bailey. This is a move in the right direction. In most scientific schools students are required to present theses in all scientific studies before leaving them.

Prof. McLouth lectured Wednesday, Sept. 23, in the chapel. His subject was "Galileo." The lecture was very ably written and delivered, and was much enjoyed by the students. One thing is true, that the boys appreciated a *good* lecture.

President Willits taught the class in psychology last week. Prof. Nelson, Superintendent of Public Instruction, was to have the class, but illness has detained him from so doing, and in his place Prof. White, of Jackson, has been secured.

Prof. Cook read an illustrated paper before the meeting of the American Pomological Society at Grand Rapids Sept. 10. His subject was "Economic Entomology." The paper was illustrated by drawings made by W. G. Everhart, of '86.

President Willits attended the State fair at Kalamazoo. It is reported that he was exceedingly busy while there, and judging from hearsay, we are sure that the interests and good qualities of old "M. A. C." were not forgotten or even neglected for a moment.

The residence of Mrs. Baird at 612 Ottawa street, Lansing, was burglarized Tuesday evening, Sept. 22. A watch, some jewelry, and a pocket-book containing nearly \$70 in money were among the things taken by the thief or thieves. No clew to the guilty parties as yet.

Prof. Cook acted as sole judge at the fair at Kalamazoo in the department of the apiary. At the recent fair at Owosso he took first premiums on Short-horn cattle, Shropshire sheep, and Poland China hogs, to the amount of \$30. At Flint, Sept. 2., he acted as judge on Jersey cattle.

H. K. Lum, of Ann Arbor, is with us for a special course in micro-photography. He graduated in the medical department of the University with the class of '85. He is now assistant in Physiology. His work here will be chiefly to prepare microscopic slides illustrating his subject in hand.

Why were not the senior orations announced Wednesday, Sept. 16, by the professor in charge of the chapel exercises? As it was, no one knew anything about it, and when 5 o'clock came Prof. McEwan and his seniors entertained empty seats. That is, if empty seats can be entertained.

We are now proud of the fact that we have a barber. He has entered college as a regular student, and will occupy room 46, Williams Hall. He comes to us from Hillsdale College, and will enter the sophomore class. Out of study hours and on Saturdays he will scrape the faces of our beardless boys.

Through the negligence of our new democratic postmaster at Lansing, Mr. Moore brought back, September 24, the same mail he had taken down to the city at noon. A screw is loose somewhere. Let Grover keep his eyes open. *Civil Service Reform* was his motto prior to the last presidential election.

We have a district school here at the College. Miss Harrison is the teacher. She has on roll some fifteen pupils. The plan is to have the school continue all winter. There is talk of trying to get a district set off, which certainly ought to be allowed, as there are twenty-five pupils on the grounds of the proper age.

Base ball! The game played Sept. 4 between the freshmen and the College resulted in a victory for the College by a score of 23 to 8. Sept. 11, '88 laid out the aspiring freshes 12 to 11. It was a very fine game, and but for two or three errors in the ninth inning on the part of the freshmen, '88 would have had to pull down her colors. There is material in '89. Bring it to light.

The farm department will make an exhibit of potatoes at the Lansing fair. Prof. Johnson will show them for the purpose of comparison. Instead of sorting over the crop and exhibiting selected baskets, average hills will be shown. This seems to be a fairer way of exhibiting, and will give visitors a better notion of the size and producing qualities of the different varieties.

Have you noticed the donkey and its drivers? Master Bert Cook feels quite proud over his new pet. He now makes it his special duty to take his sister Katie and all the little girls of "Faculty row" out riding. To see them driving that innocent (?) little donkey around the grounds reminds one that—

No time so bright or so serene appears,
As that of happy childhood's years.

Dr. C. E. Bessey, Dean of the agricultural school of the University of Nebraska, was visiting here the first of the term. He was on his way to the meeting of the American Pomological Society. While here, he spoke at the chapel on "Prairie Flora." He delivered an evening address on "Injurious Fungi" at the meeting in Grand Rapids. His address is said to have been very able, and was well received by the society.

For once in its history the College is practically free from hazing. This is a move in the right direction. It is to be hoped that the so-called relic of barbarism has at last been buried too deep for resurrection. The light of the increasing civilization brightens up this earthly spot where once the black cloud of barbarism enveloped all in utter darkness. Yet there are some noisy, much-knowing *freshies* among us, and it seems hard to see our worthy sophomores compelled by public opinion to hang up the squirt-gun and the lantern. Sad experience of some of our best students is the great check or drawback to the immediate declaration of hostilities.

The Club boarding association of the students exists and flourishes. The clubs have nearly equal numbers, and harmony has at last been restored. Mr. F. R. Smith, of '87, is steward of club "A;" J. B. Cotton, of '86, steward of "B;" Mr. T. A. Stanley, '86, of "C;" Mr. W. A. Kinnau, '86, of "D;" and Mr. H. S. Theirs, '87, of "E."

The officers of the Students' Organization for the ensuing year are as follows: President, A. L. Nichols; Vice president, J. N. Esbrook; Secretary and Treasurer, H. W. Carr; Legal Board, E. A. Whitney, W. S. Launstein, J. B. Cotton, I. B. Bates, G. C. Crandall, L. A. Breggar; the Auditing Board, J. W. Clemons, G. C. Crandall, and W. A. Taylor.

Did you witness the slugging match between the two "Tom Thumbs" of the college? It was a "picnic." A large crowd of anxious boys assembled on 2d floor Williams hall to witness the match. At the end of the third round "P." showed the white feather, and C— was declared the champion. Efforts are being made to bring the "freshman champion" and the "light-weight" of the sophomore class together in a match of five rounds.

We are sorry to state that we have some freshmen who certainly lack in the "upper story" in so far as manners are concerned. While the picnickers were here from DeWitt several of these smart "Al-eks" were around making impudent remarks, and in various ways making themselves very conspicuous. We would say to such, "Go slow, or you will certainly come to grief." We mention no names; but, "if the shoe fits, put it on."

Prof. J. C. Arthur, botanist of the New York experimental station, and one of the editors of the *Botanical Gazette*, visited the College in company with Dr. Bessey. Prof. Arthur is a graduate of the Iowa Agricultural College. He spoke to the students on "Bacteria, the cause of Pear Blight." At the meeting of the Pomological Society at Grand Rapids, he made an address on the same subject, which was very well received.

The SPECULUM is read far and near. Its literary articles, reviews, scientific notes and papers, personals and college news, are read in some 800 families, and are of interest not only to our students and Alumni, but to all lovers of knowledge. Our paper has a serious tone to it, and of course this becomes apparent to those who are acquainted with our work and our purpose here; for a college paper, to a large degree, reflects the spirit of the students that it represents.

The recent meeting of the American Pomological society is pronounced by all to be the best one that the society ever held. The papers, addresses, and discussions were very much above the average. The society voted a silver medal to Dr. Beal for his services as secretary. This is the highest honor the society can bestow upon any of its members, and was never given before for services rendered the society. Dr. Beal may well be proud of his hard-earned laurels.

Prof. Cook has received a curious and interesting specimen from Colorado. It is pure candy from the honey dew of plant lice. This honey dew is a secretion from the nectar tubes on the bodies of the lice. Mr. Gillett says it is as good candy as can be procured at any of the grocery stores. We take his word for it. Bees gather this secretion, but at the time this was secreted they had other work to do, and hence it was not gathered by them, but rather by that other bee-man.

Dr. Beal has received much praise for his efficient work as secretary of the American Pomological Society. At the time of the meeting in September, it was remarked by several able men that Dr. Beal was the best secretary the society ever had. Owing to the pressure of other work the doctor refused reelection. Mr. Charles W. Garfield was chosen as his successor. This is quite an honor to Mr. Garfield, as he is by far the youngest man ever chosen to act in the capacity of secretary.

An effort is being made to have the walls of our halls freed from pencil marks. This is a step which all lovers of neatness and cleanliness will be glad to see taken. President Willits will visit the halls once a week, and will gladly do anything in his power to add to the boys' comfort. The President says that he thinks the boys are reciprocating his efforts in this direction. The mechanical department is to have the heating of the dormitories in charge. President Willits further predicts that ere long we will have our dormitories clean, well heated, and wholesome.

The question of establishing a street car line between Lansing and the College is being agitated again. We hope something definite will be decided on soon. With our increasing facilities, we are gaining more students, and have now nearly as many as we can accommodate in our dormitories. If this line were established a large number could board in the city, and yet reach the College daily with only a trifling expense. It would thus save the state the cost of building a new dormitory as it will have to do in the near future, unless some other means is provided for the students' accommodation.

In our last issue we referred to the rumor that several of our seniors contemplated matrimony after commencement. To our surprise soon after commencement we received a wedding card inviting us to attend the wedding of R. M. Bates to Miss Allie Osborn, of Hastings. This clearly demonstrated to your scribe that not only had certain parties contemplated marriage, but that all the arrangements necessary to such a state of affairs had been made. For fuller particulars see the *Personals*.

We listened to a conversation between a senior and a freshman the other day. It was as follows: *Freshman*: "Say, pard, did you say it was a rule of the College that the freshman must sweep the room, make the bed, dust the furniture, and fill the lamp for his senior pard?" *Senior confidentially*: "Yes, indeed, my dear; the faculty several years ago made that one of the organic laws of the College." *Tableau*: Exit of the freshman, greatly puzzled over that *organic law* and the *greatness* and *knowledge* (?) of a senior.

A report is in circulation down town that the waiter girls at the College get so fat before leaving that it is almost impossible for them to get away. As a result of this erroneous report, several persons have taken the pains to walk out here in order to hire out to our stewards. The stewards will probably be compelled to call a meeting of the body politic in order to ferret out the perpetrators of this malicious act. Our investigation committee winks knowingly at our fat man, and is showered at twilight beneath the windows of room No. —

At the State Board meeting held at Lansing in September the following business was transacted: President Willits was authorized to paint the outside steps of the dormitories. Owing to the fact that Dr. Abbot was injured in attempting to get aboard a sail boat, by the boom swinging around and hitting him, and that this lamented fact will prevent him from hearing his classes, President Willits was authorized to engage some one to hear the classes in moral philosophy and psychology. Prof. Bailey was instructed to complete the tiling for the garden.

A few days ago Dr. Kedzie received from George W. Haigh, of Menkato, Minn., Secretary of the Minnesota State Farmers' Alliance, two samples of wheat with the following statement: "No. 1 is a sample of our good Scotch Fife wheat; No. 2, a sample of rice or goose wheat. I would like, if not asking too much, to have you give me an opinion of the food value of No. 2, the rice wheat. The millers have told us that it is of no value for making into flour, nor does it contain any elements of human food. When first introduced the Fife wheat was similarly treated by the millers. Now it is our leading wheat—really, the most valuable variety grown in the northwest. The rice wheat is hardy, productive, and seems adapted to our climate. What is its real value?"

This appears to be a renewal of the old battle between the millers and the farmers over the introduction of every new and valuable variety of wheat. It reminds us of the old fight over the Clawson in this state.

Now, as then, Dr. Kedzie comes to the rescue of the farmers against the millers. He has analyzed both specimens of the wheat and reports to Mr. Haigh that the Scotch Fife wheat contains 14 per cent of albuminoids, and the rice wheat contains 14.42 per cent of albuminoids. "The claim of the millers that rice wheat is of no value for making flour and does not contain any elements of human food, is directly refuted by the results of analysis. The rice wheat is very rich in the elements required in human food,—even superior to the Fife wheat."

PERSONALS.

THE Editor of this Department desires the earnest co-operation of the alumni in aiding him to fill these columns with interesting items. Give occupation since graduation, what offices held, whether married or not, etc. Let this receive prompt attention from every alumnus.

DIRECTORY OF '85.

- T. L. Parker, Elsie, Clinton Co., principal of the Elsie school.
 Frank M. Woodmansee, Hastings, in an office reading Blackstone.
 John W. Matthews, Coral, Montcalm Co., principal of Coral school.
 George E. Sprang, Lansing, traveling agent for Lansing Paper Co.
 L. G. Palmer, Napoleon, Jackson Co., assistant principal of the high school.
 H. P. Gladden, Lansing, plans the work for "the old man" on his father's farm.
 J. D. Towar, Lansing, will stick to the farm for he knows there is money in it.

R. W. Hemphill, Jr., Detroit, reporter for the *Detroit Commercial Advertiser*.

D. J. Stryker, Kirkeville, Iowa. "Doc." is superintendant of the Kirkeville schools.

T. D. Himebaugh, Guelph, Ont., at the Guelph college taking a course in veterinary.

J. Y. Clark, Orion, Oakland Co., on the farm through the day, but will not answer for his nights.

Edward R. Lake, Agricultural College, fitting himself for a machinist in the machine shop here.

Fred L. Chappell, Cooper, Kalamazoo Co., contrary to custom, will soon dedicate a large Chappell to law.

E. A. Bartness, Lafayette, Ind., was obliged by weak eyes to resign his position as superintendent of Williamston schools.

C. B. Collingwood, Pewamo, Ionia Co., principal of Pewamo public schools, reports Pewamo a good field for temperance work.

C. H. Hoyt, Climax, Kalamazoo Co., principal of the school at Climax. His class-day poem will soon be issued in pamphlet form.

Hubert M. Wells, Howell, is with his father farming near Howell. Prohibitionists in that vicinity would do well to look him up.

H. T. French, Agricultural College, foreman of the State farm, knows another state that would make him happier. "Name the day."

H. E. Thomas, Middleville, Barry Co., principal of the Middleville school. Will enter a law office at Eaton Rapids when his school closes.

J. R. Newton, Lansing, always thought Ingham Co. rather swampy. Doing his share toward draining it. College dudes with silk ties will stand aside.

W. I. Power, Pontiac, Oakland Co., teaching for the present, but anxiously awaiting the time when he can introduce the gifted and able Dr. Power to the public.

P. G. Towar, Agricultural College, at the machine shop learning to be a machinist. May be Aultman, Miller & Co. will want him in their shops at Akron, Ohio.

R. M. Bates, after Oct. 9, Ann Arbor, was married Sept. 3 to Miss Allie Osborn, of Hastings. Says "there's millions in it." Will go to the University Oct. 9 for a course in law.

G. C. Lawrence, Ypsilanti, entered the senior class at the State Normal and will make teaching his life work. Since going there he has become a strong advocate of co-education.

J. A. Dart, Petoskey, in his father's law office. Wants it understood that he don't go into law under any circumstances, but is helping his father and reading Blackstone at odd times out of curiosity.

E. S. Antisdale, Nottaway, St. Joseph Co., is upon his farm, and believes in doing his share of the work now because there is money in it. Is content to have a sister preside over the house. But how long?

W. A. Bahlke, '83, is studying law at Ionia.

A. E. Calkin, '72, is practicing medicine at Bath, Clinton Co.

H. A. Haigh, '74, is secretary of the Michigan club, Detroit.

J. A. Horton, '76, has charge of Prof. Cook's farm at Owosso.

D. S. Lincoln, '81, is reported married. Guilty or not guilty?

Miss Alice Johnson, '84, teaches this year in the Sixth ward, Lansing.

Lightbody, one term with '87, has returned to college and joined '89.

Jason Woodman, '81, is accused of having a little *red haired* baby, a girl.

Prof. W. W. Tracy, '67, had the misfortune this summer to break his leg.

J. E. Coulter, '82, is book-keeper for the Belt and Leather Co., Grand Rapids.

G. M. Van Atta, with '88, is attending the Normal School at Valparaiso, Ind.

W. K. Prudden, '78, is made happy by the addition of a little girl to his family.

Eugene I. McClear, one year with '86, will return in the spring and join '88.

C. F. Stilson and E. A. Burnett, who were with '86 for a time, are now back and join '88.

H. M. Holmes, '81, has broken up housekeeping and gone back to his bachelor's den.

C. E. Hollister, '61, has the honor of being the first graduate to send a son to the College.

L. A. Buell, '83, is in the furniture business at Minneapolis, Kansas.

C. E. Smith, '84, has quit teaching and is now establishing agencies for Grant's Memoirs.

Fred Herrington, '84, is studying law in his brother's, C. E. Herrington's, office at Pontiac.

Prof. W. C. Latta, '77, has issued a bulletin from Purdue University on the culture of wheat.

A. F. Kinnan, '83, is discharging, for the third year, the duties of principal of the Fenton high school.

G. W. Burdick, for a number of years engineer at the college, is farming near Hudson, Lenawee Co.

Charles S. Guile, '79, is prosecuting attorney at Bellair, Antrim Co., and not as given in the triennial.

Eugene D. Millis, '82, has returned from the East and is now superintendent of the Williamston schools.

Prof. C. F. Davis, '80, of Colorado, paid a flying visit to the college a week or two before commencement.

E. B. Fairfield, Jr., '75, has been engaged for the fourth year as superintendent of the Grand Haven schools.

Clarence M. Weed, '83, has been appointed assistant Professor of Entomology at Champaign University, Illinois.

J. S. Dixon, with '85, is in Hagadorn's drug store at Lansing. Will go to the University this year to study pharmacy.

J. W. Beaumont, '82, is writing a series of articles on our College for Saginaw papers. Go thou and do likewise.

Erwin F. Smith, at one time a special student in botany here, has entered the University for a course in meteorology.

Miss Ella Wood, '84, is taking the course for nurses at Harper Hospital, Detroit, and is now in charge of the soldiers' ward.

F. F. Rogers, '83, was married at Marlette, Sept. 1. Frank and his happy bride have the congratulations of his many friends at M. A. C.

Milton St. John, '83, lately spent a few days at the College. He was on his way to Muscatine, Iowa, where he will teach the coming winter.

A. N. Prentiss, '61, has been in Europe this summer, seeking health. His constant attendant and medical advisor is his wife, who is an M. D.

Lynn Bonham, '84, has joined the great majority in Cincinnati. He and his father are proprietors of a pork packing establishment there.

F. J. Hodges, '84, who has been here during the summer engaged in advanced work in chemistry, has returned to the Eclectic Medical College, Chicago.

C. L. Grimes, W. Leisnering, Wm. Dothany, Charles Baker, all of '84, and M. E. Jones, two years with '84, will take a course in pharmacy at the University.

E. O. Ladd, '78, is the happy possessor of '78's prize boy baby. He brought it with him to the Alumni meeting, and the baby connoisseurs all pronounced it a beauty.

J. W. Beaumont, '82, who has been practicing law in Saginaw, will soon go to Detroit for the same purpose. We predict a brilliant career for him in the city of the straits.

L. W. Hoyt, '82, has been elected president of the Schubert club, Grand Rapids. The gross receipts of this local amateur vocal club for last season amounted to \$1,600.

Mr. Foster, principal of the Fowlerville schools, and a graduate of the Normal school, visited the college last week. He now expects to take a special course here next summer.

C. H. Judson, '86, is now at his home, White House, Ohio. Will soon begin teaching a five months' school. Intends to keep up his studies and come back in the spring to finish with '86.

Edward G. Eldridge, '86, succeeds his brother, Clark Eldridge, '83, as principal of the school at Mackinac. He will continue his college studies while teaching, and graduate with his class.

Louis D. Niles, '75, is much interested in science. He attended the meeting of the Association for the Advancement of Science at Ann Arbor. He is now studying medicine at the University.

H. K. Lum, with '85, has been spending a few weeks at the College working in the Chemical Laboratory. He will soon return to the University to assume the duties as assistant teacher in physiology.

W. H. Coffron, '82, who graduated from Ft. Myers in the signal service with the highest honors, and was sent to the central station at Washington, is now studying under Prof. Mendenhall in the physical laboratory of the service, and is likely to be sent to Johns Hopkins University to continue his studies under more favorable conditions.

A. A. Dodge, '77, of Fowlerville, visited the college a week ago. He rejoices in the arrival of a relative, Sept. 17, whom he hopes in the future will be the junior partner in the firm of Dodge & Son, lawyers.

Will E. Hale, '82, made us a brief call a short time since. Had just come from George Lawson's (with '82) wedding, and was on his way to William T. Langley's, '82. Will, don't let the good work stop yet.

J. D. Hill, '84, who spent the summer in the West, has returned to his home at Montpelier, Ohio. He thinks the West a poor place for a man without capital. He expects to begin the study of Blackstone this fall.

A. C. Redding finishes his post graduate course in chemistry about the middle of Oct. Will teach at Hamilton, Allegan, this winter, as the college at Findley, Ohio, in which he was to have been professor of chemistry, will not open this year.

W. C. Stryker, '84, has been visiting at the College for a few days. He will teach this year at Dayton. Remembering his old-time skill with the pencil we do not wonder that he contemplates a course in architecture at Cornell University.

Burglars entered the house of Mrs. R. G. Baird in Lansing, Sept., and made away with a watch belonging to W. S. Baird, '85, and between sixty and seventy dollars of H. W. Baird's, '83. Harry will see that the doors are shut after this when he goes to bed.

B. S. Palmer, '81, writes: "We are still watching with a great deal of anxiety the result of the dreadful disease which has brought my wife so near death's door. She has been confined to her bed for long weeks now, and still looks as though it would be as many more before she can leave it."

O. C. How, '83, is on his father's farm near Buchanan. He and his brother do nearly all of the superintending of their father's farm besides running 160 acres of their own. He has been in the sheep-raising business, and lets many on shares. Letting sheep, he says, pays from 50 to 60 per cent.

H. V. Clark, '78, attended the alumni meeting and made a vigorous appeal to the faculty to have the overland route to the Peninsular farm, so dear to the students, obliterated, and the cooking of water-melons and apples done away with, and known no more through all the dreary days in store for M. A. C.

We lately saw a West Point calendar for the last school year and were happy to learn from it that T. H. Reese, with '85, ranks fifth in his class—an enviable position at West Point. He is now a senior and will be allowed to choose his department of the army, provided he maintains his place throughout the year.

Mr. O. L. Hershiser, '84, writes that he has taken 4,000 lbs. of honey, 2,500 lbs. of which is comb honey, from his bees this summer, besides doubling his stock. He has engaged the Water Valley school, Erie Co., N. Y., for the winter at \$52 per month. Mr. Hershiser also made an exhibit of honey at the Erie Co. fair, on which he received every premium offered.

Dr. Abbot has returned to his home in Lansing. He is not fully recovered from the accident he met with at Charlevoix a couple of weeks since. While sitting in a small sail-boat at Charlevoix he was struck by the jib-boom and thrown partly into the water. He remained unconscious for forty-eight hours after the blow, and was unable to see any for five days after. He is yet troubled with double vision caused by it.

W. T. Welch, with '86, is at home continuing the college studies and working in the interest of science by making practical applications of his knowledge of chemistry. He bags the woodchuck in the following unique way: He starts out supplied with a quantity of copper filings and some nitrous peroxide and a large sack; arrived at the den of the woodchuck he arranges the sack over one hole leading into it, and applies the filings and the peroxide at the other. The nitrous fumes forced in soon prove too much for the woodchuck and he beats a hasty retreat toward the opposite hole, where he is received in the sack and quickly disposed of by the victorious Will.

REVIEWS.

THE MODIFICATION OF PLANTS BY CLIMATE, by A. A. Crozier, Ann Arbor, Mich. Published by the author, 1885. 35 pp. 25c.

This is a studious and judicious collation of facts concerning the influence exerted by climate, or more strictly by latitude, upon the vexed questions relating to the variations of cultivated plants. The author has made an industrious search through the literature of the subject; his bibliography covers five pages. Among the topics discussed are the influences of climate upon size, form, color, composition, fruitfulness, and hardiness of plants, with a few remarks upon acclimation. An especially important feature of the whole discussion is the impartiality

with which the author handles facts and the opinions of others. It is evidently intended that a fuller presentation of the subject shall be made in the future as items of direct practical importance, bearing upon any of the questions discussed are invited. It is to be hoped that the chapter on acclimation will then be given much greater attention. This sort of condensed and impartial collation of facts and experiences by competent persons is greatly needed in all branches of practical and popular scientific research, and especially in the phenomena of cross-fertilization and hybridization in the vegetable kingdom.

Mr. Crozier is a graduate of the class of '79, and the present contribution earned him the degree of Master of Science from the University of Michigan. L. H. B. jr.

WHITE'S HAND-BOOK FOR TEACHERS, by Emory C. White, Albion, Ind. Published by the author, 1885. 29 pp., 25c.

This pamphlet is a "hand-book of United States History, Literature, Arithmetic, Grammar, etc., for teachers and students." It is the outgrowth of school-room practice, a series of

synopses embracing the salient points of the branches introduced, intended to be used either as a guide to teaching or as a reference manual. The chapter relating to United States history is a compendium in itself; it condenses all the important occurrences of volumes into fourteen pages. Four pages upon civil government comprise the gist of a text-book. The chapters on literature, arithmetic, and grammar need a fuller development.

Mr. White was a member of the class of '82, but graduated at Purdue. He has been a successful teacher in Indiana, and has been called lately to assume responsible duties in the same line in Peru. L. H. B. jr.

THE MICHIGAN HORTICULTURIST is the title of a monthly magazine of which the September number is No. 1 of volume 1, with C. W. Garfield, '70, editor. The first number opens with the portrait of President T. T. Lyon, which is followed by a host of the good things for which the genial secretary of our State Horticultural society is noted. It is published by W. H. Burr & Co., Detroit, at a subscription price of only \$1.00.

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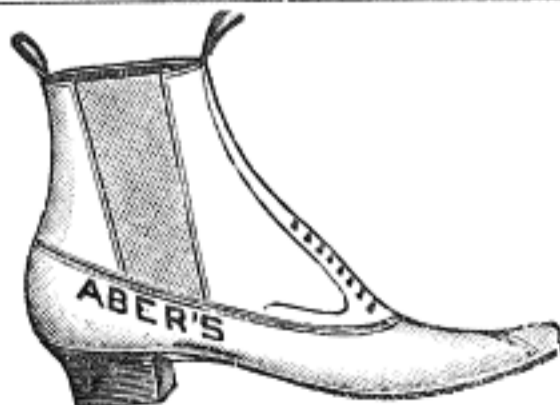
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